

## SIGN LANGUAGE TYPOLOGY SERIES

The Sign Language Typology Series is dedicated to the comparative study of sign languages around the world. Individual or collective works that systematically explore typological variation across sign languages are the focus of this series, with particular emphasis on undocumented, underdescribed and endangered sign languages. The scope of the series primarily includes cross-linguistic studies of grammatical domains across a larger or smaller sample of sign languages, but also encompasses the study of individual sign languages from a typological perspective and comparison between signed and spoken languages in terms of language modality, as well as theoretical and methodological contributions to sign language typology.



# Interrogative and Negative Constructions in Sign Languages

Edited by

Ulrike Zeshan

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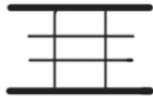
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To the deaf pioneers in developing countries  
who have inspired all my work



# Contents

Preface.....	10
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## Part I Introduction

1 Design of the volume.....	13
<i>Ulrike Zeshan</i>	
2 Negative and interrogative constructions in sign languages: A case study in sign language typology.....	28
<i>Ulrike Zeshan</i>	

## Part II Studies of negatives and interrogatives in individual sign languages

3 Aspects of interrogatives and negation in New Zealand Sign Language.....	70
<i>Rachel McKee</i>	
4 Interrogatives and negatives in Japanese Sign Language (JSL).....	91
<i>Michael W. Morgan</i>	
5 Negative and interrogative structures in Turkish Sign Language (TID) .....	128
<i>Ulrike Zeshan</i>	
6 Questions and negation in American Sign Language.....	165
<i>Susan D. Fischer</i>	
7 Questions and negation in Hong Kong Sign Language.....	198
<i>Gladys Tang</i>	

8	Interrogatives and negatives in Flemish Sign Language.....	225
	<i>Mieke van Herreweghe &amp; Myriam Vermeerbergen</i>	

### Part III            Flashes from around the world

9	The use of negative head movements in Greek Sign Language.....	258
	<i>Klimis Antzakas</i>	
10	Questions in Brazilian Sign Language (LSB).....	270
	<i>Ronice Müller de Quadros</i>	
11	Interrogatives and negatives in Finnish Sign Language: An overview.....	284
	<i>Leena Savolainen</i>	
12	Regional variation in Indo-Pakistani Sign Language - Evidence from content questions and negatives.....	303
	<i>Ulrike Zeshan</i>	

### Appendix

Transcription conventions.....	324
Research materials.....	326
Subject index.....	350
References.....	357

## **Preface**

During fieldwork in Lebanon in November 2001, I was staying with my husband and my son at the guesthouse of the German Oriental Institute in Beirut. One day I met the director of the institute, who had come up to the general living area to check on the newly acquired television. We started talking about sign languages and deaf communities, and, becoming more and more surprised at all the strange facts I was bringing to his notice, he summed up our discussion with the words: “I only came to find a new television, but I found a whole new world!”.

Since 1994, my work in the world of deaf communities in various countries has brought with it a constant stream of memorable moments. A nightly journey in 1998 on a bicycle-rickshaw through a quarter of the old city in Delhi to visit a deaf family, in almost total darkness due to one of the usual electricity cuts. The first Indian conference on bilingualism in deaf education in Hyderabad in 2001. A long evening in Eskişehir learning the local games of chance in the deaf club together with some of my first Turkish signs. A week trapped in snowstorms in the worst Istanbul winter in decades, and severe Monsoon floodings in Mumbai. And above all, the long nights of relentless and addictive signing.

Working in developing countries means working under the constant strain of insufficient resources and, at times, personal hardship, but more often than not, this is counterbalanced by the amazing human resources to be found in the deaf communities themselves. I gratefully acknowledge that they have been my main source of inspiration, and so it is to them that I wish to dedicate this volume.

On the academic side, I am no less grateful to the many people who have accompanied me on various stages of the journey towards the beginnings of sign language typology. I owe a lot to the Research Centre for Linguistic Typology (RCLT) in Australia, which was my host institution in Canberra and in Melbourne between 1999 and 2003. The framework for a large cross-linguistic study on negatives and interrogatives in sign languages, which has resulted in the present volume, first took shape at the RCLT. The subsequent development of the project is something that still surprises me. Having designed questionnaires and contacted possible collaborators around the world, the sensible expectation, which luckily I was not aware of at the time, would have been to get some basic information from a handful of respondents, if not less. Instead, I received responses for sign languages from 18 countries, varying from a few basic written answers to complete 20-page papers. More often than not, the responses also included pictures or videotapes, and the amount of effort that went into preparing all these resources was truly impressive. A project of this kind would have been impossible without the support of these dedicated collaborators, and so I would like to express my deep gratitude to the people who were part of this unique group effort: Trevor Johnston (Australia), Elisabeth Engberg-Pedersen (Denmark), Leena Savolainen, Pia Koivula, Kimmo Leinonen, Kaisa Engman, Karin Hoyer, Anja Malm, and Ritva Takkinen (Finland), Klimis Antzakas (Greece), Gladys Tang and Kenny Chen (Hong Kong), Svandís



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This volume is a direct result of the collaborative project. The majority of chapters have evolved from responses to the original questionnaires, and almost all authors have been involved with the project from the very beginning. All contributors have been extremely helpful with answering follow-up questions and cross-checking the data from their respective sign languages as successive publications were prepared that summarised the first results of the project (Zeshan 2004a, 2004b). This volume provides the opportunity of looking at a representative selection of sign languages from the original cross-linguistic study in much more detail, including many additions and modifications that add to our understanding of the structure of these sign languages.

From June 2001 onwards, my work on sign language typology has been supported by the German Research Council (Deutsche Forschungsgemeinschaft, DFG) through a post-doctoral fellowship and subsequent support for heading a junior research group (Emmy-Noether award ZE 507/1-1; 1-2; 1-3). The Research Centre for Linguistic Typology has additionally supported my fieldwork in Turkey, India, Lebanon and Egypt. I sincerely hope that this line of research will continue to be of benefit to the deaf communities involved.

My final thanks go to my husband and my son, who have patiently shared with me all the ups and downs, the excitement and hardship, the good times and the bad times in so many places around the world.

Ulrike Zeshan  
November 2005

PART I

INTRODUCTION

## Chapter 1

# Design of the volume

Ulrike Zeshan

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### **1. Background: From the project to the book**

This edited volume is somewhat unique in its structure and content and differs from the more common formats of edited books in important respects. Rather than being a collection of contributions by individual authors working separately from each other on a common topic, this volume is the direct result of a large, coordinated research effort. A number of important considerations in terms of what this volume can and cannot be stem from the nature of its origin and design, so it is worthwhile to briefly review the background to the genesis of this volume.

The research project on the typology of interrogative and negative constructions in sign languages began in 1999 and ended in 2005, with the completion of the present volume being the final stage. This study was the first-ever attempt at a systematic large-scale investigation of a particular grammatical domain across a broad range of sign languages. 37 sign languages are represented in the project data, and 10 sign languages have been chosen to appear in this volume. The study began with an exploration of the conceptual domain of questions and negation, leading to the development of questionnaires that were subsequently sent to co-researchers around the world. Information from the answers to these questionnaires constituted the main source of data for the project, as well as the point of departure for writing most of the chapters in this volume. Almost all authors were originally participants in my typological project and had worked with a detailed questionnaire designed to elicit information about the structure of negatives and interrogatives in the target sign languages. I then selected some of the questionnaire responses to be expanded into book chapters and included in this volume. Further details about the methodology of the research project can be found in Section 2.1 of Chapter 2.

As is often the case with innovative undertakings of this kind, the starting point for this project was a basic intuition: That sign languages around the world were much more diverse from each other than one could make out from the existing sign language literature, and that the similarities and differences in sign language structures could be investigated systematically in a way quite similar to the cross-linguistic study of spoken languages. Pursuing this intuition immediately led to the one most important problem that anyone faces who approaches the typological study of sign languages, that is, the fact that most of the world's sign languages are severely underdocumented or entirely unknown in terms of their grammatical structures. The existing sign language linguistics literature is heavily skewed in favour of Western sign languages, with American Sign Language in particular dominating the scene. Therefore, the possibilities of drawing upon published sources are very limited in sign language typology. In fact, the field of sign language linguistics has not produced a single comprehensive reference grammar of any sign language so far. Whereas spoken language typologists can often find a wide array of structural realisations of a grammatical domain by scanning the available literature, this option is not yet available for the comparative study of sign languages.

For the further development of the research project and its results, this situation had two important consequences. First of all, it was clear that this project could not just be about collecting and systematizing existing data. Rather, if any significant diversity of languages and structures was to be approximated, most of the data would have to actually be generated by the project itself. The methodologies of data collection, which are described in detail in Chapter 2, are the direct and necessary result of this situation. In addition, major issues of concern arise from this methodology, the most important one being the reliability of these data (see Chapter 2, Section 2.3). Clearly, if a large part of the grammatical structures to be found in this volume have never been investigated before, there are limitations as far as their repeated verification, cross-checking and further detailing is concerned. In spite of repeated follow-up and revisions on the part of both the authors and the editor, this limitation remains very real, and the reader will do well to remember that a large part of the information in this volume is genuinely new and has never been published before.

Secondly, the scarcity of available data also played a role in an important theoretical decision, the decision not to attempt any sampling of languages for this study. Usually, typological studies across spoken languages involve generating a representative sample of languages from which data are drawn for the study. The aim of sampling is to avoid undue bias in favour of a particular sub-group or sub-type of languages. A balanced sample of languages insures that the information we get from such a study is truly representative of all human (spoken) languages and not just typical of Indo-European languages only, for instance. Ideally, language samples for typological studies are both geographically and genetically balanced, that is, we do not want to have an overrepresentation of languages from either a particular region of the world or from a particular language family, and spoken

language typologists have devised ways of working towards this kind of balance as part of the methodological development of the field over the past decades (Comrie 1989, Whaley 1997, Song 2001).

As can be seen from the complete list of sign languages in Section 2.2 of Chapter 2, this kind of balanced sample has clearly not been achieved for the purpose of our project, and it was clear from the beginning that sampling would play no role in collecting the data corpus. In view of the fact that so little information is available about such a small number of sign languages, any and all available information was included in the data corpus, both from existing published sources and from those data especially generated during the course of the project. If any balanced sampling had been attempted, this would necessarily have resulted in a very small number of sign languages to be studied, and therefore the whole undertaking would have been defeated from the very beginning. Instead of dealing with a sample that would have been balanced, but too small to be at all meaningful for cross-linguistic comparison, a larger data corpus with some unavoidable bias was clearly the better option. Moreover, since this study was the first of its kind and there was no prior experience with typological diversity across sign languages, it was always possible for any sign language of any genetic or geographical affiliation to be highly significant for the study in unpredictable ways, and this was another argument in favour of including as much data from as many languages as possible. This decision has resulted in the overall data being skewed quite heavily in favour of European sign languages, although quite a number of Asian sign languages are also represented. The bias in favour of European and North American sign languages that already exists in the sign language literature was further reinforced by the fact that most eligible co-researchers for such a project are also located in the same region. Nevertheless, the project does cover all major regions of the world to some extent, particularly a good number of Asian sign languages, whose structures often prove to be of special interest in the grammatical domain under investigation here.

Another reason for the absence of sampling concerns the genetic balance of the language sample. The reason for ignoring this kind of sampling was not only the scarcity of available data, but also a more severe theoretical problem in sign language linguistics. Not only is the genetic affiliation of most sign languages simply unknown, but the very notion of language families is not at all a well-defined notion in sign language linguistics (Zeshan 2005). We simply do not know enough about historical change in sign languages, the possible results of contact between sign languages, and areal typology of sign languages. Posited relationships between sign languages are usually based on historical information about contacts between deaf communities, with the information itself often being anecdotal rather than the result of systematic research. Sign language linguistics so far has not developed any principled methods of establishing family membership for a particular sign language, reconstructing earlier forms of sign languages, or setting up family trees for sign languages. Therefore, any effort towards a genetically balanced sample of sign languages is again defeated from the very beginning, and all that can be done

is to draw attention to this current limitation in sign language typology research in general and in this volume in particular.

Nevertheless, it is definitely the case that not all sign languages represented in the research project are related to one another, so we do have a number of different genetic groupings (though it is not clear exactly which ones and how many), as well as a number of different geographical regions. For the purpose of this volume, one important consideration for choosing contributions for the individual chapters was to attempt maximum diversity of languages represented in the book. To the best of my knowledge, none of these sign languages are immediately or closely related to one another. The geographical diversity of the sign languages covered by the individual book chapters is indicated in Table 1, and it is evident from this list that the European bias does not apply here. In fact, we do have quite a well-balanced list in Table 1, except that Africa is not represented at all.

In addition to aiming at the maximum possible diversity, an important consideration for choosing languages for the chapters was the quality of the original questionnaires produced by the authors, and the potential of turning those into chapters for the volume. The data collection phase of the project resulted in a total of 18 questionnaires of widely diverging quality and quantity. Most of the chapters in the volume have developed out of the answers to one of the project questionnaires, with a few exceptions as detailed in Section 2. Finally, the choice of chapters also depended on the typological significance of the language in question in the sense that sign languages with typologically unusual structures or particular typologically interesting aspects had priority for being included in the volume. While still far from being exhaustive, I do believe that this volume succeeds in assembling a good number of widely diverging structures within the target domain, and is a successful first step in documenting the true scale of linguistic diversity across sign languages.

## **2. Parts and chapters**

This volume consists of three parts. The first introductory part sets the general background for the studies of individual sign languages, and focuses on two aspects. On the one hand, details about the research project from which this volume has resulted are summarised, so that readers are in a position to evaluate for themselves the scope and significance of the individual chapters and the book as a whole. This is especially important because the evolution of this volume out of a collaborative research project has important consequences for the presentation and the content of the book. Each chapter must be seen in the light of the project as a whole rather than being a stand-alone contribution by the individual author. The sections in Chapter 2 on data and on methodology are particularly useful for understanding the relevant background.

Secondly, the introductory part also summarises the most important results of the whole project. While a full account of the findings from the comparative analysis of all sign language data can obviously not be given, Chapter 2 does highlight and

Europe	northern Europe western Europe southern Europe	3 1 (Finland) 1 (Belgium) 1 (Greece)
Asia	East Asia West Asia South Asia	4 2 (Japan, Hong Kong) 1 (Turkey) 1 (Indian Subcontinent)
Americas	North America South America	2 1 (USA) 1 (Brazil)
Australasia		1 (New Zealand)
Total number		10

Table 1: Geographical distribution of languages represented in the chapters of the volume

exemplify the kinds of cross-linguistic generalisations that can be drawn from the study. The chapter serves to illustrate the range of variation that we can find, in general terms, across sign languages in the target domains of investigation, as well as given a sense of what is common and what is unusual across sign languages. Besides having the advantage of including information about a lot more sign languages than can be covered in the individual chapters in Part II and III of the book, this chapter is also helpful in relating the information from the individual chapters to what was found in the study as a whole. A particular structure reported in one of the other chapters can usually be related back to the overview in Chapter 2. This serves as a point of orientation for the reader who wants to know whether a given structure in a particular sign language exemplifies a common “garden variety” kind of pattern, is highly unusual, or stands in any relationship with other structures, such as being at an extreme end of a variation cline, or implying the absence or presence of other features.

Part II and III of the volume consist of studies on ten individual sign languages. Each chapter begins with a short overview providing basic information about the sign language and the sign language community. This has been done so that readers can have a short, concise point of orientation at the beginning of each chapter. In many cases, this kind of information is not easily available or even previously unpublished, especially for the lesser-documented sign languages in the volume. The intention has been to cover the following points, as far as the information has been available, although in a number of cases, some of the information remains incomplete, unavailable or uncertain:

- Name or names by which the sign language is known
- Extension of the region where it is used
- Information about dialects
- Size of the language community (how many sign language users)
- Genetic relationship with other sign languages, i.e. membership in a language family
- Areal influence/contact with other sign languages, historical information

At the end of each of these introductory texts, basic references about the sign language are listed. These are provided for readers who would like to get acquainted with the existing general literature on each sign language, independently of the domain of questions and negation. Preference has been given to reference listings that are in English and widely available. However, where no or few such publications exist, references in other languages, or items that are not readily available on the market, have also been listed.

The main difference between Part II and Part III of the volume lies in the amount of information and the level of detail provided for each sign language. The six chapters in Part II are full studies of the system of negation and questions in each of the sign languages. The authors of the chapters on Flemish, Hong Kong, Japanese and New Zealand sign languages were all participants in the original typology project, and their chapters have developed out of responses to the project questionnaire. However, different chapters have evolved into somewhat different directions, with each chapter having its own particular focus areas. The chapter on American Sign Language is an exception in that the author was not a collaborator in the original project. However, I strongly felt that with American Sign Language being a common first point of reference for many linguists who come into contact with the field of sign language research for the first time, a contribution about ASL would add value to the volume. This rationale applies to both beginning sign language linguists and, in particular, to linguists from various other specialisations such as language typology. Although added at a later point, the ASL chapter also follows the general format of the questionnaire and is thus quite compatible with the other chapters. Finally, Part II also includes my own chapter on Turkish Sign Language, combining my recent fieldwork with the typological strand of research. It is evident from the style of this particular chapter that it was written with a background of cross-linguistic comparison in mind, and indeed, this sign language proved to be highly significant for the typological study as a whole.

Although all chapters in Part II are based on the project questionnaire, each chapter has its own focal points. Individual sub-topics are often particular to one of the sign languages because the same issues do not occur in or are not relevant to other sign languages.

For New Zealand Sign Language (Chapter 3), Rachel McKee opens up interesting perspectives with respect to the historical development of paradigms in both the interrogative and the negative domain. NZSL is closely related to British



Sign Language and Australian Sign Language (Auslan), and the latter in particular has played an important role in the development of NZSL. The paradigm of question words in NZSL started out with a single general question word derived from a communicative gesture. Under the influence of Auslan and Australasian Signed English (Jeanes & Reynolds 1982), which also draws its vocabulary from Auslan, the paradigm has expanded to include a wider range of question words. Many of these question words have non-interrogative functions, such as being used as indefinite pronouns. The paradigm of negatives has similarly expanded, and often the effects of this recent expansion are still visible in the differences between younger and older signers. The wide range of present-day negative signs and their functions in NZSL is also highlighted in this chapter. They are described in terms of their semantics (e.g. denial, disavowal), their contexts of use (e.g. negative reply, negative quantifier) and their form. A number of formationally related negatives are based on a “zero”-handshape, and the negator NOTHING can be inflected for person.

Michael Morgan in his chapter on Japanese Sign Language (Chapter 4) takes care to situate this sign language in its wider sociolinguistic context. In this complex picture, written Japanese, which also includes various Chinese characters in addition to the Japanese syllabaries, and the contact sign variety Signed Japanese are the most important factors impacting on the structure and usage of Japanese Sign Language. His argument about “grammaticality” judgments being at times both linguistically and politically motivated is particularly intriguing in this context and is a useful concept when trying to evaluate the status of a putative question particle in JSL. Question words in JSL fall into several formational groups, the most important ones being based on the signs WHAT and HOW-MANY and their several combinatorial usages. It is interesting to compare this system with what is found in Hong Kong Sign Language (Chapter 7). Although these two sign languages are clearly from two separate language families and not genetically related, there is a considerable degree of parallelism in the structure of the system of interrogatives in terms of these formational groupings, although they obviously differ in the details. It is an open question whether written Chinese characters have served as a bridge between the two interrogative systems to some extent, or whether there are other possible explanations, such as language contact or areal features. These questions are particularly intriguing given that this kind of interrogative system is not common among sign languages in other parts of the world. The JSL chapter also reports on a considerable variety of negative signs. It is clear from the discussion though that research into negation in JSL is in its early stages and a lot more needs to be done before we can have a satisfactory description of the negative domain in JSL. A particularly interesting sub-domain is the expression of existentials, where there is a distinction between animate and inanimate reference.

Chapter 5 on the sign language used in Turkey addresses all sub-sections of the target domain comprehensively, showing many interesting and typologically unusual features of the language. The non-manual expressions for both negation and questions differ from what is found in most other sign languages, but correlate clearly with the communicative non-manual gestures used by hearing people in the same

region. There are at least two separate negative head movements in Türk İşaret Dili (TID), a repeated side-to-side headshake and a backward head tilt. A discussion of the grammatical status of these head movements clearly concludes that the system conforms to what is called a “manual-dominant system of negation” in Chapter 2, that is, manual signs are the primary negation markers and head movements are secondary. Non-manual marking in content questions is also typologically unusual, involving a fast and tense headshake. The basic clause negator NOT often occurs as a clitic, which is again a structure not commonly found across other sign languages. In the question word paradigm, there is evidence for a sub-group of interrogatives that are morphologically derived from non-interrogative signs by adding a repetitive movement pattern. From a theoretical point of view, the distinction between prototypical and intermediate question types is of particular interest.

In the chapter on American Sign Language (Chapter 6), Susan Fischer not only summarises the known structural facts comprehensively, but also manages to pull together information from many different points of view bearing on the same topic, such as ASL linguistics in the generative paradigm, observations on child language, sociolinguistic variation, and so on. In comparison with other sign languages, the very large number of question words is particularly noticeable, especially if one includes signs that are clearly interrogative but have not traditionally been subsumed under the question word paradigm in ASL. The notion of a “semi-productive system” is of theoretical importance here. Another important section is dedicated to the syntactic position of question words in the clause, a topic which has recently been the subject of much debate in the ASL literature (cf. Lillo-Martin 1997, Neidle et al 2000). It is enlightening that even in the case of a sign language that has been so intensely studied, a number of contentious issues are still far from being resolved.

The Hong Kong Sign Language chapter by Gladys Tang (Chapter 7) is, in some of its sections, a good example of the importance of language contact phenomena in sign language linguistics. A number of HKSL structures have affinity with equivalent structures in Cantonese (as well as other Sinitic languages). The Sinitic languages are well-known for their so-called “A-not-A”-construction in polar questions (e.g. Li & Thompson 1989 for Mandarin Chinese, Matthews and Yip 1994 for Cantonese), where the strategy for expressing something like ‘are you going?’ is to say the equivalent of ‘you go-not-go?’. In HKSL, two constructions show a certain parallelism with the A-not-A construction. The first one involves two clause-final signs GOOD+BAD and HAVE+NOT-HAVE that function as a kind of question particle in a particular sub-type of polar (yes/no-) question. In the other construction, also occurring in polar questions, the main predicate of the clause is doubled, e.g. YOU GO GO PLAY? No other sign language in the entire typological study has been found to have a similar syntactic mechanism of doubling a constituent in interrogative clauses. Although it is important to recognise the impact of language contact with Cantonese on HKSL, the ways in which these structures have been adapted and “nativised” in the sign language are of particular interest. In fact, the use of the sign language structures is far from being identical to

the A-no-A construction in Sinitic languages. Within the domain of negatives, the information on HKSL in Chapter 7 is more limited, but includes a very interesting negative formational strategy by way of handshape alternation. In many sign pairs, a handshape with extended thumb carries positive meaning, and the corresponding negative is created by substituting a handshape with extended little finger. This pattern is very productive and occurs in sign language varieties in other parts of China as well (Yang & Fischer 2002). Again, this kind of negation strategy has not been found in sign languages in any other region of the world.

In Chapter 8, Myriam Vermeerbergen and Mieke van Herreweghe investigate questions and negation in Flemish Sign Language (VGT). This chapter is characterised by a careful, differentiated exploration of the target domains and takes into account the substantial level of regional variation, and to some extent age-related variation, that exists within VGT. Interestingly, the situation with respect to the question word paradigm is much more complex than the patterns of regional variation found in negative signs. From a comparative point of view, it is intriguing to note that there does not seem to be much difference between the degree of regional variation within a very small area such as the Flemish-speaking part of Belgium, and the degree of regional variation within a very large area such as the urban centres in the Indian Subcontinent. Methodologically, this chapter is quite corpus-oriented, drawing most examples from existing corpora, with some additional “semi-elicited” data. In the sections on interrogatives, various construction types are covered including some complex ones such as pseudo-cleft constructions and multiple content questions. Some of the most interesting negatives in VGT are modal auxiliaries, of which there are a good number across the whole semantic range of modals. To the extent that negative incorporation is used in VGT, this process applies mostly to these negative modals.

The “Flashes From Around the World” in Part III provide additional material about interrogatives and negatives in four other sign languages. The chapters in this section were chosen in order to increase typological breadth of coverage in the volume by adding contributions that could not be turned into full chapters for one reason or another. The chapters from Brazil and Greece cover only individual aspects of negatives and questions because not enough information was available to produce a full study. Moreover, these two chapters focus on aspects that were considered to be of particular typological interest, while other sub-topics did not have the same theoretical significance and were left out. The Greek Sign Language chapter (Chapter 9) focuses solely on non-manual negation because this system is cross-linguistically unusual. Greek Sign Language has three different negative head movements, a backward head tilt, a side-to-side headshake and a single sideways head tilt. The distribution of these head movements and their grammatical function is the topic of the chapter. The Greek Sign Language system is quite similar to the use of head movements in Türk İşaret Dili (TID) (Chapter 5), but has not been found anywhere outside the Eastern Mediterranean region. Whereas the discussion in Chapter 5 is general and qualitative, the Greek Sign Language chapter adds welcome quantitative data to the issue.

The Brazilian Sign Language chapter (Chapter 10) discusses selected sub-topics within the domain of questions. The paradigm of question words is complex, including both specific question words and a general question word, alone or in combination with other signs. Several aspects of this system are typologically unusual. For example, there is a single question word subsuming both the meaning of ‘what’ and the meaning of ‘who’. These two interrogatives are often regarded as the most basic ones in a paradigm of question words, so it is unusual for a language not to distinguish between the two. The only case where this distinction is regularly ignored is in systems that have only a general interrogative used to cover the meanings of all question words, as is the case, for instance, in Indo-Pakistani Sign Language (Chapter 12). However, Brazilian Sign Language does have several other specific interrogatives, as well as yet another sign that is used as a general interrogative but is different from WHAT/WHO. Moreover, Brazilian Sign Language has a question word with a dedicated function as an embedded interrogative (glossed Q-e), which occurs only in embedded questions but not in main clauses. This kind of structure is unique in the sign languages that have been surveyed for the typological study. Chapter 10 also discusses the pragmatics of questions in Brazilian Sign Language, including various politeness phenomena.

Chapter 11 on Finnish Sign Language is somewhat different from the other chapters in Part III in that it addresses most sections of the original questionnaire, yet in much shorter form than the chapters in Part II. Therefore, the chapter is aptly titled “An Overview”, more or less listing the inventory of forms rather than going into in-depth discussions at each point. More strongly than others, this chapter is structured around individual signs because of a close connection with extensive dictionary work that the Finnish collaborators had been engaged in. However, some new data that were generated during the course of this project and are not part of earlier dictionary work are also included in this chapter. Utterances in this chapter are transcribed in a slightly different way, in particular with respect to non-manual components, which are transcribed in much more detail than is generally the case in the other chapters.

My own contribution to Part III on Indo-Pakistani Sign Language (Chapter 12) is the only one that is not a direct result of working with the project questionnaire. However, answers to the questionnaire from Indo-Pakistani Sign Language are available in Section 2.3 of the Appendix. This document was used as a sample that was sent to all collaborators in order to illustrate the use of the questionnaire, and it includes brief answers to all sections, with examples and some illustrations. The questionnaire answers in the Appendix are mainly based on the Karachi dialect of IPSL, which is different at some respects from Indian dialects, so that there are a few differences between what is reported in the sample questionnaire and what is reported in Chapter 12.

The IPSL chapter looks at selected negative and interrogative structures from a somewhat different perspective. Since the basic structures of the target domain have already been documented in several previous publications (Zeshan 2000b, 2002a, 2003a), the aim of this contribution is to look at regional variation and the kinds of

arguments that an analysis of negative and interrogative structures can bring to bear on this question. The chapter does include descriptions of questions and negation in IPSL, including some new structures not previously documented, in particular “split interrogative” constructions where a complex interrogative consisting of two signs is split into non-adjacent components in the sentence. However, the structural information is used to compare the degree of similarity between regional dialects of IPSL and to evaluate the significance of the patterns of variation that can be found.

In the Appendix, this volume includes details of the transcription conventions and abbreviations used in the chapters, as well as samples from the original research materials that were used for the typological study. Readers who are not familiar with the conventions used in sign language linguistics will do well to familiarise themselves with Section 1 of the Appendix before starting to read the individual chapters. The transcriptions of signed utterances are standardised to some extent across the chapters in the volume, but not all individual differences and authors’ preferences could be harmonised entirely. Most chapters use English transcriptions only, but Chapter 5 uses double transcriptions into English and Turkish, and Chapter 8 has transcriptions in both Dutch and English.

The research materials in Section 2 of the Appendix include three items: The background questionnaire was sent to prospective collaborators before joining the project and recorded certain details about both the target sign language and the participants themselves. Secondly, the Appendix includes the project questionnaire on interrogative and negative structures, to which the co-investigators responded during the data collection phase of the project. This is the most extensive of the several versions of the questionnaire, which was used by most of the collaborators and most of the authors contributing to this volume. Finally, the sample answers from Indo-Pakistani Sign Language served as a model to illustrate the kinds of answers that may be expected from project participants.

This volume includes not only the written contributions with signs illustrated in pictures, but also several hundred video clips on the accompanying CD-Rom. The video clips consist of single signs and example utterances from all sign languages represented in the volume except Greek Sign Language and American Sign Language. Most of the video clips relate directly to transcribed examples in the respective book chapter, so that the reader can refer to the text first and then look at the signed example in the corresponding video clip. In these cases, the video example number is noted in the text next to or under the transcription of the example. However, not all examples that appear in the text in the individual chapters have accompanying video clips, and sometimes authors have provided additional video examples that are not part of the text itself. Some of the video clips were already recorded during the data collection phase of the project, but most were filmed or re-filmed much later in preparation for the publication of this volume. For further information about how to use the CD, readers can refer to the “readme” document on the CD itself.

### 3. Scope and significance of the volume

The main defining feature of this volume is its direct connection with the collaborative research project on which most of the chapters are based. In fact, the significance of the book lies not only in the value of the individual contributions, but specifically in the fact that all contributions have followed the same framework. This applies to the content in terms of the main domains of grammar discussed in the chapters and to the terminology, which is standardised to a large extent across the whole book. This organisation makes it easy to directly compare the structures found in the individual sign languages with each other.

However, this uniformity of approach has some secondary effects which are important to keep in mind when reading through the book. First of all, the authors often report the most canonical structures found in their target sign languages because it has been the aim of the typological project from the beginning to identify these structures. Therefore, the chapters do not always pay full attention to variation and further complexities that exist in some of the target domains. It may at times have been possible to enter into elaborate in-depth discussion of alternatives to a particular analysis, or to assemble further evidence which is at variance with the most typical structures presented here. For instance, there is often considerable variation with respect to non-manual behaviours used in questions, depending on both linguistic structural factors and pragmatic factors, and it is not always easy to draw the line between grammatical and affective components of a facial expression. Such complexities are not always discussed in a principled way in the contributions to this volume, simply because from the very beginning, this has not been the aim of the whole undertaking.

Secondly, the fact that most chapters are built around responses to a structured questionnaire has also reflected on the style of the contributions, which is often more “report-like” than would usually be the case in a research paper. There is necessarily a certain level of generalisation built into the chapters, which reads differently from the somewhat more careful hedging that is typical of other kinds of publications. Though the authors are careful enough to qualify their statements, provide counterexamples and introduce some level of cautious reservation where appropriate, the typological approach has exerted some pressure towards categorizing structures more decisively than would otherwise be the case. For example, clause negators are usually assigned to one of the available categories, although it is often possible to use a particular negator in more than one function, some of which may overlap with another negator. For instance, a number of sign languages, such as Ugandan Sign Language, use a negative sign that would be categorised as a negative existential in our framework in ways that very nearly approach the function of a basic clause negator. In such cases, where in principle one could choose between focusing on the “fuzziness” or the categoriality of a certain phenomenon, the theoretical slant of this volume naturally leans towards the latter possibility.

In terms of its significance for the field of sign language typology, this publication is clearly one of the very first steps towards a better understanding of typological variation across sign languages. When abstracting away from the individual languages and their data, a number of general issues emerge repeatedly. First of all, when investigating structural variation it is important to look at an appropriate level of detail. For example, it is not enough to simply state that a sign language uses a side-to-side headshake for negation, and stop at this level of generality. If we stay at this superficial level, all sign languages would indeed look alike, since indeed every sign language in our sample does have this kind of negative headshake, and there would be nothing interesting to say about this topic from a comparative point of view. However, looking at the grammatical patterns of use of the headshake, it quickly becomes clear that this negation strategy has very different properties in Japanese Sign Language and in Flemish Sign Language, for instance (cf. Chapter 4 and Chapter 8 in this volume). Finding the right level of analysis, and indeed the right parameters to study in the first place, is not trivial in sign language typology, since we can hardly draw on any previously existing experience with such studies.

Another important issue that keeps coming up is the impact of language contact – both between different sign languages and between a sign language and a spoken language – on the structure of a sign language. This line of investigation may potentially lead to explanations for some of the patterns we find across the sign languages in our sample. So far, it is an open question whether an areal typology of sign languages can be developed and would yield similar fruitful results as areal typology in the spoken language domain. We simply do not have enough systematic information about the ways in which sign languages influence each other and are influenced by surrounding spoken languages. However, the fact that such influence is very much a reality is evidenced more than once in the contributions to this volume, as was exemplified in the case of Sinitic A-not-A construction in Section 2 above. In Zeshan (2005), a world map charting the occurrence of question particles in sign languages shows that East Asian sign languages are particularly rich in question particles and stand out from the rest of the world in this respect. Spoken languages in this area are also rich in question particles, but we cannot be sure whether the pattern in the sign languages is due to contact between the sign languages themselves, or to contact with the spoken languages of the region, or indeed whether this trends would hold up to closer scrutiny in an in-depth study.

Similarly, it is striking that all manual dominant systems of negation found in the typological sample occur in non-Western sign languages. By contrast, the opposite pattern is found with respect to pre-verbal placement of negative particles, which overwhelmingly occurs in the sign languages of Europe and North America (Zeshan 2004a), while non-Western sign languages prefer clause-final placement of negators. No explanations can be hypothesised for these tendencies at present, and there are many more patterns emerging from comparative sign language data that also cannot be explained at the moment. It will be the task of future studies

to identify promising lines of explanation for such patterns, and it is important to remember that the contact between a signed and a spoken language includes a number of sub-systems, such as conventionalised gestures used by hearing people, contrived sign systems, and written forms of the spoken language (cf. Chapter 4 on Japanese Sign Language for details on one such scenario).

Finally, the historical development of sign languages is another factor that will be of great theoretical importance for future studies. This issue is even more difficult to approach than the others discussed in this section. In this domain, problems are not only due to the lack of historical documentation and the lack of conceptual clarity in relation to the notion of “sign language families” (cf. Section 1). There is also a huge area to be explored with respect to the development of grammatical structures in sign languages. For instance, it is striking that some sign languages have no or very little irregular negatives in the form of negative derivation or suppletion, while others have quite a lot, but no sign language has morphological negation as a general negation strategies (cf. Chapter 2, Section 4.2). Instead, negative particles are the norm across sign languages, with morphological negation being exceptional to a greater or lesser extent. Part of the reason for this could well be related to the individual age of sign languages, the older ones being more likely to have developed irregular negation than the younger ones, but in the absence of reliable historical information, this line of reasoning also remains speculative at present.

To return to the question of significance of this volume, it is clear that this cross-linguistic study is evidence of the early stages of sign language typology. However, the longer-term goal is already clearly marked out: As we go along enriching our understanding of an ever-increasing range of grammatical structures in sign languages at ever-increasing levels of linguistic sophistication, we should be working towards an empirically substantiated theory of variation across sign languages. In this endeavour, studying the *range* of typological variation is only the first step. In fact, as already noted above, it is a natural and almost automatic by-product of such studies that we will also notice this variation to fall into a limited number of *patterns*. Further examples of some such patterns are discussed in Chapter 2 of this volume. Within the domain of negation, this would include, for instance, the preference for post-placement of negators (Section 5.2), the typology of irregular negation (Section 4.2), and the distinction between manual dominant and non-manual dominant systems of negation (Section 3.2). It will then be the task of sign language typology to suggest explanations for the patterns we find, this becoming the central part of the theory of variation. Some of the issues summarised in the previous paragraph would certainly enter into such theoretical debate. With an even tentative grasp on such issues, we would be in a much better position to contrast the entire range of signed languages with the entire range of spoken languages and to re-assess the question of what exactly it is that makes signed languages – all signed languages – different from spoken languages and that could justifiably be taken as defining criteria of the visual type of human language. There is still much uncharted



territory to cover before this stage can be reached. For instance, an entire new class of sign languages is only just beginning to emerge from obscurity. These are the natural sign languages used in village communities with a high incidence of deafness, often hereditary deafness. Typically, these sign languages arise in isolation from other sign languages and are localised in a very small geographical area (Johnson 1994, Branson, Miller & Marsaja 1999, Nonaka 2004, Nyst 2004, Sandler, Meir, Padden & Aronoff 2005). One such sign language, Kata Kolok from Bali, was included in the typological project on questions and negation, but there are many others whose linguistic structures are undocumented or which have not even been identified yet. Hopefully, the exciting findings of this volume will motivate other researchers to pursue similar work in the future and add their own bits and pieces to the growing, colourful mosaic of sign language typology.

## Chapter 2

# Negative and interrogative constructions in sign languages: A case study in sign language typology

Ulrike Zeshan

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### **1. Introduction**

Large-scale typological studies on sign languages are a novelty. In previous linguistic research, sign languages have neither been included in broadly-based cross-linguistic studies, nor have there been any comparative studies across a substantial group of sign languages. This chapter provides an overview of some major findings from the first-ever case study in sign language typology.

The choice of negative and interrogative constructions as the main focus of the case study was not a coincidence. This target domain represents a very suitable candidate for sign language typology. First of all, questions and negatives constitute a central domain of the grammar of all languages because in all languages, speakers/signers must be able to ask questions and negate statements. The domain also includes a large number of interesting sub-parameters, which are, for the most part, straightforward enough to be explained in not-too-technical terms for the purpose of cooperating with co-researchers around the world. Moreover, both negation and questions have been studied extensively across spoken languages, and published information on some of the target constructions is available for a substantial number of sign languages. In practical terms, of course, my personal experience with sign

language varieties in India/Pakistan and Germany and the very noticeable differences in their structures also played a role in making this choice.

After discussing the methodology of the study and the data corpus, some of the main results are discussed in relation to three major domains: Non-manual ways of marking questions and negatives, paradigms of question words and clause negators, and syntactic patterns in negatives and interrogatives.

## **2. The study and the data**

### **2.1 Design of the study**

In the preparation phase for the project, a set of parameters for negatives and interrogatives was developed to be investigated across sign languages. These were largely derived from available typological literature on spoken languages (e.g. Chisholm 1984, Payne 1985, Dahl 1979). Although sign languages themselves have not figured in any cross-linguistic studies on negation or questions, many parameters and construction types that have been investigated across spoken languages can straightforwardly be applied to sign languages. However, I also had to develop a number of additional parameters that are crucial for studying sign languages but are not relevant to the spoken language modality. This includes, for example, the relationship between signs and gestures, and the role of facial expressions and head movements in the grammar of sign languages. For such aspects of the study, the existing sign language literature was helpful.

A wide range of parameters within the target domain was covered in the study, not all of which can be discussed in detail here. For the domain of interrogatives, a principal division is between two major types of questions, polar questions (also known as “yes/no-questions”) and content questions (also known as “wh-questions”). Information about question words constitutes a substantial part of the latter question type. Question particles, mostly occurring in polar questions, represent a third major sub-domain. Finally, some aspects of the pragmatics of questions, such as ways of introducing and answering questions, and the use of interrogatives for polite commands or requests, were also included in the study.

The use of facial expressions and head movements is a recurrent phenomenon that was investigated for various types of both interrogatives and negatives. Similarly, the relationship between signing and gesturing, with both manual and non-manual

aspects, is important in both interrogatives and negatives. The expression of negation through manual signs includes paradigms of clause negators of various size and complexity. In sign languages, these negators usually occur in the form of independent particles. However, a limited number of signs in many sign languages have irregular negative forms, which may be suppletive or derived from the positive forms through various morphological processes. In addition to these sub-domains, the study also included particular cases of negative construction types such as constituent negation, negative quantification, and the like.

The parameters of investigation were turned into detailed questionnaires designed to elicit, with the help of co-researchers around the world, the kind of information that was to be the focus of the study.<sup>1</sup> The answers to these questionnaires constitute the most important source of data for the study, supplemented by my own fieldwork data and by published materials. The data are described in detail in Section 2.2, and methodological issues are discussed in Section 2.3. Most of the data were entered into a Microsoft Access database, which was mainly used as an analysis tool for testing hypotheses about the data.

It would be far beyond the scope of this chapter to try to summarise the results of all parameters of investigation. Rather, the aim here is to demonstrate the kinds of insights that emerged from the study and to relate them to a larger conceptual framework of sign language typology. Moreover, the remainder of this chapter serves to situate the chapters on individual sign languages in Part II and Part III of this volume within the larger context of typological variation across sign languages. Therefore, I provide a general overview of the main points and most interesting findings of the cross-linguistics study while referring to chapters on individual sign languages in this volume for more detailed information. More extensive discussion, data and analysis of negative constructions and interrogative constructions across sign languages can be found in Zeshan (2004a) and Zeshan (2004b) respectively.

## **2.2 Data**

The data used for the cross-linguistic sign language study fall into three main categories: questionnaires, publications, and my own fieldwork and research data. For some sign languages, more than one type of data has been available. An overview of the current data from 37 different sign languages is presented in Table 1.

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<sup>1</sup> The most extensive of the questionnaires is included in full in the appendix to this volume.

<i>Sign language</i>	<i>Country/region</i>	<i>Type of data</i>
American Sign Language (ASL)	U.S., Canada except Québec	published material
Auslan	Australia	questionnaire (text, with ref. to dictionary) dictionary (pictures, video clips)
British Sign Language (BSL)	Great Britain	published material
Chilean Sign Language	Chile	published material (negation only)
Chinese Sign Language	mainland China	published material (negation only)
Dansk Tegnsprog	Denmark	questionnaire (text, pictures from dictionary)
Deutsche Gebärdensprache (DGS)	Germany	published material
Finnish Sign Language (Suomalainen viittomakieli)	Finland	questionnaire (text, video frames from dictionary, video with transcription)
Greek Sign Language	Greece	questionnaire (text)
Hong Kong Sign Language	China (Hong Kong)	questionnaire (text, video with transcription)
Islenskt Taknmal (Icelandic Sign Language)	Iceland	questionnaire (text, video with transcription)
Indo-Pakistani Sign Language	India/Pakistan	sample questionnaire (text, pictures) own fieldwork
Irish Sign Language	Ireland	questionnaire (text, video with transcription)
Israeli Sign Language	Israel	questionnaire (text, video with transcription)
Kata Kolok	Bali, Indonesia	own video data
Kenyan Sign Language	Kenya	questionnaire (text) dictionary own video elicitation
Langue des Signes Française (LSF)	France	published material dictionary
Langue des Signes Québécoise (LSQ)	Canada (Québec)	published material

Lengua de Señas Argentina	Argentina	published material
Lengua de Señas Española	Spain except Catalonia	questionnaire (text, video with transcription)
Língua Gestual Portuguesa	Portugal	published material
Lingua Italiana dei Segni (LIS)	Italy	published material (interrogatives only) dictionary
Língua de Sinais Brasileira	Brazil	questionnaire (text, video frames)
Lughat al-Isharat al-Lubnaniya	Lebanon	own fieldwork
Nederlandse Gebarentaal	Netherlands	published material
New Zealand Sign Language (NZSL)	New Zealand	questionnaire (text, video frames)
Nihon Shuwa (Japanese Sign Language)	Japan	questionnaire (text) published material
Norsk Tegnspråk	Norway	published material
Russian Sign Language	central part of Russia	published material own video elicitation
South Korean Sign Language	South Korea	questionnaire (text)
Svenska Teckenspråket	Sweden	published material
Taiwanese Sign Language (Ziran Shouyu)	Taiwan	questionnaire(text; interrogatives only)
Tanzania Sign Language (Lugha ya Alama ya Tanzania)	Tanzania	questionnaire (text) dictionary own video elicitation
Thai Sign Language	Thailand	dictionary own video elicitation
Türk İşaret Dili (TİD)	Turkey	own fieldwork
Ugandan Sign Language	Uganda	questionnaire (text, video with transcription)
Vlaamse Gebarentaal	Flemish part of Belgium	questionnaire (text) published material

Table 1: Data used in the typological project

A total of 18 questionnaires were collected for the study (see Section 2.3.a), most of which also included some kind of visual representation of signs (pictures or video clips). Respondents were mostly teams of native sign language consultants and hearing linguists (for Denmark, Finland, Hong Kong, Israel, Spain, South Korea, Belgium, and New Zealand), or hearing sign language linguists who have deaf parents and are thus native users of the sign language (Australia, Greece, and Brazil). A few hearing researchers who had acquired a local sign language as a second language participated on their own (Japan, Iceland, Taiwan), and a special questionnaire designed for non-linguists was provided for some deaf participants from Ireland, Kenya, Tanzania and Uganda. The use of publications in the form of books and research articles or in the form of dictionaries and word lists is discussed in Section 2.3.c.

My own data include extensive fieldwork materials from India/Pakistan, Turkey and, to a lesser extent, Lebanon, as well as data generated through cooperation with a hearing researcher and a deaf informant from Bali. Moreover, I conducted several elicitation sessions filmed on video (see Section 2.3.b) in order to collect some basic data on negative and interrogative structures in a number of additional sign languages (“own video elicitation” in Table 1, from Thailand, Tanzania, Kenya and Russia).

Based on Table 1, we can establish the geographical distribution of the sign languages represented in the typological survey as follows:

Americas:	5
Europe:	16
Africa:	3
Asia:	11
Australasia:	2
<b>Total</b>	<b>37</b>

All sign languages in the data are full-fledged languages that are used by deaf communities around the world. With the exception of Kata Kolok in Bali, which is used in a village community with a high incidence of hereditary deafness (Branson, Miller & Marsaja 1999), these communities are primarily urban communities. In a number of cases, it is difficult to decide on the linguistic boundaries of a sign

language, which may or may not coincide with political, ethnic or spoken language boundaries. For instance, it is not at all clear whether the sign language variety used in Lebanon is limited to this country or extends over a larger area including neighbouring Arabic-speaking countries. Conversely, it is not clear how different the sign language varieties in Hong Kong and in mainland China actually are from one another and whether there is more than one sign language in mainland China. Finally, the question of what constitutes a language versus a dialect is of course just as intractable in sign languages as it is in spoken languages. For instance, British Sign Language, Auslan (Australia) and New Zealand Sign Language could be considered different languages but could also be argued to be dialects of one and the same sign language (Johnston 2000). Such issues cannot be resolved at this stage, but should be kept in mind for subsequent typological work.

The geographical distribution of sign languages is heavily skewed in favour of European sign languages (16). Asian sign languages are also somewhat well represented (11), while Africa is the most severely underrepresented continent (3). Such an uneven distribution is currently unavoidable and is due to the fact that, as detailed in Section 1 of Chapter 1, no representative sampling was used to choose which sign languages should be included in the study. For some areas, such as North America, the small number of sign languages is due not to a lack of documentation but to the fact that there are few sign languages used in a large geographical region. Since genetic sampling and indeed the identification of genetic groupings cannot currently be established, this factor is not controlled for either. However, it is definitely true that the sign languages listed in Table 1 are not all genetically related to each other and do represent a number of distinct genetic groupings, although in most cases, neither the nature of these groupings nor the affiliation of individual sign languages is sufficiently clear at present.

### **2.3 Methodological considerations**

Since the study on interrogative and negative constructions across sign languages is the first of its kind, it is important to consider a number of methodological issues associated with the novel approach and, in particular, to discuss the various limitations that a study of this kind necessarily has at the present stage of research. Apart from the aforementioned skewed distribution of the languages in our data, methodological problems mainly concern the various methods of data collection



that were used during the course of the study. This section discusses the use of questionnaires collected from co-researchers, the video data collected in elicitation sessions, and the use of published sources included in the survey.

*a) Questionnaires*

In principle, using questionnaires prepared by co-investigators has many potential advantages. The coordinating typologist may get direct access to in-depth knowledge of specialists working on various languages, the domain of investigation can be targeted much more precisely, and it may be possible to obtain recent, previously unpublished information. In sign language typology, this method of data collection has particular significance because it is necessary to actually generate the majority of the data in the course of a project (cf. Chapter 1, Section 1). However, the method also presents some problems.

The first challenge is to find willing and able co-researchers. Fortunately, the field of sign language linguistics worldwide is still very small and researchers tend to be well connected to each other. It has therefore been comparatively easy to identify the groups and individuals who have subsequently been able to contribute the substantial written explanations, examples, graphics and videos that now make up the bulk of the project data. Above all else, it was this unique group effort which made the project possible. In order to assess each participant's background, co-researchers first submitted preliminary questionnaires with basic information about the sign language itself as well as information about the sign language background and the linguistics background of all people who would be involved in the project.

A number of measures were taken to address a principal methodological problem associated with working through questionnaires, namely that the co-researchers may misinterpret the instructions or misrepresent the data in some way. All terminology used in the questionnaire (for instance, "polar question", "auxiliary", "contrastive negation", etc.) was explained in the questionnaires, often with examples. Sometimes a linguistic term was defined more broadly than would usually be the case (for instance, "question particle") in order to encourage co-researchers to report structures that may or may not fit a more narrow interpretation. As far as possible, the questionnaire avoided open-ended questions and instead provided definite choices. For instance, rather than asking "What is the syntactic position of...?", respondents were asked to identify possible syntactic positions from a list of options. The questionnaire also included explicit requests for providing example sentences and graphic representations of individual signs for the most important points. For

a few respondents with no background in linguistics, a separate questionnaire was devised to elicit basic information using only non-technical language. Finally, I provided a set of sample answers from Indo-Pakistani Sign Language from my own data, which could serve as a model to illustrate the use of the questionnaire. The sample answers are included in the appendix to this volume.

After receiving the responses to the questionnaires, there has been a wide variety of continuous follow-up activity. Keeping all co-researchers well-informed at all times about the progress of the project has been part of its philosophy from the beginning. I corresponded with all co-researchers about aspects of their responses and compared questionnaire answers with available published sources and dictionaries where possible. At various stages of the publication of the results, all co-researchers had opportunities of cross-checking any use of the data that they had provided in order to avoid any errors or misrepresentations.

*b) Video data elicitation*

In order to obtain some basic data from additional sign languages, I conducted several elicitation sessions during the World Federation of the Deaf Congress in Brisbane, Australia, in 1999. Since the available time for each session was very limited, I only asked participants to translate a number of questions and negative sentences from a spoken/written language (English, Thai, Russian) into their sign language. The utterances produced during these sessions were videotaped. This methodology is generally avoided in sign language research because it has major shortcomings. Even if the informants have sufficient knowledge of the spoken/written language, which is not always guaranteed, the methodology can easily result in distorted data. The written sentences are presented out of context and may be misunderstood. More importantly, the signed utterances may end up resembling the stimulus sentences rather than being the natural and most common way of expressing the same idea in a particular sign language because there is often a substantial level of interference and unintended “word-by-word” translation. For sign languages, this outcome is particularly likely in cases where artificially created signed codes exist to represent spoken languages “on the hands”. Such systems are known as “Signed English”, “Dutch in Signs”, “Signed Mandarin”, and so on, and are usually used in educational settings only (cf. the contributions by Tang, Vermeerbergen & van Herreweghe, and Morgan in this volume). In such systems, sign language specific morphology is omitted, word order follows the spoken language, and additional signs are invented to represent morphemes that have no equivalent in the sign language. In those

countries where a primary sign language co-exists with a signed code for a spoken language, influences from the signed code need to be avoided when collecting sign language data. In an artificial elicitation situation and where a translation process is involved, there is always a danger of “contamination” of the sign language data from the secondary signed code, which may severely compromise the value of data obtained in such a situation.

Because of such interference, or because the data were invalid for other reasons, data from sessions with signers from Saudi Arabia, Malaysia, Taiwan and Uganda were excluded from analysis. Data obtained from the remaining elicitation sessions (Thailand, Tanzania, Kenya and Russia) were only included in the study inasmuch as they could be independently verified from other sources. For example, the data from Thailand were subsequently verified with deaf signers from Thailand and found to be wholly accurate, whereas the data from Kenya were more ambiguous, so that only some aspects were included in the analysis after cross-checking with the questionnaire and a dictionary.

### *c) Interpreting the data*

Because the field of sign language typology is so new, all data used in the study are primary sources. Secondary typological sources in the sense of compilations and analyses of data from a substantial number of languages are not available for sign languages yet. Therefore, the study can be said to be reasonably close to the original data, which is a positive aspect. However, the reliability of all data, as well as their interpretation, has been a major methodological challenge.

Problematic issues associated with the questionnaire method and the elicitation sessions have already been discussed. Another substantial part of the data consists of published material. Ideally, the use of published sources would have been restricted to materials for which a certain standard and quality can be assumed, such as publications in international peer-reviewed journals. However, this would have left us with very little materials from very few sign languages. It would have excluded items such as sign language dictionaries produced by deaf associations, recent unpublished manuscripts, and articles in lesser-known non-refereed journals. Such materials often constitute the only available source of information about sign languages in developing countries where the field of sign language linguistics is not yet established. It was therefore necessary to find a balance between including a broader range of information and instituting some precautions against including unreliable data and analyses.

In some cases, even when one can be reasonably confident about the sign language data themselves in a narrow sense, they are often not presented in a framework that is useful for typological purposes. For instance, it is quite difficult to find references to negative existentials in many European and North American sign languages, not because they do not exist but because they have not been described as such. One needs to instead look for signs that are glossed as NONE or NOTHING and try to find out whether these fit the definition of a negative existential. Moreover, many important grammatical notions have simply not been widely applied to sign languages yet, for example the status of a sign language morpheme as a clitic or an affix. Instead, one may have to reinterpret pretheoretical terms such as “contraction”.

Similar problems of course also apply to spoken language typology where typologists have no first-hand knowledge of most of the languages they are investigating. Song (2001:41) does note that “the use of primary materials is not without problems”, but also identifies a more positive way to look at the situation by considering the data not individually but as a whole: “If a certain pattern of structural type occurs in language after language, one can be reasonably assured that this is a real phenomenon to be identified as such. Primary materials may fail to inspire faith individually, but they may inspire faith collectively.” (ibid.) This reasoning definitely holds for sign languages as well and can serve to put doubts about the data into a more positive perspective. However, for sign language typology the problem is compounded by the scarcity of data that are potentially available in the first place. This situation leaves much less room for choosing between alternative sources of data for a sign language, or for choosing to include one language and exclude another, than is the case for spoken language typology.

If we do not want to exclude a priori potentially doubtful sources of primary data, the only viable option is to be very cautious in the way we interpret the available information. Real in-depth experience with research on at least one, if not several, sign languages is essential when trying to judge the quality of published sources. Often it will then be possible to reinterpret data or analyses in terms of the typological framework used in a cross-linguistic project, and to separate valid data from doubtful claims. As noted in the above quote, recurrence of familiar structures is also an important aspect for assessing “collectively based confidence” in the data. For instance, if all sign languages so far have been found to have headshake negation, the existence of headshake negation in another sign language that is only documented in a non-refereed paper (in this case, Chilean Sign Language) seems quite credible. However, any claims about more intricate questions such as, for

instance, the grammatical status or the scope of the headshake, should be taken more cautiously. Finally, a problem that extends to all types of the project data inasmuch as they are represented on paper rather than on video is that the information derivable from written transcriptions of sign language data is rather limited (cf. the information about transcription in Section 2 of Chapter 1 and in the Appendix).

In spite of substantial methodological challenges, the information collected during the course of the project has revealed fascinating insights into the extent of cross-linguistic variation that can be found in sign languages. The following sections give an overview of some of the basic findings of the study.

### 3. Non-manual marking

In sign language linguistics, the term “non-manual marking” refers to the use of any part of the body other than the hands for the purpose of marking grammatical functions. This may be in the form of facial expressions, head movements, body posture, eye gaze, or a combination of several of these. A particular non-manual configuration used for a particular grammatical function is called a “non-manual marker”.

Non-manual markers in sign languages are suprasegmental, that is, they spread over a smaller or larger string of manual signs in a clause, just as intonation in spoken languages is superimposed on spoken words (cf. Sandler 1999a). Non-manual marking has been shown to play an important role in the structure of sign languages, in particular in identifying various clause types (e.g. Baker & Padden 1978 for American Sign Language, Coerts 1992 for Sign Language of the Netherlands, Zeshan 2000a for Indo-Pakistani Sign Language).

An important notion associated with non-manual marking is the notion of “scope” (or “spread”) of the non-manual marker. This is defined as the extent of a string of manual signs co-occurring with the non-manual marker.<sup>2</sup> That is, all manual signs that co-occur with a non-manual marker are said to fall under its scope. The minimum scope of a non-manual marker is a single sign, the maximum scope is the whole clause. The scope of a non-manual marker is an important parameter in the comparison of non-manual marking across sign languages.

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<sup>2</sup> Note that this usage is not necessarily the same as in other linguistic definitions of “scope”, as found, for instance, in much of the literature on negation (e.g. Horn 1989: 479ff).

### 3.1 Non-manual marking in interrogative clauses

Across sign languages, all types of interrogative clauses strongly tend to be marked non-manually. I concentrate on the most basic types of direct questions here, polar questions and content questions, leaving aside other types such as rhetorical questions, reported questions, and the like. In most sign languages, polar questions and content questions are marked differently, although sometimes a polar question can have content question non-manuals and vice versa (cf. the contribution on Turkish Sign Language (TID) in this volume). For a few sign languages in the data, the same non-manual marking is reported for both polar and content questions.

The most common way of marking polar questions is by way of non-manual marking alone, and there is a significant degree of overlap in the form of polar question non-manuals across sign languages. The marking typically involves a combination of several features, including raised eyebrows, wide open eyes, eye contact with the addressee, and a forward head and/or body position.<sup>3</sup> Non-manual marking in polar question is usually obligatory, whereas manual ways of marking a polar question (cf. Section 5.1) are optional. With respect to content questions, we often get the reverse situation, that is, non-manual marking is less obligatory, whereas a manual question sign is typically present, although it may be absent under certain conditions.

Examples (1a) and (1b) exemplify the difference between a statement and a corresponding polar question in Indo-Pakistani Sign Language. In (1b), the polar question is signalled through non-manual marking. Note, in particular, the difference between the two realisations of the sign DEAF in (1a) vs. (1b).

Indo-Pakistani Sign Language:<sup>4</sup>

- (1a) TEACHER DEAF  
'The teacher is deaf.'

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<sup>3</sup> This applies to the canonical, most typical form of non-manual marking, in the absence of interfering factors such as the expression of doubt or disbelief, the use of echo questions or emphasis, the expression of a particular pre-supposition, and the like.

<sup>4</sup> Examples for which no reference is quoted are taken from the project data (questionnaires) or from my own fieldwork data. Transcription conventions are explained in the Appendix

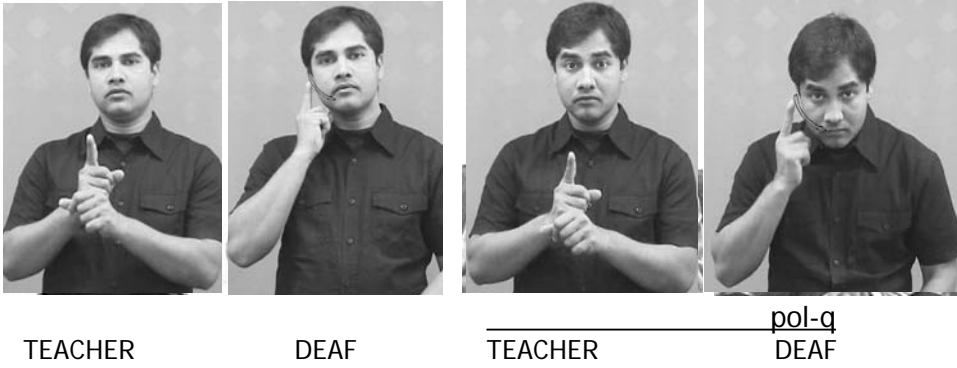


Figure 1: Example (1a)

Figure 2: Example (1b)

(1b) pol-q  
 TEACHER DEAF  
 ‘Is the teacher deaf?’

In addition to being less obligatory than in polar questions, non-manual marking in content questions is also more variable cross-linguistically in form and in scope. For most Western sign languages, lowering the eyebrows is reported as a major feature of canonical non-manual marking in this question type. However, Indo-Pakistani Sign Language uses brow raise in combination with a backward head tilt, while the marking in Türk İşaret Dili (Turkey) includes a headshake.

As in polar questions, the scope of content question non-manuals may include the whole clause (minus any topicalised constituents). However, it is also true that the non-manual marking is often more closely associated with manual interrogatives than with other constituents. For example, in the data from Ugandan Sign Language, content question non-manuals often have scope over the question word only. Nihon Shuwa (Japan) has a particularly interesting structure with a sub-type of non-manual marking (*wh'*) that can occur clause-finally by itself (Example 2). This kind of structure is not attested for any other sign language in the data.

Nihon Shuwa (Japan):  
 (2) COLOUR LIKE wh'  
 ‘What colour do you like?’ (Fischer & Osugi, to appear)

In many sign languages, it is possible, though not necessarily frequent, to mark content questions non-manually only. In this case, the scope of non-manual marking is usually the whole clause. An expression such as in Example (3), where the context is quite conventionalised, occurs in many sign languages. In other cases, the meaning has to be inferred from the context, with sometimes more than one possibility of interpretation (Example 5).

Russian Sign Language:

- (3)                   cont-q  
INDEX<sub>2</sub> WORK INDEX<sub>2</sub>  
'What do you do?'

Lengua de Señas Argentina (Argentina):

- (4)                   cont -q  
BE-BIRTHDAY INDEX<sub>3</sub>  
'When is his birthday?' (Veinberg, w/o year:15)

American Sign Language:

- (5)                   cont-q  
FATHER LEAVE  
'Why/how/when did father leave?' (Petronio & Lillo-Martin 1997:36)

### 3.2 Non-manual marking in negative clauses

In all sign languages in the data, non-manual marking in negative clauses mainly occurs in the form of head movements. There are also a variety of additional facial expressions, such as furrowed brows, wrinkled nose, corners of the mouth pulled down, etc., that may accompany the whole clause or individual negator signs. Since the status of facial expressions as instances of grammatical non-manual marking is often uncertain, I concentrate on negative head movements in this section.

One of the most striking results of comparing non-manual marking across sign languages has been the fact that a non-manual marker can occur in different sign languages in the same form, but with a very different function. Thus all sign languages in the data use a side-to-side headshake in negative clauses, but the grammatical status of this negative headshake and the constraints applying to its use vary substantially from language to language. In addition to the headshake, sign languages in the Eastern Mediterranean (Greece, Turkey, Lebanon) also use



an alternative head movement, a backward head tilt that is usually accompanied by raised eyebrows (see Figure 6 in Section 4.2) and is clearly an areal feature of this region (see Antzakas, this volume).

A number of characteristics related to the use of negative head movements tend to occur together in two different constellations. This empirical observation allows us to posit two superordinate types to which most of the sign languages in the data can be assigned. In the first type, the non-manual negation is the primary marker of negation, whereas in the second type, the manual negator is more prominent. The characteristics of each type are summarised in Table 2. They are of course prototypical and can have slightly different realisations in different sign languages. In some cases, not all characteristics apply to a particular language, and some sign languages may display a mixed system where neither manual nor non-manual negation can be seen as primary.

<i>Characteristics of non-manual dominant systems of negation</i>	<i>Characteristics of manual dominant systems of negation</i>
non-manual negation is obligatory	non-manual negation is not obligatory
clause can be negated non-manually only, manual basic clause negator is optional	clause cannot be negated non-manually only, manual negator is required
choice of non-manual marking does not depend on manual signs	choice of non-manual marking depends on choice of manual clause negator (if there is more than one non-manual configuration)
non-manual negation spreads freely over the clause	scope of non-manual negation is over the manual negator only or is closely tied to the manual negator
Examples: Deutsche Gebärdensprache (Germany), Svenska Teckenspråket (Sweden), American Sign Language	Examples: Kata Kolok (Bali), Türk İşaret Dili (Turkey), Nihon Shuwa (Japan)

Table 2: Manual dominant and non-manual dominant systems of negation

Non-manual dominant systems represent the majority of sign languages in the data. For 26 out of 37 sign languages, the possibility of negating a clause using a negative headshake only, without any manual negator present in the clause, as in Example (6), could be confirmed, with a number of other sign languages currently lacking information on this point. Several sign languages use headshake negation as the most frequent and/or most basic clause negation strategy. This is reported, for instance, for several Scandinavian sign languages (Norway, Sweden, Finland). However, there is always room for language-specific exceptions. Thus Bergman (1995a) also reports for Svenska Teckenspråket (Sweden) that there is one environment where headshake-only negation is disallowed. With modal auxiliaries such as CAN and NEED, a manual negator must be present in the clause and headshake-only negation is ungrammatical (Example 7).

Nederlandse Gebarentaal (Netherlands):

- (6)      \_\_\_\_\_neg  
 INDEX<sub>1</sub> OUTSIDE WORK  
 ‘I couldn’t work outside.’      (Coerts 1992:216)

Svenska Teckenspråket (Sweden):

- (7)      a.    top    \_\_\_\_\_neg  
 F-R-E-D / CAN NOT SWIM  
 ‘Fred can’t swim.’  
 b.    \* top    \_\_\_\_\_neg  
 F-R-E-D / CAN SWIM      (Bergman 1995a:87)

For a smaller group of sign languages with manual-dominant systems of negation, it is not possible, or may be possible under narrow constraints only, to negate a clause non-manually only. In these languages, a manual negative sign is usually required in a negative clause, whereas non-manual negation may or may not be present in addition to the manual negator.<sup>5</sup> Thus examples (8) and (9) are ungrammatical. This group includes Nihon Shuwa (Japan), Türk İşaret Dili (Turkey), Hong Kong Sign Language, and Kata Kolok (Bali).

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<sup>5</sup> Note that it does not matter how frequent non-manual negation is. In fact, in some sign languages from this group, non-manual negation occurs very frequently. However, the crucial point is that a non-manual negative marker is not able to negate a clause by itself.

Nihon Shuwa (Japan):

- (8) \*  $\overline{\text{neg}}$  WORK FINISH  
 ‘The work isn’t finished.’

Türk İşaret Dili (Turkey):

- (9) \*  $\overline{\text{neg}}$  INDEX<sub>1</sub> UNDERSTAND  
 ‘I don’t understand.’

The choice of negative non-manual marking can only be discussed for cases where there is more than one possible form. This is the case for the Eastern Mediterranean sign languages mentioned above. The side-to-side headshake and the backward head tilt each preferably combine with particular negator signs, and their scope is limited to the negator sign itself in most cases, with a few interesting systematic exceptions. For instance, in Türk İşaret Dili (Turkey), the negator NOT is one of the signs co-occurring with the backward head tilt and often cliticises to a preceding host sign (see the chapter about TID in this volume). In this case, the head tilt always spreads over the entire host-clitic combination (Example 10). Neither of the two negative head movements can negate a clause by itself in TID.

Türk İşaret Dili (Turkey):

- (10)  $\overline{\text{neg-tilt}}$  INDEX<sub>3</sub> SIGN UNDERSTAND ^ NOT  
 ‘S/he doesn’t/didn’t understand the signs.’

In Hong Kong Sign Language and Kata Kolok (Bali), the scope of the non-manual negation also spreads only over the manual negator sign in most cases. This constraint can lead to cross-linguistically unusual structures with clause-medial headshake negation. Such structures are ungrammatical in many sign languages, but are possible in some manual-dominant systems of negation because the headshake is closely tied to the manual negator sign and its position in the clause. An example of medial headshake in Hong Kong Sign Language is given in Tang (this volume).

In non-manual dominant systems of negation, the scope of non-manual negation is more variable both within and across sign languages. Negative non-manuals often spread freely over the whole clause, with the exception of clause-initial

topicalised constituents, or they may spread over the negated constituents only. There is usually more than one scope possibility within one and the same sign language, and there may be language-specific constraints. For instance, in *Langue des Signes Québécoise* (Canada, Québec), the scope of headshake negation is always from the verb or predicate up to the end of the clause, that is, the headshake cannot begin before the verb/predicate and, as in most sign languages, cannot be stopped before the end of the clause (Berthiaume & Rinfret 2000:12). *Deutsche Gebärdensprache* (Germany) also seems to be peculiar in that a headshake with scope on the manual negator sign only is disallowed (Example 11).

Deutsche Gebärdensprache (Germany):

- |      |    |          |        |     |            |     |
|------|----|----------|--------|-----|------------|-----|
| (11) | a. | MOTHER   | FLOWER | BUY | <u>neg</u> |     |
|      | b. | MOTHER   | FLOWER | BUY | <u>neg</u> | NOT |
|      | c. | * MOTHER | FLOWER | BUY | <u>neg</u> | NOT |
- ‘The mother does not buy a flower.’ (Pfau & Glück 2000:11)

As the examples in this section demonstrate very clearly, many sign languages have an intricate interplay between manual and non-manual negation that manifests itself at various levels of structure. The categorisation of sign languages into manual dominant and non-manual dominant systems of negation that has been attempted here is a good example of the kinds of generalisations that can emerge from empirical data in sign language typology. Thus we can identify the characteristics of each prototype, assign sign languages to one of the types and determine the relative frequency of each type, but also go into details of how exactly individual sign languages fit neatly into or go beyond the prototypes in the specific combination of their characteristics and constraints.

#### 4. Paradigms: Clause negators and question words

##### 4.1 Negative particles

Negation is a wide field of study because there are so many places in a sentence that can be negated independently of each other. We thus find, among others,

clause negators ('not'), negative pronouns ('nobody'), negative interjections ('no'), negative adverbs ('never'), and negative coordination ('neither...nor'). In this section, I concentrate on clause negation as the most basic instance of negation.

Across spoken languages, a variety of structures are used for clause negation, including, most commonly, verbal affixes and uninflected particles, but also negative copula and auxiliary forms and more complex bi-clausal constructions (Dahl 1979). Sign languages show a strikingly different pattern. All known sign languages use at least one uninflected negative particle, and most have several, making this the most prominent negation strategy alongside non-manual negation. Morphological negation, on the other hand, is narrowly restricted in virtually all the sign languages where it occurs and is definitely not universal across sign languages (see Section 3.2).

Sign languages do vary cross-linguistically in the size of the paradigm of negative particles and in the types of negatives that are expressed by a separate particle in each sign language. Table 3 lists the negative categories that were found in the data together with their frequency across sign languages.<sup>6</sup>

A *basic clause negator* ('not') is a particle that simply reverses the polarity of the clause, without any additional semantic content. With one possible exception, all sign languages in the data have at least one such particle. Finnish Sign Language possibly lacks a basic clause negator, although the data are not entirely conclusive at this point. Instead, the non-manual headshake negation would seem to serve the function of basic clause negator in this language (see the contribution by Savolainen in this volume).

In most sign languages, there is an intimate connection between existential and possessive functions, that is, 'not exist/there is none' and 'not have' are expressed in the same way. *Negative existential* particles are particularly prominent across sign languages, with sometimes more than one sign in this category. Formationally, it is striking to observe the recurrence of 'O'-like handshapes in negative existentials across a substantial number of unrelated sign languages, including those in Uganda, Thailand, the US, Finland, Japan, New Zealand, Hong Kong and India/Pakistan (see Figure 4 in Section 4.2 for an example).

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<sup>6</sup> Frequency across languages is indicated in brackets, e.g. 17/37, that is, a separate particle has been confirmed to exist for this category in 17 out of 37 sign languages. Note that these figures fail to record exhaustively all negative particles in all sign languages in the data because for a number of sign languages, no information or insufficient information was available, and in some other cases, the function of a negative particle could not be established, so that it could not be assigned to any of the categories.

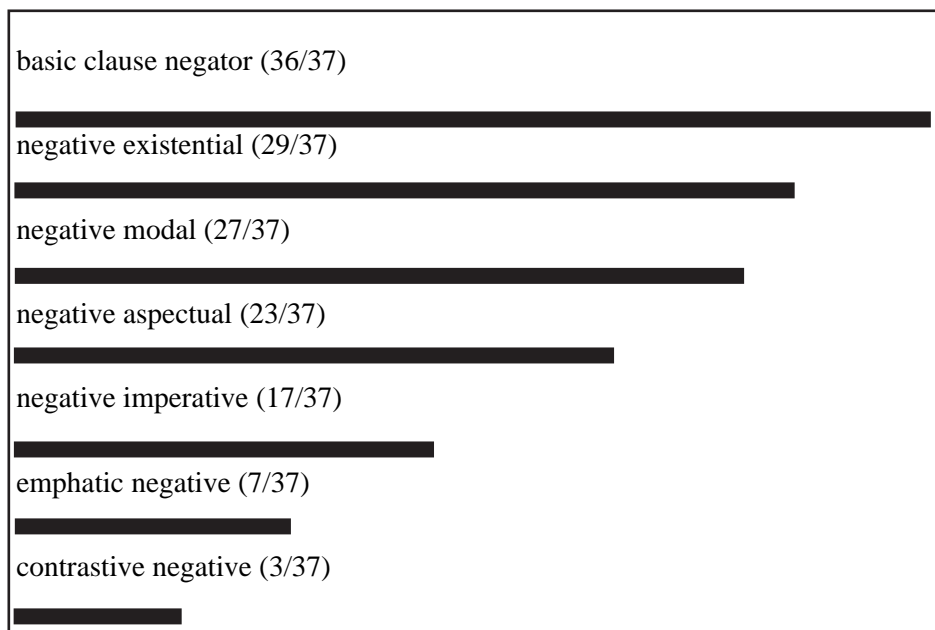


Table 3: Frequency of negative particles across sign languages

The category of *negative modals* covers a variety of modal meanings such as ‘cannot’, ‘need not’, ‘will not’, ‘may not’, and ‘should not’. In the latter meanings, a negative modal is sometimes difficult to distinguish from a negative imperative. ‘Cannot’ is by far the most common negative modal. Both negative existentials and negative modals are particularly frequent among the various types of irregular negatives, and there are many suppletive negative forms across sign languages in these categories.

A negative completive particle (‘not yet’) is by far the most common item in the category of *negative aspectual* particles. It usually contrasts with a positive completive aspect particle. Some sign languages (e.g. Italy, Germany) also have a particle meaning ‘not any more’ in addition to the negative completive.

*Negative imperatives* (‘don’t!’), though a pragmatically salient category, are less common across sign languages than other negators. The function of negative commands may be subsumed under the basic clause negator or combined with another negative function, such as a negative modal. On the other hand, Israeli Sign Language has as many as three negative imperatives, each with a slightly different

form and function. Cross-linguistically, many negative imperatives consist of a single or repeated sideways movement of either an extended index finger or a flat hand with the palm facing outward.

A stronger kind of negation can be expressed in most sign languages through secondary, “intonational” modifications of clause negation, such as emphasis on the negator sign, intensification of negative non-manual features, or sign rhythm. However, some sign languages have one or even several separate *emphatic negative* particles (‘not at all’, ‘really not’, ‘absolutely not’).

Finally, the *contrastive negative* is a rare category where a separate particle is used to convey a negative meaning in contrast with something else, like saying ‘this is not the case, in contrast to what has been said/has been implied/usually happens/is generally acknowledged’. See Zeshan (2003a) and the chapter on Indo-Pakistani Sign Language in this volume for details.

Note that the list in Table 3 is in no way an implicational hierarchy, that is, it is not the case that the occurrence of a less frequent negative category in a sign language would imply the existence of all categories of higher frequency. Rather, each sign language covers its own array of negative categories. For example, the most minimal negative paradigm in the data is found in Kata Kolok (Bali), which only has a basic clause negator and a negative aspectual particle (completive ‘not yet’), but no separate particles for negative existential or modal. Indo-Pakistani Sign Language has the cross-linguistically rare contrastive negative particle and a negative imperative particle, but does not have the otherwise more common negative modal and negative aspectual categories.

## 4.2 Irregular negatives

In addition to the canonical way of marking negation by way of negative particles and non-manual marking, we also find suppletive forms and instances of morphological negation. The number of such negative forms in sign languages is almost always narrowly restricted, ranging from a single item to a maximum of about 25 items (Zeshan, 2004a). Because of this restricted distribution, I refer to negative forms of individual signs as irregular negatives.

Irregular negatives can be of several types which are represented in Figure 3. The first basic distinction is between cases where the negative form as a whole is different from its positive counterpart (negative suppletion) and cases where the negative form contains a negative morpheme (morphological negation). Not surprisingly, negative suppletion is limited to a few signs in each language, but is

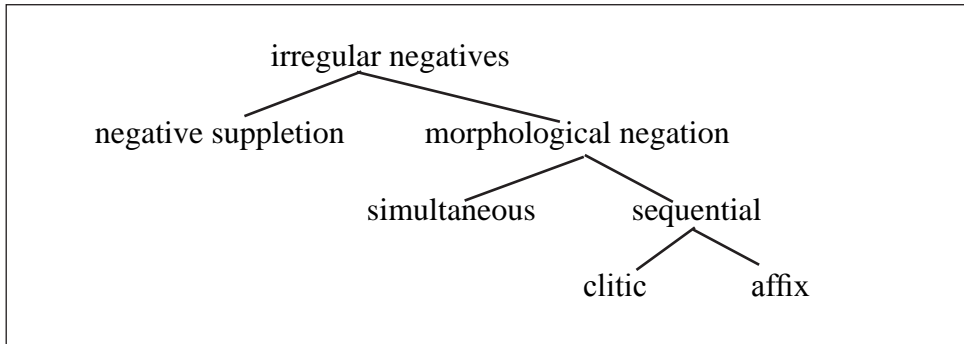


Figure 3: Types of irregular negatives

at the same time very widespread across languages. Only one sign language variety in the data, the Karachi dialect of Indo-Pakistani Sign Language, has no suppletive negatives at all. In fact, this dialect has no irregular negation whatsoever and is thus unique among the languages in the data. In the village-based sign language Kata Kolok (Bali), a single suppletive negative for completive aspect ('not yet') is the only instance of irregular negation in the language. Similarly, Indian dialects of Indo-Pakistani Sign Language, as well as Lengua de Señas Española (Spain), have only a single irregular negative, which is a suppletive form for the negative existential. There are few sign languages in the data with more than five suppletive negatives (e.g. France, Russia). In addition to clause negators (existentials, modals, completives, and so on) there are also a number of lexical predicates to which negative suppletion regularly applies in various sign languages, such as WANT, KNOW, and LIKE. Figures 4 and 5 show examples of negative suppletive forms and their positive counterparts from Indo-Pakistani Sign Language (Indian dialects) and from South Korean Sign Language.

Morphological negation falls into two main types depending on whether the morphological change is realised simultaneously or sequentially. In the latter case, we find a negative clitic or affix attached to a predicate stem in a clearly identifiable sequence, much as is the case in many spoken languages. However, in spoken languages both prefixes/proclitics and suffixes/enclitics are well represented to mark negation whereas all known cases in sign languages involve a negative morpheme following the stem. Not a single case of a negative prefix or is attested in the sign language data, a fact that correlates with a strong preference across sign languages for placing negative particles in post-predicate or clause-final position (see Section 5.2).





EXIST NOT-EXIST  
Figure 4: Suppletive negative (India)



KNOW NOT-KNOW  
Figure 5: Suppletive negative (South Korea)

A detailed discussion of the difference between a negative enclitic and a negative suffix can be found in Zeshan (2004a), so I only exemplify each type briefly here.<sup>7</sup> The basic clause negator in Türk İşaret Dili (Turkey) is the most striking example of a negative clitic in the data and has been discussed in detail in Zeshan (2003c). Figure 6 shows an example of the sign KNOW with the following negative as an independent sign (6a) and as a clitic (6b). This kind of alternation between a free form and a bound form is typical of clitics, but does not occur with any of the negative suffixes in the data. Unlike all other instances of morphological negation in the data, negative cliticisation in Türk İşaret Dili is widely applicable and not restricted to only a few individual signs (cf. the chapter on Türk İşaret Dili in this volume).

In all other sign languages in the data, morphological negation applies to a few signs only, and this is true of all attested cases of negative suffixes. A particularly common form, which is found across a number of different sign languages, is a negative suffix consisting of an outward twist of the wrist ending in an open handshape, as shown in Figure 7 from Ugandan Sign Language. Note that the repeated movement in LIKE is lost in the negative form, so that the negative form has the duration and rhythm of a single sign rather than a two-sign combination.

The possibility of formational changes in the stem itself is another factor that differentiates negative suffixes from negative clitics. In some East Asian sign languages (China, Hong Kong), negative forms can be derived by using a negative handshape with the little finger extended from a fist. The sign in Figure 8 has a

<sup>7</sup> The description of clitics and affixes in sign languages is still in its initial stages and a lot of groundwork has yet to be done. Some analyses can be found, for instance, in Sandler (1999b) and in Aronoff, Meir & Sandler (2000).



(6a) KNOW NOT

(6b) KNOW^NOT

Figure 6: Independent negative and negative clitic in Türk İşaret Dili (Turkey)

positive counterpart where the final handshape is a fist with the thumb extended. There are a number of such pairs in Hong Kong Sign Language as well as in Chinese Sign Language, but the negative handshape can also be added directly to monomorphemic signs, or it simply replaces the handshape of a positive sign to make it negative (see Yang & Fischer 2002, and Tang, this volume, for further details).

Finally, negative signs may be derived by internal modification of a positive sign. A handshape change as in the Hong Kong Sign Language example just mentioned is cross-linguistically rare, but a change in movement pattern is more common. A good example of the latter comes from Deutsche Gebärdensprache (Germany), which has a set of eight signs that form a negative by modifying the movement to constitute a downward and diagonal inward-outward pattern (see Figure 9). The movement pattern is clearly a negative morpheme, but it is not a



Figure 7: LIKE and NOT-LIKE (Uganda)



Figure 8: UNAPPEALING (Hong Kong)

clitic or affix because it co-occurs simultaneously with the sign as a whole rather than being added after the positive sign.<sup>8</sup>

As in this last example, morphologically derived negatives can form small paradigms, and several sets of related forms can co-exist with each other and with suppletive negatives in one and the same sign language. A final striking observation that concerns all kinds of irregular negatives in sign languages is the regular recurrence of particular items to which morphological negation or negative suppletion applies. These items are cognitively highly salient and very frequent in discourse, including semantic or grammatical categories such as cognition (e.g. ‘not know’, ‘not understand’), emotional attitude (e.g. ‘not want’, ‘not like’), modals (e.g. ‘cannot’, ‘need not’), possession/existential (e.g. ‘not have’, ‘not exist’) and tense/aspect (e.g. ‘not yet’). Zeshan (2004a) makes the argument that cognitive salience and high frequency facilitate suppletion and the development of morphological



Figure 9: RIGHT and NOT-RIGHT (Germany)

<sup>8</sup> This is true synchronically. Historically, it is quite likely that these forms are the result of a complete assimilation between the predicate sign and the following basic clause negator (with to and fro movement of an upright index finger), but it would go too far to pursue this analysis in detail here.

negation in these negative items, and we can find irregular negative forms for a similar range of items in many spoken languages.

The domain of irregular negatives is a good example of how the careful cross-linguistic comparison of forms from a wide range of sign languages can lead to the complex morphological typology represented schematically in Figure 3. Individual sign forms and sign languages can then be assessed and placed within the framework of this typology. It also becomes clear where sign languages and spoken languages share similar features, and where sign languages are peculiar in their structures, such as in the domain of simultaneous sign modification, which is not commonly found in negatives in spoken languages.

### **4.3 Question words**

The domain of question word paradigms is one of the aspects where the cross-linguistic sign language project has revealed the greatest degree of cross-linguistic variation. This section summarises results from the data relating to the size of the paradigm, the existence of general interrogatives, grammatical distinctions found in interrogative paradigms, and the relationship between interrogative and non-interrogative functions of signs. Further details can be found in Zeshan (2004b).

The size of question word paradigms can vary radically from one sign language to the other. In some dialects of Indo-Pakistani Sign Language, there is a minimal paradigm with only one question word that covers the entire range of interrogative meanings and may translate into any specific question word depending on the context. If signers want to be more specific, the general interrogative has to be combined with non-interrogative signs, as in TIME+INTERROGATIVE ‘when’, NUMBER+ INTERROGATIVE ‘how many’, or FACE+INTERROGATIVE ‘who’. At the other end of the scale, we find languages such as American Sign Language with more than a dozen question words (see Fischer, this volume). Each sign language has its own set of interrogatives, and the semantics of lexicalised interrogatives may vary considerably across languages. In addition to the more common question words such as ‘what’, ‘who’, ‘where’, ‘how many’, ‘why’, ‘how’, ‘which’ and ‘when’, sign languages around the world also include interrogatives with more rarely attested semantics, such as signs for ‘how about?’ (Nihon Shuwa, Japan), ‘what month and date?’ (Hong Kong Sign Language), ‘what’s this?’ (Israeli Sign Language), and ‘what to do?’ (American Sign Language).

Many sign languages have a general interrogative which always includes a basic meaning ‘what’ and may then cover the rest of the interrogative paradigm either completely, as in Indo-Pakistani Sign Language, or partially, with a few specific signs for some interrogative meanings and the general question word covering the rest. This is the case in *Língua de Sinais Brasileira* (Brazil), which has specific question words for ‘what/who’, ‘how’, ‘why’ and ‘how many’, while other meanings are covered by the general interrogative, sometimes in combination with another sign (see Quadros, this volume). In the project data, general interrogatives are attested for 15 sign languages, and a few more potential cases are unclear at this stage. Sometimes the meaning of a question involving a general interrogative may be very ambiguous and can only be interpreted on the basis of the context of the utterance, as in this example:

Kata Kolok (Bali):

- \_\_\_\_\_q  
 (12) INDEX WH-GENERAL  
 ‘Who is this? / What is this? / What is s/he doing? / What’s happening? /  
 Why are they doing this?...’ (interpretation depending on the context)

As in spoken languages, interrogative and non-interrogative functions of certain signs may be closely related in sign languages in several ways. A well-known and cross-linguistically amply attested association is between interrogative and indefinite functions (cf. Bhat 2000), and this holds for sign languages as well. For example, in Auslan (Australia), the same sign is used for ‘who’ and ‘someone’, and another sign is used for both interrogative ‘where’ and indefinite ‘somewhere’. Similar cases are attested in other sign languages, although for many languages in the data no information is currently available on this point, so that the extent of this phenomenon cannot be established at present.

Another possibility is for a non-interrogative sign to be interpreted as a question word when it is accompanied by interrogative non-manual marking. For example, many sign languages express ‘how many’ by using a sign for ‘number’, ‘many’ or ‘count’ in combination with content question non-manuals. Other recurring pairs include the signs AGE to express ‘how old’, REASON to express ‘why’, and TIME to express ‘when’. Sometimes there are additional modifications to derive an interrogative from a related non-interrogative sign. Cross-linguistically, a repeated tremolo movement, which also characterises many non-derived interrogatives across sign languages, is particularly common in this function (cf. the contributions



PLACE 'place'

PLACE-qu 'where'

Figure 10: Related non-interrogative and interrogative signs (Turkey)

by Fischer and by Morgan in this volume). Figure 10 shows an example of a derived interrogative from Türk İşaret Dili (Turkey).

Apart from the size and the semantics of question word paradigms, it is interesting to see how grammatical distinctions are realised in question words. Since not all categories can be discussed here, the following examples only cover some basic categories, that is, time expressions, person distinctions, and number marking. For further information, including also case marking, distinctions between mass nouns and count nouns (as in 'how much' vs. 'how many'), distinctions based on the referential status of an entity (as in 'which' in the general sense of 'what kind of' vs. 'which' in the specific sense of 'which of these'), see Zeshan (2004b).

A number of sign languages have several question words or interrogative expressions relating to time. This may sometimes involve reference to a so-called "time line", an imaginary line running through the signer's body with the past behind the shoulder, the present immediately in front of the body, and the future also in front of the body, but further away (cf. Engberg-Pedersen 1993 on various types of time lines in Danish Sign Language). Lengua de Señas Española (Spain) has an extensive paradigm of such temporal expressions that can be used as interrogatives as well. An open hand moving backward over the shoulder or forward in front of the body indicates time reference, so that, for example, positioning the hand close to the shoulder refers to 'recent past', while moving the hand further backward over the shoulder indicates 'distant past'. When these temporal signs are combined with the appropriate interrogative non-manual marking, they can all be used as question words, so that several temporal nuances of 'when' can be expressed: 'when in the past' (that is, general past), 'when in the recent past', 'when in the distant past', 'when in the future' (that is, general future), 'when in the distant future', and also



be used for person and number marking on other categories such as verbs and pronouns, and this sometimes extends to interrogatives as well. For example, in Irish Sign Language the question words WHICH and WHO inflect for both person and number, for example: WHICH signed with the hand moving in a half-circle in the horizontal plane for ‘which of them’ (third person plural); WHICH signed with the hand moving between two points in space for ‘which of these two’ (third person dual); WHO signed with the hand moving between signer and addressee for ‘who of us two’ (dual first person inclusive), and so on. In some other sign languages (e.g. Finland, Iceland), the sign WHICH can only be used with reference to dual number (‘which of two’). Islenskt Taknmál (Iceland) also has a sign WHO-OF (Example 16) that is only used with plural reference (‘who of them’, ‘who of you all’), in addition to a general WHO which is unmarked for number.

Islenskt Taknmál (Iceland):

- (16)  $\frac{\text{cont-q}}{\text{OLDEST BROTHER WHO-OF}}$   
 ‘Who of your brothers is the oldest?’

Although the range of variation in question word paradigms across sign languages is considerable, common tendencies across sign languages do exist in this domain as well, and their possible explanations are of particular interest within the framework of sign language typology. For instance, why is repeated tremolo movement frequent in interrogatives across sign languages, where do the general interrogatives come from that are so widely attested, and how do question word paradigms in sign languages expand over time? Explaining the patterns of cross-linguistic differences and similarities is one of the major aims of sign language typology after the range of variation as such has been established, and the domain of question word paradigms is particularly rich in interesting sub-parameters.

## 5. Syntactic patterns

In this section, we look at a few selected syntactic patterns across sign languages. This is a domain of investigation where research has not progressed very far yet because the project did not include any negative evidence, which would be essential for making stronger claims about syntactic structures in the sign languages in our data. Covering the major clause types of the cross-linguistic study, some data are





Hong Kong Sign Language:

- (19) a.             $\underline{\text{pol-q}}$   
 INDEX<sub>2</sub> GO PLAY
- b.             $\text{INDEX}_2 \text{ PLAY PLAY} \underline{\text{pol-q}}$
- c.             $\text{INDEX}_2 \text{ GO GO PLAY} \underline{\text{pol-q}}$

Finally, it is not uncommon across sign languages for polar questions to be marked by question particles. Depending on the interpretation of the data, which are sometimes not conclusive at this stage, between a fourth and a third of all sign languages in the data do have one or several question particles. However, their properties are somewhat different from typical cases of question particles found in spoken languages. In Zeshan (2004b), the following characteristics were used to define question particles in sign languages:

- They are signs whose main function it is to indicate that an utterance is a question.
- Unlike question particles in many spoken languages, it is not essential that they should be obligatory in all utterances belonging to a particular grammatical question type.
- They are semantically bleached, having lost any original lexical meaning they may have had.
- They occur with the actual question in the same prosodic unit. If there is an intervening intonational break, the utterance is more likely to be a tag question.

There is no attested case in the data of a sign language with a question particle that would be obligatory in all polar questions. Rather, it is common for the question particle to occur only in certain contexts that are often pragmatically constrained. This makes question particles in sign languages somewhat different from many typical cases in spoken languages, such as Japanese *ka* or Turkish *mi*. In most sign languages, question particles are only used in polar questions, and their preferred position is clause-final, although there seem to be some cases where they can be clause-initial or occur both initially and finally. Most sign languages in the data have only one question particle, but some have several, and these are especially interesting cases.

Examples (20) - (22) are from sign languages that have a single question particle. In Lengua de Señas Española (Spain), YES-NO (Figure 12) is used in polar questions only, whereas Finnish Sign Language PALM-UP (Figure 13) and American Sign Language QM can occur in both polar and content questions.

Lengua de Señas Española (Spain):

- \_\_\_\_\_ pol-q  
                               nod  
 (20) INDEX<sub>2</sub> IN SCHOOL DEAF YES-NO  
 ‘Do you go to a deaf school?’

Finnish Sign Language:

- \_\_\_\_\_ lowered brows  
                               head tilt  
 (21) PAPER WHERE PALM-UP  
 ‘Where can I find some paper? / Where is the paper?’

American Sign Language:

- \_\_\_\_\_ pol-q  
 (22) FATHER BECOME-ANGRY QM++  
 ‘Has Dad become angry?’ (Baker-Shenk & Cokely 1996:126)

Sign languages in East Asia are particularly rich in question particles, which, interestingly, is also true of many spoken languages in the same region (e.g. Mandarin Chinese, Japanese, Korean). Confirmed or suspected instances of question particles in the data can be found in sign languages from South Korea, Japan, Hong Kong, Taiwan and mainland China, and some of these have more than one question particle. The sign in Figure 14 (GOOD+BAD) is used in non-existential polar questions in Hong Kong Sign Language, whereas existential questions in HKSL use a different form HAVE+NOT-HAVE.

Taiwanese Sign Language is a particularly instructive case because there are several types and layers of question particles. The particle MA is used in Signed Mandarin, an artificially created hybrid system that has a sign language lexicon, but attempts to mirror the grammatical structure of spoken Mandarin, thus also including a sign for a question particle. Similarly, a question particle that first originated in Signed Japanese is beginning to enter the primary sign language in Japan as well (see Morgan, this volume). In addition to the use of MA (mostly by younger people who have had more exposure to Signed Mandarin), a strategy that is more native to

Taiwanese Sign Language involves a rapidly alternating repetition of positive and negative forms of certain predicates. The most grammaticalised and most commonly used form consists of the signs HAVE and NOT-HAVE, which have effectively become fused into one sign HAVE-NOT-HAVE. An equivalent combination is used in Hong Kong Sign Language, but is not formationally fused, is used only in existential questions, and the interrogative non-manual marking co-occurs only with HAVE+NOT-HAVE and cannot spread over the whole clause (see Tang, this volume, for details). In Taiwanese Sign Language, HAVE-NOT-HAVE seems to be compatible with both active predicates (as in 23) and a stative or existential reading (as in 24), and the interrogative non-manual marking spreads over the entire clause, except for topicalised constituents.

Taiwanese Sign Language:

- (23) \_\_\_\_\_ pol-q  
 EAT FINISH HAVE-NOT-HAVE  
 ‘Have you eaten?’

- (24) \_\_\_\_\_ pol-q  
 INDEX<sub>2</sub> FATHER, MONEY HAVE-NOT-HAVE  
 ‘As for your father, has he got money?’

In addition to HAVE-NOT-HAVE, equivalent constructions based on positive and negative forms of CAN, WANT, KNOW and GOOD are also used in Taiwanese Sign Language, though they are not as frequent, not as tightly fused formationally, and their grammaticalisation is apparently less advanced. The positive-negative pairs



Figure 12: YES-NO (Spain)

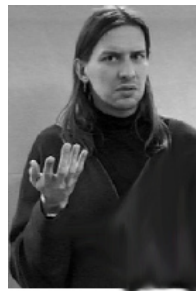


Figure 13:  
PALM-UP  
(Finland)



Figure 14:  
GOOD+BAD  
(Hong Kong)

in sign languages from Hong Kong, Taiwan, and mainland China are conspicuously similar to the so-called “A-not-A-construction” used in polar questions in Sinitic languages (but not in spoken Thai). In fact, the A-not-A-construction may well have influenced the development of forms combining positive and negative counterparts in these sign languages (see Yang & Fischer 2002, and Tang, this volume).

## 5.2 Question words and clause negators: Syntactic patterns

With respect to syntactic aspects of interrogative and negative clauses, there are still a lot of open questions and unknown factors. In particular, syntactic tests in a narrower sense, including negative evidence and grammaticality judgements, were not included in the study. In this section, I discuss some generalisations regarding the syntactic positions of question words and negative particles across sign languages. Higher-level generalisations that hold for both clause types are of particular interest here, whereas more details of the syntactic structures in individual sign languages can be found in Zeshan (2004a) and (2004b).

Both in interrogative and in negative clauses, we can observe a striking preference for clause-peripheral positions with respect to the placement of question words and negative particles. For question words, both clause-initial and clause-final positions are pervasive in the data. Figure 15 schematically illustrates the preferred syntactic positions across sign languages. The bracketed constituents, if present in a content question, may precede or follow an otherwise clause-peripheral question word and thus constitute systematic exceptions to the general pattern. The questions in Example (25) illustrate these regularities (non-manual marking has been omitted).

Auslan (Australia):

- (25) a. WHEN MAN GO HOME (clause-initial)  
 b. MAN GO HOME WHEN (clause-final)  
 c. MAN, WHEN GO HOME (initial topic)  
 d. GO WHEN INDEX (final pronoun)  
 e. WHEN GO HOME WHEN (doubling)

In addition to these structures, a few sign languages also have particularly interesting split interrogative constituents, as in Example (26) from Nihon Shuwa (Japan), where TIME is separated from HOW-MANY (see also the contribution on Indo-Pakistani Sign Language in this volume for details).

Nihon Shuwa (Japan):

- (26)  $\begin{array}{c} \text{top} \\ \text{TIME} \end{array}$   $\begin{array}{c} \text{_____} \\ \text{TODAY COME} \end{array}$   $\begin{array}{c} \text{cont-q} \\ \text{HOW-MANY} \end{array}$   
 ‘What time are you coming today?’

As Figure 15 also shows, clause-initial position (20 instances), clause-final position (26 instances), and both of these with doubling of the question word (19 instances) are about equally common across sign languages, and often all three of these patterns are possible. By contrast, in situ placement of question words has only been found in four sign languages in the data, and even then it is never the only possibility. Even if we take into account that it can be difficult to distinguish clearly between in situ placement and clause-peripheral placement, the predominance of the latter still emerges clearly enough from the data.

However, if we look beyond mere frequency, we also find a difference in status between clause-initial and clause-final positions which indicates a more prominent role for the latter. This is because several sign languages in the data allow only clause-final placement of interrogatives, and others allow both clause-final placement and doubling in both peripheral positions, but there is no attested case of a sign language that would allow only clause-initial interrogatives. If it is true that clause-initial placement always implies the presence of clause-final placement as a second possibility, but not vice versa, which has yet to be confirmed in detail, this would be interesting for two reasons. First of all, we need only look as far as the Germanic language family to see that spoken languages where question words

(topic)	clause-initial	clause-final	(pronoun)
(pronoun)	20	26	(question particle)
(question particle)	19		
	clause-initial and clause-final		

Figure 16: Preferred syntactic positions of interrogatives across sign languages

occur only clause-initially are not at all uncommon, as is the case, for instance, in German.<sup>9</sup> The complete absence of this pattern in sign languages would thus call for some explanation. Secondly, the predominance of post-placement rather than pre-placement is also characteristic of negatives in sign languages, with many instances of clause-final negative particles in the data. Rather than pursuing possible explanations for these patterns here, we now turn to some syntactic aspects of negative clauses.

Table 6 summarises some differences between negative structures found in sign languages and in spoken languages. Typological studies on spoken languages have reported a preference for pre-verbal position of negative particles (Dahl 1979, Payne 1985). By contrast, all sign languages for which information has been available on this aspect (27 languages) allow for clause-final placement of negative particles, and sometimes this is the only possible position. Pre-verbal negative particles are much less common, occurring in only 15 sign languages, and many of these have an additional pattern with doubling of the negative in both pre-verbal and clause-final position. Given that many sign languages in the data are predicate-final languages, it has not always been possible to distinguish between post-predicate and clause-final position of negative particles. However, the main point of interest, namely that pre-verbal position is comparatively rare across sign languages, does not depend on making this distinction.

The tendency for post-placement of negators in sign languages is even more conspicuous if morphological negation is also considered. Whereas spoken languages use both prefixes and suffixes, with a preference for the former (Payne 1985, Whaley 1997:229), not a single case of a negative prefix is attested in our sign language data. In fact, among the whole range of sub-types of morphological negation across sign languages, as detailed in Section 4.2, there is not a single instance of a pre-posed negative morpheme.

Both in interrogatives and in negatives, multiple marking is pervasive in sign languages. The most common type here is double marking with both manual signs and non-manual signals, as discussed in detail in section 3. In spoken languages, marking of interrogatives by both question words or question particles and intonation, the equivalent of the sign language structures, is also the norm. However, the use of intonational and prosodic features to mark negation is very rare in spoken languages even as an additional feature accompanying another negative marker.

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<sup>9</sup> This is true, of course, with the well-known exception of echo questions in German.

Apart from non-manual signals, multiple marking of interrogatives and negatives by way of manual signs is also frequent. In content questions, the question word is often repeated both clause-initially and clause-finally (Example 25e above), and sometimes a question word co-occurs with a question particle, although this is rather rare cross-linguistically. Moreover, there are a number of attested cases in the data where a specific question word can co-occur with a general interrogative in the same clause, as in Example (27). Note that although the clause includes two different question words, this is not an instance of a multiple content question of the type ‘Who went where?’, but a pragmatically marked construction with a single interrogative meaning (see Vermeerbergen & Van Herreweghe, this volume, for details).

- Vlaamse Gebarentaal (Belgium):  
cont-q  
 (27) WHEN INDEX<sub>2</sub> COME WHAT  
 ‘When are you coming then?’

Multiple clause negation is relatively uncommon in spoken languages, but when it does occur, it mostly involves a double particle construction, that is, the use of two different negative particles, as exemplified by French *ne...pas*. Interestingly, this kind of construction is completely unattested in our sign language data even though most sign languages have a substantial paradigm of negative particles and

<i>Spoken languages</i>	<i>Sign languages</i>
Predominantly pre-verbal position of negative particles	Predominantly clause-final / post-verbal position of negative particles
Preference for negative prefixes; suffixes possible	Negative suffixes only; no attested prefixes
Multiple clause negation relatively uncommon	Multiple clause negation extremely common
Double particle constructions	No attested double particle constructions
Negative pronouns/adverbs/quantifiers in either positive or negative clauses	Negative pronouns/adverbs/quantifiers incompatible with clause negators

Table 6: Differences between sign language and spoken language negation





particular socio-cultural and historical context. These broader perspectives seem particularly important if we want to find explanations for the patterns we can observe both within a particular language and across languages. Therefore, the chapters in Part II and Part III of this volume include various other angles on sign language data in addition to descriptively oriented accounts of morphosyntactic structures. The contribution by McKee on New Zealand Sign Language provides insights into historical change, the chapter on Indo-Pakistani Sign Language brings data to bear on the comparative study of sign language dialects, and the relationship between sign languages and surrounding spoken languages plays a role in the contributions Tang (Hong Kong Sign Language) and Morgan (Japanese Sign Language). Thus it is not only a theoretical interest in the nature of human language that motivates studies in sign language typology, but also a keen interest in the deaf communities that use these fascinating languages.

PART II

STUDIES OF  
NEGATIVES AND INTERROGATIVES IN  
INDIVIDUAL SIGN LANGUAGES

## Chapter 3

# Aspects of interrogatives and negation in New Zealand Sign Language

Rachel Locker McKee

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### NEW ZEALAND SIGN LANGUAGE

New Zealand Sign Language (NZSL) is used by approximately 4,500 deaf people (Dugdale 2000), in a country of four million people. Immigrants from the UK began colonising New Zealand in the 19<sup>th</sup> century and NZSL is closely related to British Sign Language (BSL) and Australian Sign Language (Auslan). The extent of lexical similarity and mutual intelligibility between them suggests that they are dialects or close relatives of a BSL-based sign language family (Johnston 2000; McKee & Kennedy 2000.) Deaf New Zealanders first congregated in a residential school in 1880, which was followed later by two others; all were strictly oralist. In these schools a form of signing (now known as “old signs”) emerged and developed further in the deaf adult social world. It is not clear from available historical sources how BSL signs entered the early signing community since no signing teachers or residential staff were employed at the schools and deaf immigrants would have been few and far between. However numerous children were sent to Australian deaf schools where sign language was used by teachers from the UK and Ireland, and their return to New Zealand was probably one source of language transmission.

In 1979, a system of manually coded English called Australasian Signed English (ASE) was introduced into deaf education. The lexicon was drawn mainly from Auslan signs supplemented by invented signs, and its use in schools for fifteen years has led to many “old” and “new” variants in the current NZSL lexicon.

Increased international interchange since the 1970s, especially with deaf people from Australia and the UK, has motivated lexical borrowing and expansion, and to a lesser extent borrowing from American Sign Language also occurs in NZSL. The first systematic linguistic analysis of the language was conducted during the early 1980s (Collins-Ahlgren 1989), leading to the recognition and naming of “New Zealand Sign Language”. The first dictionary of NZSL was made in 1985 (Levitt) followed by a more comprehensive dictionary in 1997 (Kennedy, Arnold, Dugdale, Fahey, & Moskovitz). NZSL was recognised in law as an official language of New Zealand in April 2006.

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This article<sup>1</sup> describes interrogative and negation structures in New Zealand Sign Language (NZSL), focusing on lexical, syntactic and suprasegmental (non-manual) aspects which may contribute to a typological comparison of these structures across signed languages. Analysis draws on data from a transcribed corpus of 100,000 signs in natural discourse (McKee & Kennedy 1998), as well as examples observed and elicited by the writer for the purpose of analysis. Structures described here are those which appear to be canonical for native and fluent signers who acquired NZSL during early childhood; their usage of course varies across the entire signing community. The writer is a non-native signer who has used NZSL for twenty years as an interpreter, teacher of deaf adults, researcher, and social participant in the Deaf community. The writer's observation of NZSL discourse in natural contexts contributes to this analysis. A brief socio-historical introduction to NZSL in section one provides context for certain linguistic structures and changes described in the article.

## **1. Background to NZSL**

The extent of documented lexical similarity and mutual intelligibility reported between NZSL, British Sign Language (BSL), and Australian Sign Language (Auslan) users indicates that these are dialects of a common language, or at least close relatives in the BSL-based language family (Johnston 2002; McKee & Kennedy 2000). Deaf people in New Zealand first came together in an oralist residential school in 1880; anecdotal evidence indicates that a mix of indigenous (home and school) and certain BSL signs were used amongst deaf people at least a century ago, although it remains unclear exactly how and when BSL lexicon found its way into the early development of NZSL in an exclusively oralist, hearing-taught education system. Potential sources of transmission were Deaf UK immigrants, an early British teacher of the deaf who taught using signs before the establishment of a state school, and New Zealand children's attendance at Australian Schools for the Deaf using sign language around the turn of the twentieth century (Collins-Ahlgren 1989). In recent decades, increased contact with Auslan and BSL signers in particular, has been a productive source of lexical borrowing into NZSL.

In 1979 a system of manually coded English called 'Australasian Signed English' (ASE) was introduced into deaf education as the manual component of

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<sup>1</sup> Thanks to Ricki Pointon for modelling the NZSL examples and David McKee for video editing.

the Total Communication approach (Jeanes & Reynolds 1982). Because NZSL was not systematically described or documented as a language until the mid 1980s (Collins-Ahlgren 1989, Levitt 1985, Kennedy, Arnold, Dugdale, Fahey, & Moskovitz 1997) the lexicon of ASE was based mainly on Auslan signs of the Melbourne area, supplemented by invented signs. This system was used (variably) in deaf education until about 1993, and has resulted in significant lexical and stylistic differences between older and younger generations of signers.<sup>2</sup> An oralist educational history remains evident in NZSL signers' tendency to co-produce many manual signs with English mouthing - defined by Boyes Braem (2002:99) as "unvoiced pronunciation of ... words or word parts"- particularly to disambiguate homophonous signs that have multiple meanings. Older NZSL signers who do not use a conventionalised manual alphabet, may also combine voice or mouthing with signs to convey proper nouns that do not have a sign equivalent. These features of variation in the lexicon and use of mouthing to specify meaning appear in certain forms of interrogatives and negation.

## **2. Interrogatives**

### **2.1 Sign order in questions**

No special constituent order or interrogative particle distinguishes polar questions from statements, but signers frequently place or repeat a subject pronoun or index at the end of a polar question. In a content question, the interrogative sign (such as WHAT or WHO) may occur in clause initial position, clause final position, or be repeated in both. Clause final, or repeated at beginning and end are preferred patterns. Analysis so far indicates that multiple content questions are rarely used in NZSL.

### **2.2 Non-manual marking of interrogatives**

#### *2.2.1 Form of non-manual interrogative marking*

Non-manual signals are a key feature of question structure in NZSL, as is typical of signed languages in general (cf. Zeshan 2004b). Polar questions are signalled

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<sup>2</sup> Grammatical variation between generations has not been systematically studied.

by direct gaze at the addressee and raised brows (also described as eye-widening), with forward and slight downward movement of the head (see Example 1). Content (or ‘wh’) questions are signalled by furrowed (or lowered) brows and less marked forward – or sometimes backward - movement of the head (Example 2). Both types of question may be articulated with a slight sideways turn of the head.

Example 1 *Polar question non-manuals*



YOU?

video ex.1

Example 2 *Content question non-manuals*



WHAT?

video ex.2

The articulation of non-manual question signals varies for pragmatic reasons, including intensification of the signals for stronger enquiry. When it is obvious from discourse context or the presence of an interrogative sign in a sentence that a question is intended, non-manual marking may be reduced or imperceptible. A polar question may be formed without eye-widening or in fact with furrowed brows when the question seeks to confirm or express doubt about a fact, (e.g., ‘You’re 21, aren’t you?’ as opposed to ‘Are you 21?’) This parallels the effect of falling vs rising intonation in spoken English polar and tag questions. In content questions, the chin may move back rather than forward to add affect such as surprise, puzzlement, or disapproval to the interrogative.

### 2.2.2 *Scope of non-manual interrogative marking*

In polar questions non-manual signals co-occur with the whole sentence or question clause, excluding any initial topic or conditional phrase. Example 3 illustrates a polar question with a topic phrase that is marked by narrowed eyes, raised brows and chin. In contrast, forward and downward head movement and the wide eyes mark



the clause FINISH YOU as a polar question. Non-manual signals in questions tend to intensify towards the final sign, which is held fractionally longer than normal.

Example 3 *Polar question with topic clause*

\_\_\_\_\_ t \_\_\_\_\_ pol-q  
 HOMEWORK FINISH PRO2pl  
 ‘The homework - have you done it?’ video ex.3

In content questions, non-manual marking can accompany the whole sentence, but is obligatory with at least the interrogative (‘wh’) sign. When an interrogative sign occurs at the beginning of the sentence, non-manual marking continues throughout the sentence, (see Example 4). When an interrogative sign occurs only in sentence final position, non-manual marking may be limited to the question sign (see Example 5), or can optionally cover the whole sentence.

Example 4 *Content question non-manual marking throughout sentence*

\_\_\_\_\_ cont-q  
 WHERE ROOM WHERE  
 ‘Where is the room?’ video ex.4

Example 5 *Content question non-manual marking with interrogative sign only*

\_\_\_\_\_ cont-q  
 3SEND1 LETTER WHY  
 ‘Why did (they) send me the letter?’ video ex.5

## 2.3 Negative questions

### 2.3.1 Negative polar questions

Negated polar questions seek confirmation of a negative proposition. Non-manual marking combines a negative headshake (represented below as ‘neg’) with brow signals in either of two ways:

(a) When the questioner strongly expects negative confirmation of the proposition (i.e., agreement) the eyes are squinted or brows furrowed. The head may be moved forward or down, as seen in Examples 6 and 7.

Example 6      neg + squint  
 IX-2 GO PRO2  
 ‘You’re not going, are you?’      video ex.6

Example 7      neg + squint  
 DEAF PRO2  
 ‘You’re not Deaf, are you?’      video ex.7

(b) When the questioner less strongly expects agreement with the negative proposition, the brows are raised (b.r.) as in a normal polar question, as in Examples 8 and 9. The head may be moved forward or down.

Example 8      neg + b.r.  
 TEACHER COME NOTHING  
 ‘Has the teacher not come?’      video ex.8

Example 9      neg  
                          b.r.  
 PRO2 RECEIVE NOT-YET  
 ‘Have you not received it yet?’      video ex.9

The negation headshake commences at the beginning of the whole proposition (Example 8), or at the negated constituent (e.g., the verb or the negation sign), as in Example 9.

### 2.3.2 Negative content questions

In negated content questions, the ‘neg’ headshake normally co-occurs with the negated predicate only and not with the interrogative sign (see Examples 10 - 12). Content question non-manual signals, however, can cover the entire sentence (Examples 10 and 11) or the interrogative clause only (Example 12):

Example 10      cont-q  
                          neg  
 WHY<sub>2</sub> TELL<sub>1</sub> WHY  
 ‘Why didn’t you tell me?’      video ex.10

Example 11      cont-q  
                          neg  
 SPORT LIKE WHICH PRO2  
 ‘Which sports do you not like?’      video ex.11

		_____ cont-q	
	_____ neg		
Example 12	NOTHING WORK	HOW-MANY	
	‘How many are not working?’		video ex.12

## 2.4 Interrogative signs: ‘old’ and ‘new’ paradigms

### 2.4.1 *The generic interrogative*

Specific signs for different types of content questions have developed relatively recently (influenced by Signed English) in contrast to an earlier paradigm in which one generic interrogative sign covered most information seeking functions. The generic interrogative sign consists of two open hands turned palm upwards, with a small sideways movement away from the centre, (see WHERE, in Example 4). This corresponds with the gesture used by non-deaf English speakers to seek information or express uncertainty. Among the oldest generation of NZSL signers, this sign is used to express ‘what’, ‘where’, ‘when’, ‘how’, ‘why’, and any other enquiring phrases such as ‘what for?’, ‘what kind?’, ‘what happened?’ The exact meaning of the question is specified by context and by a lip pattern of an English question word. This traditional paradigm also included separate signs for HOW-MANY, WHO, and WHAT-FOR (a directional form used as a generally probing or deictic interrogative, e.g., ‘what’s that?’). Australasian Signed English introduced a larger set of interrogative signs from Auslan which correspond to English wh question words; these signs are now widely used to differentiate ‘what’, ‘when’, ‘which’, and ‘why’. While the generic interrogative system was apparently unproblematic among older generations of NZSL users<sup>3</sup>, the pedagogically motivated expansion of the question sign paradigm has brought modern NZSL closer to the lexicons of related languages Auslan and BSL. The differentiation of question signs also brings NZSL into closer correspondence with the semantics of English content question words, while simultaneously increasing independence from spoken language by reducing reliance on English mouthing to specify interrogative meaning.

<sup>3</sup> This is part of a more general process of lexical expansion in NZSL whereby many traditional polysemous signs that were specified by mouthing have been replaced by, or co-exist with, borrowings from ASE, Auslan, and elsewhere (e.g. ASL, BSL). An example is a generic sign for ‘colour’ that is specified by mouthing an English colour name, which is now used only by signers over the age of about 50; younger signers use a set of Auslan-based colour signs imported via ASE.

The signs HOW, WHERE and one form of WHAT retain the traditional interrogative form of upturned, open hands, although HOW is distinguished slightly from WHERE by a more pronounced turning upward movement of the palms. Use of the two-handed generic form may be pragmatically conditioned. It occurs in emphatic questions that function as exclamations, such as – ‘What?!’, ‘Why?!’ - or in large/distant audience settings where the two-handed form is more visible or dramatic than the one-handed variants. Signers might also use this generic form in situations where they want to elicit information in a more ‘open-ended’ manner, for reasons of politeness or emphasis, or perhaps when the type of expected response is less defined than a ‘what’/ ‘which’/ ‘why’/ ‘how’ enquiry would signal. The generic interrogative may be added to the end of a question that begins with a specific question sign - for example WHAT SAY INTERROG? or WHY LATE INTERROG? The pragmatic effect of this ‘doubling’ is to encourage a response (‘tell me’), or perhaps to soften the impact of a bald question.

Two forms of WHO, old and new, also co-exist and appear to be diverging in usage. The older version, glossed here as WHO-1, wiggles the extended four fingers of the flat hand, palm down. It can be directed at referents in a deictic manner to distinguish ‘who/which of them?’ (group) or to specify ‘who’s that?’ (singular) (Example 13). Introduced through ASE (and identical in BSL), is another sign glossed WHO-2, formed with an upright index finger, moving in a small circle (Example 14). This form is not generally locatable for person deixis.

For those signers who use and differentiate between the two sign forms, WHO-1 (wiggle) is used to ask ‘who (which) of a number of referents’, or to enquire about the identity of a specific visible referent, allowing the signer to avoid obvious pointing, whereas WHO-2 is used more generally for a non-specified referent.<sup>4</sup> Most older signers, however, use the traditional WHO-1 sign in all contexts; younger signers vary in how consistently they differentiate semantic contexts for the two forms. Further analysis of contexts of their use is needed to confirm whether a consistent semantic distinction exists. Both variants are also used to express the possessive interrogative ‘whose’. Some older signers also report a third, now practically extinct, form of WHO - a bent index finger tapped on the chin, palm left

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<sup>4</sup> Zeshan (2004b) notes a similar distinction for two forms of WHO in Icelandic Sign Language. See also chapter 2 in this volume.



Example 13 WHO-1 (traditional)  
video ex.13



Example 14 WHO-2 (new)  
video ex.14

– also known in the southern dialect of Auslan (Johnston 1989). Interestingly, signs from this era for STAFF and FATHER are identical in form, and the traditional sign NAME is similar but with a straight index finger, suggesting that this interrogative form may have been part of a semantic grouping (around the chin/mouth location) of nouns relating to personal identity.

#### 2.4.2 Conventionalised question expressions

A number of conventionalised question expressions consist of non-interrogative signs combined with content question non-manual signals, including (how) MANY? (also glossed as HOW-MANY), (how) MUCH?, (how) LONG?<sup>5</sup>, (are you) HEALTHY?, (what) DO?, (what's) WRONG?, (how) OLD?. (The glosses in brackets are not expressed by a separate sign.) Just as vocal intonation in English can signal a question in the absence of a question word or special word order, single signs or phrases without an interrogative sign can function as questions when marked by non-manual signals - for example:

Example 15      pol-q  
HEALTHY  
'Are you well?/How are you?'      video ex.15

Example 16      cont-q  
TIME  
'What's the time?'      video ex.16

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5 The form of (how) LONG? varies depending on the kind of time period in question; different forms of (temporal) 'LONG' may be used to differentiate past–until–now, from–now–to–future, a general period of time, or clockface time.

Example 17	<u>cont-q</u> NAME PRO2 'What's your name?'	video ex.17
Example 18	<u>cont-q</u> MONEY 'How much does it cost?'	video ex.18
Example 19	<u>cont-q</u> FROM PRO2 'Where are you from?'	video ex.19

### 2.4.3 *Interrogatives and indefinite pronouns*

Several indefinite pronoun forms are the same as or very similar to a corresponding interrogative sign. The traditional generic interrogative sign which covers a wide range of question meanings covers an equally wide a range of pronoun meanings, as shown in Table 1 along with other correspondences in pronoun/question signs from the older and more recent paradigms of question signs. The meaning of forms that function as both interrogative and indefinite pronoun is differentiated by context, lip pattern, and the presence or absence of question non-manual signals.

Old and new versions of WHICH correspond to different pronoun forms: the older sign (first two fingers extended, hand palm up, shaken horizontally from wrist) has the primary meaning of a dual person pronoun. The new (Auslan) form of WHICH ('Y' handshape, palm forward/down, moved horizontally in a small side to side movement; see Example 11), when used with a small rotating wrist movement means 'either'/'or', implying deictic pronoun meaning – 'this one' or 'that one'. The traditional form of WHICH can be oriented in space so that the extended fingers index the two referents, while the new form can be either moved in a manner that indexes dual referents (side to side movement) meaning 'which-of-the-two?', or a group of referents (circling movement ) to mean 'which of these/those?'

## 3. Negation

Negation in NZSL is expressed through several forms used independently or in combination: lexical negators, non-manual signals, mouthing co-produced with

Table 1: Interrogative – indefinite pronoun correspondences  
(Older or traditional signs are marked as ‘trad’ and more recent forms borrowed via ASE as ‘new’.)

Interrogative sign	Related pronoun forms	Other non-interrogative uses
Generic interrogative (trad)	something, somewhere, somebody, someone, anything, anywhere, anyone, any, somehow	because (trad.) so or
WHICH (trad) (+ spatial inflect. for person)	two-of-them/you	both, same, generic sign for family relative
WHICH (new) (+spatial inflect. for person, number)		either, or
HOW-MANY (trad)		number, many, count, score
HOW-MUCH (trad)		enough /not enough (+neg)
WHO-2 (new)	someone	
WHY (new) - see Ex. 5		because (new), reason

manual signs, morphological inflection of a closed (small) set of verbs, and lastly, a family of signs with inherently negative meaning (e.g., BAD, WRONG, RUDE, MISTAKE, DIRTY) that are formed with an extended-pinky handshape that can be used productively. This last category of signs will not be discussed here, except to note that their handshape is also associated with negative meaning in other signed languages including Auslan (Johnston 1989), BSL (Brien 1992), Chinese Sign Language and Thai Sign Language (Yang & Fischer 2002), and some varieties of ASL (Sternberg 1981).

### 3.1 Non-manual marking of negation

Predicates can be negated non-manually by a headshake co-occurring with the phrase. Non-manual negation (headshake) may be used with or without a negator sign. In relaxed discourse particularly, non-manual negation alone is typical, and articulation of the negation headshake may be reduced to a single sideways

movement of the head, returning only to the centre, as also described by Sutton-Spence & Woll (1999) for BSL.<sup>6</sup> Negation is emphasised by closed lips drawn down at the corners with the chin tensed (see Example 20). The head may be pulled back, and the brows furrowed to express emphatic negation in speech acts such as denial or disagreement.

Particularly in sentence final position, or as a stand-alone utterance, the sign NOTHING is accompanied by a “mouth gesture” (Sutton-Spence & Boyes Braem 2001) consisting of protrusion of the tongue between the teeth, as shown in Example 21. This mouth gesture also occurs with other negatives (conveying denial) such as NOT-ME and NOTHING-ME (see Section 3.3). Backward head movement shown in Example 20 signals intense negation.

Example 20: Emphatic negation: NOTHING + mouth gesture



video ex.20

Example 21: NOTHING with tongue protrusion mouth gesture



video ex.21

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<sup>6</sup> See the contributions by Antzakas and by van Herreweghe & Vermeerbergen in this volume about the use of this head movement in Greek Sign Language and Flemish Sign Language.



### 3.2 Scope of non-manual negation marking

The scope of non-manual negation marking occurs in the following patterns:

(a) Entire simple sentence or clause, minus any topicalised constituents<sup>7</sup>, for example:

Example 22            \_\_\_\_\_ neg  
PRO3 LIVE AUCKLAND  
‘She doesn’t live in Auckland’            video ex.22

Example 23            \_\_\_\_\_ t \_\_\_\_\_ neg  
NEXT MEETING, PRO1 GO PRO1  
‘As for the next meeting, I’m not going’            video ex.23

(b) In complex sentences - negated clause only, excluding other clauses such as topic, rhetorical question or conditional which are marked by contrasting non-manual signals:

Example 24            \_\_\_\_\_ cond \_\_\_\_\_ neg  
IF RAIN, MOW  
‘If it rains, don’t mow the lawn’            video ex.24

(c) Co-occurring with a sentence final pronoun. This structure is used to refute, contradict, or emphasise negation of a proposition about a particular referent.

Example 25            \_\_\_\_\_ neg  
DEAF SCHOOL, PRO3  
‘She didn’t attend a deaf school – not her’            video ex.25

Construction (c) has a positive corollary with an affirmative head nod. Sutton-Spence & Woll (1999:74) describe post-clausal negation in BSL, where the headshake occurs off the end of a sentence, without a manual sign. This is infrequent but possible in NZSL, usually occurring in the form of a rhetorical polar question (marked by slight brow and chin raise) followed by a headshake, as follows:

<sup>7</sup>A restriction on the co-occurrence of topic and negation marking in NZSL is also described by Collins-Ahlgren (1989).

## (d) Post-clausal negation by headshake without a manual sign

	_____ rhet-q	_____ neg
Example 26	WORTH GO CONFERENCE	
	‘Is it worth going to the conference? I don’t think so’	
	video ex.26	

Predicates containing a negation sign – or at least the sign itself – tend to be marked by a negative headshake, but not invariably. The combination of non-manual and manual negation does not result in positive meaning, in the way that two lexical negatives in English cancel each other out (as noted by Collins-Ahlgren 1989).

### 3.3 Lexical negation

NZSL has a variety of negation signs with distinct semantics and contexts of use, including (but not exhaustively) NOTHING, NOT, NOT-YET which negate predicates; negative pronouns and quantifiers - NOBODY, NONE (more emphatic than NOTHING which is also used as a quantifier), NOTHING-LEFT, NOTHING-THERE, exclamations of disavowal - NOT-ME and NOTHING-ME; negative imperatives - DON’T, MUST-NOT, FORBIDDEN, and negative replies - ‘neg’ headshake, DECLINE (sometimes described as neg. handwave), and NO. A closed set of verbs – WANT, KNOW, CAN, WILL – incorporate negation by a movement away from the body contact point (see Examples 27a, b).

Example 27a	WILL	video ex.27a
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Example 27b	WILL-neg (‘Won’t’)	video ex.27b
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As with interrogatives, the set of negation signs in NZSL has diversified somewhat in recent decades. Previous and older generations of NZSL signers used one

generic sign for most basic negative functions, including ‘not’, ‘don’t’, ‘can’t’, ‘never’, ‘should not’.<sup>8</sup> This sign (glossed as NEG, Example 28) is formed with two (optionally one) flat hands, palms facing forward or down, moving outward from the centre.

Example 28      NEG (traditional generic negator)      video ex.28

Like the generic interrogative, this coincides with a gesture used by hearing people to emphasise refusal or ‘no more’. Its use by most NZSL signers now is restricted to ‘no more/that’s all’, imperative ‘don’t’, and very emphatic negation of a predicate.

Examples 29-32 show a related set of negation signs (variants of the root sign NOTHING) which cover the domain of negative quantification and negative pronouns.

Example 29      NOT (Signed English)      video ex.29

Example 30      NONE      video ex.30

Example 31      NOBODY      video ex.31

Example 32      NOTHING-THERE      video ex.32

### 3.3.1 *Inflection of NOTHING for grammatical person*

NOTHING can be inflected for grammatical person by forming the sign (one handed) in pronoun loci, to incorporate reference to either abstract or visible referents. For example, NOTHING made with the arm outstretched into the second person locus can mean, in context, ‘You don’t have /You aren’t/ Not you’. Moved in a horizontal arc in front of the signer, or made at various discrete points in the signing space, these meanings apply to multiple referents. The negative pronoun glossed NOBODY (Example 31) is a lexicalised group inflection of the ‘nothing’ handshape, while the sign NOTHING-THERE (Example 32) is a lexicalised use of the ‘nothing’ handshape moved in a circular path to incorporate the meaning of area. A further example of

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<sup>8</sup>This is consistent with a similarly wide range of negative meanings expressed by this sign in BSL (cf. Brien 1992: 699)

this negation morpheme being used productively is the sign meaning ignorant or unknowing, in which the zero handshape is held against the forehead - the semantic location associated with knowledge and thought. ASL has a direct cognate of this sign formed with the ASL “zero” handshape, and it seems likely that the NZSL sign, which is of modern derivation, may be an adapted borrowing of that.

Two inherently first person negation signs are formed on the signer’s chest, the locus of first person reference. The sign NOT-ME (Example 33) is used to deny an accusation, disown an action or object, or to strongly decline involvement, e.g., ‘Nothing to do with me’; ‘Bags not!’; ‘Count me out’. The sign glossed NOTHING-ME (Example 34) is used to disavow or disclaim possession or knowledge of something, e.g., ‘I haven’t got one’, ‘I didn’t get a turn’, ‘I didn’t know that’, ‘I’ve never done/seen that’.<sup>9</sup>

Example 33      NOT-ME: Denying      video ex.33

Example 34      NOTHING-ME: Disavowing      video ex.34

### 3.3.2 *Position of negators in sentences*

The most common lexical means of negating a clause is the addition of NOTHING to a predicate, either preceding or following a verb (e.g., PRO1 IMPROVE NOTHING – ‘I didn’t improve’; PRO3 NOTHING TALK – ‘He didn’t talk’). Clause final position of NOTHING is very frequent and described as more ‘natural’ by deaf consultants, although the data contain acceptable examples of NOTHING in either position. Pre-verb negation (using NOTHING or NOT) is more noticeable in careful or formal signing and in discourse with hearing participants, possibly influenced by awareness of English word order.

Like pronouns and question signs, NOTHING can be repeated at both ends of a verb phrase, e.g., PRO1 GROW-UP BOARDING SCHOOL NOTHING COOK SEW NOTHING – ‘I went to boarding school and we didn’t learn to cook and sew’. The doubling of NOTHING might be interpreted in such cases as emphasising both

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<sup>9</sup> According to Johnston 1989:382, the same sign form in Auslan is used to express a reaction, such as ‘oh, really, you don’t say’, which is similar but has a slightly narrower range of meaning than in NZSL usage.

negative occurrence and negative quantity ('didn't learn any cooking or sewing'). NOTHING can also occur at the end of a clause containing another negator, for example: PRO1 NEVER TAKE-PILL NOTHING – 'I never take (any) pills'; IX NOT-YET<sub>3</sub>FAX<sub>1</sub> NOTHING – '(They) haven't faxed me yet'. A similar construction in Chinese Sign Language is characterised by Yang and Fischer (2002) as a 'negative sandwich'.

Incomplete aspect is expressed by the sign NOT-YET normally accompanied by a headshake and/or backward head movement, although the headshake may be absent as in Example 35. NOT-YET generally follows a verb or a topic phrase, as in Examples 35 and 36. NOT-YET may pre-modify a verb (see Example 37), but this is a less preferred position. Data suggest that when NOT-YET precedes a verb, negation non-manual signals mark the whole sentence (as in Example 37), but when in clause final position, particularly following a topic, negation signals are only required with the negation sign or clause (see Example 36).

Example 35 (NOT-YET without headshake)  
PAINT HOUSE NOT-YET video ex.35

Example 36  

_____	t		_____	neg
HOUSE PAINT		NOT-YET	PRO1	

 'As for painting the house, I haven't done it yet' video ex.36

Example 37  

	_____	neg
PRO1 NOT-YET PAINT	PRO1	

 'I haven't painted (it) yet' video ex.37

The semantic opposite of NOT-YET is FINISH, which indicates completive aspect and patterns identically to NOT-YET. Either the sign NOT-YET, or non-manual negation alone, is used to negate FINISH, meaning that an action is in progress but has not yet been completed, e.g., ESSAY FINISH NOT-YET ('I haven't finished my essay yet') or HOUSE PAINT, NOT-YET FINISH ('I haven't finished painting the house'.) NOT-YET or FINISH can be used as negative/affirmative replies to a closed question (e.g., 'Have you paid?')

The sign NOT (Example 29) originates from Signed English and is now sometimes used in place of the older NEG form with nominal and adjectival predicates. NOT immediately precedes the constituent it negates, e.g., BORN PRO1 NOT RIGHT (‘When I was born something wasn’t right’). It does not appear in clause final position - e.g., \*PRO1 TEACHER NOT is unacceptable, in contrast to PRO1 NOT TEACHER or PRO1 TEACHER NOTHING. While NOTHING (and NOT-YET) can negate a whole preceding predicate (e.g., DEAF LEARN FAMILY HISTORY NOTHING – ‘Deaf people don’t learn about family history’), the scope of NOT appears to be limited to an immediately following constituent or phrase, in a construction similar to English syntax. This usage may be influenced by its Signed English origin. NOTHING appears to be favoured over NOT as a general negator.

### 3.3.3 *Negative existential and possessive functions of NOTHING*

As well as being a negative pronoun, the sign NOTHING expresses negative existential and negative possession; its positive antonym is HAVE. HAVE is not required in an existential predicate, but is used to assert or emphasise existence, often accompanied by a head nod. HAVE is primarily used to express possession, and the sign form iconically represents grasping or holding something. These factors suggest that the existential meaning of HAVE has developed by extension. Another sign glossed as TRUE is also used with existential meaning. Both NOTHING and HAVE can stand as independent utterances in reply to closed questions about existence or possession, meaning for example (in context), ‘It’s not’, or ‘I am’.

To assert or negate existence, NOTHING and HAVE usually follow a predicate, while in a possessive context they commonly occur before or after the noun. Assertion is stronger when NOTHING or HAVE are clause final. For example:

Positive existential:

	_____ nod		
Example 38	PRO3 SHY HAVE PRO3	‘She’s shy’	video ex.38

	_____ t _ nod		
Example 39	PRO1 NERVOUS HAVE	‘I am nervous’	video ex.39

Negative existential:

	_____ <u>neg</u>		
Example 40	PRO1 SHY NOTHING	'I'm not shy'	video ex.40

Positive possession:

	_____ <u>t</u> _____ <u>nod</u>		
Example 41a	CAR PRO1 HAVE PRO1	<i>or</i>	video ex.41a

	_____ <u>nod</u>		
Example 41b	HAVE CAR PRO1	'I have a car'	video ex.41b

Negative possession:

	_____ <u>t</u> _____ <u>neg</u>		
Example 42	CAR NOTHING PRO1	'I don't have a car'	video ex.42

HAVE can also be negated by combination with NOTHING, as in the example, GALLAUDET ONLY DEAF UNIVERSITY IX WORLD. NOTHING HAVE HERE, NOTHING HAVE AUSTRALIA. The meaning of this particular example could be ambiguously possessive or existential ('we don't have one/ there isn't one'), but the post-negation position of HAVE (and other examples in the data) suggests that this combination is used with the intent of emphasising negative existence.

#### 4. Conclusion

NZSL shares some features of interrogative and negative constructions with other signed languages, and exhibits recent change and expansion in these two aspects influenced by the introduction of Signed English from 1979. Both questions and negative propositions can be expressed by suprasegmental non-manual signals, produced with or without manual signs which express interrogative or negative meaning. Non-manual signals for negation and interrogatives can be layered to express negative questions of both open and closed types. Syntactic analysis shows

that the scope of non-manual marking is subject to more restrictions than constituent order, which generally displays more flexibility. In NZSL, there is a tendency for signers to repeat pronouns, question words and negators at the beginning and end of a clause or predicate, in a form of “sandwiching”.

Lexical aspects of interrogative and negation signs have been described, noting in each case an historical shift from a small set of forms consisting principally of generic interrogative and generic negation forms, differentiated by mouthing, towards a more diversified lexicon of question and negation words. Lexical expansion and replacement has come about mainly through language contact (and intervention) since the 1979 introduction of Australasian Signed English, based on Auslan vocabulary. Signs from both traditional and newer paradigms co-exist and generally, but not in every case, are associated with older and younger generations of NZSL signers. Observation indicates that middle-aged and younger signers make more consistent use of grammaticised non-manual signals for marking interrogatives than do older signers, who place more emphasis on mouthing to convey or disambiguate word and sentential meaning.

Traditional generic forms of interrogative and negation signs that are specified by mouthing, and non-manual signals that signal questions (brow movement) and negation (negative headshake), coincide substantially with hand and facial paralinguistic gestures that non-deaf people in New Zealand might also use to emphasise a question or negative statement. This overlap with gestures (supported by mouthing) is not true of recently adopted question and negation signs; this perhaps reflects a shift in the resources from which the NZSL lexicon draws - away from the surrounding spoken language (at least in terms of production features, if not semantics) and towards other signed languages, as opportunities for cross-language contact increase and the language changes internally in a changing sociolinguistic context.



## Chapter 4

# Interrogatives and Negatives in Japanese Sign Language (JSL)<sup>1</sup>

Michael W. Morgan

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### JAPANESE SIGN LANGUAGE

Japanese Sign Language (JSL - also known by its Japanese name *Nihon Shuwa*, or NS) is used to varying degrees by the overwhelming majority of the deaf population throughout Japan, as well as a large proportion of the younger hard of hearing population. Ichida et al. (2001) estimate there to be about 57,000 “native” signers of JSL (though by “native” signers they seem to mean primary language users). This number excludes both those under 12 years old and CODAs who might be considered native signers. JSL is a member of the Japanese Sign Language family, which includes, besides JSL, (South) Korean Sign Language and Taiwanese Sign Language. JSL is not in direct contact with any other sign language, but is most subject to influence from American Sign Language (ASL) in the form of new loan words, especially those of a technical nature. There is some degree of dialect variation in JSL, though, thanks to the efforts of the Japanese Deaf Federation and the broadcasts of a Sign Language course and Signed News on NHK national public television’s educational channel, much less than in the past. The “standard”, which is the subject of virtually all research studies, is based on that of the Tokyo area. There is relatively little published about JSL in any language other than Japanese.

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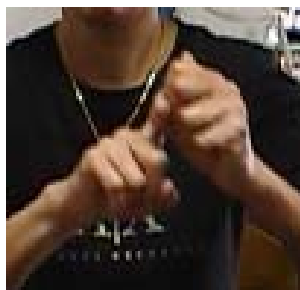
## Introduction

Japanese Sign Language, known in Japanese as Nihon-Shuwa (日本手話, or NS), but hereafter simply JSL, is the native language of the Japanese Deaf community existing in a number of generally mutually intelligible dialects and varieties. Genetically it is related to Korean Sign Language and Taiwanese Sign Language, both of which share many if not most of the lexical forms specifically addressed in this chapter. JSL is a highly expressive language possessing both a fully developed paradigm of interrogatives and a wide variety of negatives. The present chapter addresses the forms and usage of these two categories.

JSL is a minority language, surrounded by at least three languages. The first of these languages, spoken Japanese, although acquired to some degree by most Deaf Japanese, can be accessed by them in only a very limited way, through lip-reading. A second variety of Japanese, written Japanese, is much more accessible, and Deaf Japanese are overwhelmingly literate, using written Japanese in their daily lives. This form of Japanese has influenced JSL in many ways, both linguistically and pragmatically. Written Japanese has, in addition to two syllabaries which, like western alphabets, represent the sound structure of the spoken language, a set of ideographic characters, which it borrowed from China. These characters, called *kanji*, are much more closely linked to the meaning and at their root are sometimes quite iconic. Indeed, many JSL signs are iconic representations, not of the things themselves, but of the Japanese *kanji* for them. Thus, for instance, the JSL for Japanese 田 *ta* ‘field’ and 中 *naka* ‘middle’ are presented in Figure 1. The fact that such *kanji* always mean something, along with their iconicity, eases the borrowing process. This calquing ranges from abstract concepts (since Japanese uses Chinese-based *kanji* compounds to express such concepts in much the same way English uses Latin- and Greek-based compounds) to such everyday things as name signs. Japanese names are meaningful, and the two signs in Figure 1, put together, are the JSL for Tanaka, a common surname<sup>2</sup>.

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<sup>2</sup> As the components of Japanese names have meaning, they are so glossed, while in the translation line the transliteration of the Japanese form is given. Thus, FIELD MIDDLE = Tanaka, MOUNTAIN FIELD = YAMADA, etc.

Figure 1a: FIELD (田 *ta*)Figure 1b: MIDDLE (中 *naka*)

The finger-spelling syllabaries, while used to fingerspell Japanese words inserted into JSL discourse, are much less used to create signs, and there are relatively few so-called “initialised signs”, compared with American Sign Language.

In addition to the two forms of Japanese, a second form of signed communication also exists that must be distinguished from JSL: to wit, Signed Japanese (日本言応対手話, or “Japanese on the hands and fingers”, 手指日本言, hereafter SJ). SJ is basically a contact language, or pidgin, partly artificial and partly natural, part JSL (the signs themselves) and part Japanese (the grammar – or at least parts of it). Words are signed in Japanese order and generally speaking without certain of the elements of JSL grammar, such as grammatical use of the signing space and certain non-manual markings. If, for example, we take the simple question “What is your name?”, we might compare Japanese in (1) with SJ in (2):

- (1) あなたの名前は何ですか  
 Anata no namae ha nan desu ka<sup>3</sup>  
 you GEN name TOP what COP Q

<sup>3</sup>This Japanese sentence is *not* what Japanese normally say, nor is the SJ sentence what contact signers normally sign. I have simply chosen those possible grammatical expressions which most closely match each other in structure. In fact, only novice sign language learners, and Deaf signers trying to communicate with them would include the form EXIST-unmarked, corresponding to the copula *desu*, in the SJ sentence. If we compare more common expressions in Japanese and SJ, they are significantly *less* alike.

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 cont-q

 (2) INDEX<sub>2</sub> NAME WHAT EXIST(inanim) Q

As can be seen, although it is called Signed Japanese, some elements of Japanese grammar are lacking (in the given case, the Japanese case-role markers *no* and *ha*<sup>4</sup>), and in addition some elements of JSL grammar are present; in this case, the non-manual marker of a content question. Although it might be argued that in many cases the missing Japanese grammatical elements are supplied by the mouthing of the Japanese words<sup>5</sup>, in Deaf practice this is not generally the case. Clearly, we are dealing with a communication system that is *neither* Japanese *nor* JSL, yet it is most certainly deserving of linguistic, or at least communicative semiotic, analysis.

It must also be pointed out that neither JSL nor SJ are ideal, Saussurean *langues* in the sense of monolithic, totally independent systems. Indeed, no language ever is, particularly no minority language surrounded by such a dominant and prestigious language. In addition to variation due to dialect, signing exists in a variety of forms, on a continuum from something that is more closely Japanese-like in grammar, to something that is more closely JSL-like. Although SJ is the sign variety used by the overwhelming majority of hearing signers (including CODAs, hearing children born to Deaf parents), it is also used to greater or lesser degrees and in some variety by the overwhelming majority of Deaf signers, including those native signers born to Deaf parents, at least in some situations, even when communicating with other members of the Deaf community. The co-existence of two sign systems, both used within the community and in addition to the spoken and written systems of Japanese, certainly presents certain complications for linguistic research – though perhaps no more than in many cases of diglossia in the hearing world. Unfortunately, there have been no studies for JSL like Woodward (1994 [1973]) which examine the

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<sup>4</sup>These Japanese grammatical markers can be coded manually in the form of finger-spelling. This happens on extremely rare occasions, such as for emphasis or disambiguation (as in “Kobe University” versus “*a* Kobe university”). In fact, in a dozen years of regular contact with the Japanese Deaf community, I have never seen anyone, hearing or Deaf, who “signs” the Japanese grammatical markers (case-role, tense, etc) in anything but such exceptional cases.

<sup>5</sup> Mouthing plays a significant, and largely unexamined, role in communication between Deaf individuals in Japan. For example, I have observed two native signers, both children of Deaf parents and coming from larger Deaf families, mouthing as they converse, without apparent external motivation.

diglossic continuum systematically. The fact that each of the differing systems is subject to considerable internal variation complicates things further. While in the case of SJ this is acknowledged by the positing of a continuum, in the case of JSL it seems largely to be ignored – or worse, any and all variation is written off as simply SJ, or SJ influence. Often, such a judgment would appear to be as much political as grammatical. In attempting to show that JSL is a language in its own right, and in order to get full acknowledgment of and rights for JSL, emphasis is put on showing how different it is from the dominant spoken language. Linguists should look at the linguistic reality, which includes a wealth of variation often ignored, and also includes the fact that JSL is not a fully *independent* language, as indeed it cannot possibly be in such a milieu.

Although throughout this chapter references are made to Japanese, and occasionally to SJ, it is JSL and JSL alone that is the subject of this chapter. References to the other languages used by members of the Deaf community in no case imply (nor deny) that the given phenomenon is a borrowing, or even the result of influence, from the dominant language. Comparison with these other systems is provided to guide the reader in the event that some JSL structures are found to be typologically odd for a sign language. To ignore them would be a lapse, given the multiglossic nature of the Japanese Deaf community. As Labov (1998:110) observed in reference to another minority language (African-American Vernacular English) similarly surrounded by a dominant language, a “monolithic approach” taken without reference to other co-existent language varieties “often produce[s] descriptions that are far removed from linguistic and social reality”. In the case of JSL, the other co-existent language varieties that must be taken into account are written Japanese, spoken Japanese, and the continuum of SJ.

Finally, a word about the sign language variety described in this study. In sign language research, it is often assumed that only those Deaf signers who acquired their signing “naturally”, that is, from infancy from native signers, can be called native and are appropriate sources of data. Thus, only those Deaf individuals born to Deaf parents are considered native signers. A large portion of the illustrative examples in this chapter come from Akahori et al. (2000), Ichida (1991, 2005a, 2005b) and Kimura and Ichida (1995), and can be assumed to be native-signer JSL in this sense; I suspect that this may also be the case of at least some of the other sourced examples. Examples without a source are largely based on over a dozen years of the author’s observation and an as-yet rather limited corpus of transcribed video. This material comes from a variety of Deaf signers, only a portion of whom

are native signers in the sense used above. This is due to a feeling that such a restricted definition makes certain assumptions about the language acquisition of Deaf children that seem, at worst, at odds with reality, at best, untested. Mostly, though, the original assumption is at odds with the fact that there are large numbers (though not a majority) of Deaf signers whose signing is linguistically indistinguishable from native signers defined in this restrictive way. In fact, we have two groups of native signers: “home-based” native signers, who start acquiring JSL at home from deaf parents, and also perhaps from elder Deaf siblings, and “community-based” native signers, who start acquiring JSL after they enter the Deaf community.<sup>6</sup> In Japan, this is usually at the age of 3 or 4 when they start going to the deaf school and interacting with other Deaf children. The JSL described in this chapter is that used by both these groups of native signers when communicating among themselves, that is, in situations where we would expect minimal SJ influence.

## 1. Interrogatives

In this section, we deal with three topics: the question particle in JSL, polar (yes/no) questions, and content (wh-) questions. Issues of the pragmatics of questions will be dealt with in section 3, after the section on negation.

### 1.1 The Question Particle in JSL

There is, arguably, a question particle in JSL, though it is by no means an unmarked question particle attached to all questions, as is *ka* in Japanese<sup>7</sup>. This question particle, glossed here as Q, is shown in Figure 2a. It might be noted that this sign is very similar to 1) the polite second-person index, 2) the final portion of the sign ASK (Figure 2b), and 3) the content question sign HOW-(ABOUT) (Figure 2c; see also Section 1.3.2), but without the side-to-side tremolo, any one of which could reasonably be its etymological source.

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<sup>6</sup> Thanks to Donna Fujimoto for coming up with this terminology.

<sup>7</sup> The question particle is a given for SJ, but arguable for JSL as well. The ubiquity of Japanese *ka* (and similarly used question particles *no*, *kai*, *dai*, etc.) is, however, overstated. For example, in a survey of 67 university students, the expression they said they used in asking the name of elders included *ka* almost universally. However, fewer than 15%, presumably mostly women students, had a question particle when asking people younger than themselves, and then mostly *no* was used.



a)                      b)                      c)  
 Figure 2: a) Question particle, b) final segment of ASK, c) HOW-(ABOUT)  
 video ex.38

While the distribution of the question particle has not been studied, the following seem to hold: When it occurs, it is typically found clause-finally in simple questions, after each (but also often only the first) alternative in alternative questions, and at the end of the embedded question. This distribution parallels the use of Japanese *ka*. Questions with question particle Q are obligatorily marked with the normal non-manual markings of questions (see Sections 1.2 and 1.3.1). This particle is more frequently found with yes/no-questions than with content questions, though by no means is it obligatory, or even statistically preferred, in either type of question. Its use seems to be conditioned largely by pragmatic and sociolinguistic rather than syntactic factors, including, but not limited to, a shift towards SJ on the JSL-SJ continuum, such as often occurs in formal signing, e.g. on stage. This shift is further facilitated by the fact that it parallels the Japanese question particle *ka* used, at least in formal style, with all types of questions.

An example of a content question with the question particle from Signed Japanese was given in sentence 1 in the introduction. A more “natural” variant would be:

- \_cont-q
- (3) INDEX<sub>2</sub> NAME WHAT Q  
 ‘What is your name?’

Whatever its distribution and function in native Deaf signing, the sign Q is seen by many Deaf signers as a sign of spoken or Signed Japanese influence. It is frequently labeled (and rejected) as such when signers are presented with examples of its



occurrence, even if taken directly from native Deaf signed discourse. The exact nature, function and distribution of this particle merits further study.

Be that as it may, the following example of a yes/no question with question particle can be cited:

- (4) INDEX<sub>3</sub> pol-q TRUE Q (JFD:634)<sup>8</sup>  
 ‘Is that true? / Really?’

As an example of the question particle (Q) used in an alternative question we have:

- (5) pol-q Q pol-q TRUE Q (JFD:1823)  
 ‘Is it true or false?’

- (6) \_\_\_\_\_ pol-q \_\_\_\_\_ cont-q  
 MAN Q WOMAN WHICH GOOD  
 ‘Which is better, the man or the woman?’ (from home-based native  
 signer) video ex.6

With alternative questions, the two Q signs tend to be produced to alternate sides of the body, that is, to the left for one alternative and to the right for the other alternative, although as in example 5, the second Q may be absent. Similarly, the accompanying head tilt also tends to be to alternate sides.

In content questions, the question particle is used on rare, possibly sociolinguistically conditioned occasions. Examples include:

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<sup>8</sup> Sources for the examples are indicated by abbreviation in parentheses after the gloss line. A = Akahori *et al* 2000, FO = Fischer and Osugi 1998, I1 = Ichida 1991, I2 = Ichida 2005a, I3 = Ichida 2005b, JFD = Nihon-Roa-Renmei 1997, KI = Kimura and Ichida 1995, To = Torigoe 1992-93, Ta = Tanaka 1999. Examples from the present author’s video corpus are marked C. Unmarked sentences were either observed or, less frequently, elicited or constructed by the present author, an active member of the Deaf signing community, and then rechecked with Deaf signers. Only those non-manuals that are relevant to the topic of this chapter are glossed, and appropriate non-manual markings have been added to examples in the cases where they are omitted in the original source but can be assumed.

- \_\_\_\_\_cont-q
- (7) TANGERINE HOW-MANY<sup>9</sup> Q (JFD:93)  
'How many tangerines are there?'

- \_\_\_\_\_cont-q
- (8) BORN DATE-HOW-MANY Q (JFD:115)  
'When is your birthday?'

Such forms are often judged by Deaf signers as being SJ rather than JSL – even when the same Deaf signer may be observed to use these forms naturally within minutes of this negative judgment. A fairer assessment as to whether this response is linguistically or politically motivated will have to await a detailed statistical analysis of extensive corpora including signers from the full range of linguistic backgrounds and all varieties of signing in a variety of pragmatically and sociolinguistically diverse situations. Unfortunately, such corpora do not yet exist for JSL.

## 1.2 Polar Questions

Polar questions in JSL are accompanied by non-manual marking (Figure 3). There is some variation in the combination of such marking, but it typically includes raised eyebrows, slight head nod / chin tuck on the last word – or if this is an index point, on the index point plus the preceding word – with or without a return of the head to the normal upright position (Kimura and Ichida 1995). In addition to the head nod



Figure 3: Polar question non-manual marking

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<sup>9</sup> This sentence, though listed under *ikutsu* 'how many' in the JFD, is glossed with *kazu* 'number'. I discuss the problems with (HOW)-MANY and DATE-(HOW-MANY) in Section 1.3.2 below.

or tuck, a slight diagonal head tilt is common (Ichida 1998). The final sign is also normally held and the gaze remains on the person being asked.

Although the above is generally true, it has been reported that of the four markings (eyebrow raise, head nod/tuck, final-sign hold, and addressee-directed eye gaze), any of the first three can be absent and the utterance will still be a polar question (Ichida 1997). The nuance or other differences of variant forms have, however, not been fully examined.

The scope of non-manual marking for polar questions is, generally speaking, the whole clause, less any topicalised elements. For example, we have the pair (9) and (10):

\_\_\_\_\_ pol-q  
 (9) BOOK BUY INDEX<sub>2</sub> (I1:142)  
 ‘Did you buy the book?’

\_\_\_\_\_ top pol-q  
 (10) BOOK BUY INDEX<sub>2</sub> (I1:142)  
 ‘Was it you who bought the book?’

No syntactic mechanisms are obligatory with polar questions in JSL. Frequently, however, the index point (pronoun) is either moved to question -final position, or else occurs in its normal position and again in question-final position. Thus, for instance, given a declarative sentence such as in (11), a polar question such as in (12) is normal, as well as a question such as in (13) with a copied index point pronoun:

(11) INDEX<sub>2</sub> BOOK BUY  
 ‘You bought a book.’

\_\_\_\_\_ pol-q  
 (12) BOOK BUY INDEX<sub>2</sub> (I1:142)  
 ‘Did you buy the book?’

.....\_\_\_\_\_ pol-q  
 (13) INDEX<sub>2</sub> SATO INDEX<sub>2</sub> (KI:42)  
 ‘Are you Mr/s Sato?’

Alternative questions are reasonably common in JSL. Alternative questions combining positive and negative are possible, particularly if the positive is EXIST-unmarked<sup>10</sup> or EXIST-animate.

- (14) pol-q pol-q  
DEAF HEARING  
'Which are (they), deaf or hearing?'
- (15) \_\_\_\_\_ pol-q pol-q cont-q  
INDEX<sub>3</sub>=THAT COFFEE Q TEA Q WHICH (C)  
'Is that coffee or tea?'
- (16) \_\_\_\_\_ pol-q pol-q  
CAR EXIST-unmarked>2 | NOT.2 (C)  
'Do you have a car (or not)?'

### 1.3 Content Questions

#### 1.3.1 Non-manual marking

As with polar questions, content questions are also accompanied by non-manual markings (Figure 4). The non-manual features which mark a content question typically include either raised or lowered eyebrows, and chin thrust often with a slight sideward tilt, with side-to-side tremolo wag (Kimura and Ichida 1995), and these occur in various combinations. The final sign, typically a content question word or an index point, is normally held, and eye gaze remains on the person being asked, as occurs with polar questions.



Figure 4: Content question non-manual marking

As with polar questions, there is some allowed variation in the non-manual markings accompanying content questions (Ichida 1997) – even more so if one considers that the markings themselves include variation, that is, eyebrows raised OR lowered, chin thrust with OR without sideward tilt, etc. For two of the non-manual markings (eyebrow raise or lowering, and chin thrust with or without sideward tilt with tremolo chin wag), if the utterance includes a content question sign, then the non-manual markings listed may be absent. If no content question sign is present, then they both seem to be required. Additionally, if the utterance ends with an index point which is held, then once again the non-manual markings do not seem to be required. The nuance differences, including signer’s attitude and various pragmatic effects, signalled by the various possible combinations have not been studied, but at least one minimal pair has been noted:

cont-q (eyebrow-lowered)

(17) LECTURE WHO INDEX (To:26)  
 ‘Who is that giving the lecture?’

cont-q (eyebrow-raised)

(18) LECTURE WHO INDEX (To:26)  
 ‘Who is giving the lecture (they’re not here yet)?’

In (17) we have a simple question as to who is giving the lecture, while in (18) we have the added nuance of impatience, that is, it is time for the lecture to start but no lecturer is there yet.

With the stipulations mentioned above, non-manual marking is obligatory with content questions. In fact, even without the appropriate content question sign, the non-manual marking alone is enough to signal a content question. Thus, in addition to example (19), we also see example (20), without any content question signs, and without any significant difference in meaning.

cont-q

(19) INDEX<sub>2</sub> NAME WHAT (KI:41)  
 ‘What is your name?’ video ex.2

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<sup>10</sup> The negative NOT is presumably derived from EXIST-unmarked, as argued in Section 2.5.

- \_\_\_\_\_ cont-q
- (20) INDEX<sub>2</sub> NAME (I1:143)  
 ‘What is your name?’

The scope of non-manual marking for content questions is, generally speaking, the whole clause less any topicalised elements. Thus:

- \_\_\_\_\_ cont-q
- (21) TODAY COME TIME+(HOW)-MANY (To:20)  
 ‘What time are you coming today?’

- top \_\_\_\_\_ cont-q
- (22) TIME TODAY COME (HOW)-MANY (To:20)  
 ‘What time are you coming today?’

This is identical to what occurs with polar questions.

### 1.3.2 Question words

There are a number of question signs in JSL, fitting into five formational groups, which are listed, together with their combinatory usage, in Table 1.

A few comments are in order concerning compound interrogatives. Compounds of WHAT, expressing what in English are separate and basic interrogative concepts (‘where’, ‘why’, etc), are also compounds of 何 ‘what’ in written Japanese. Thus:

Meaning:	What?	Where?	Why?	How?
JSL	WHAT	PLACE+WHAT WHAT+PLACE	REASON+WHAT	MANNER+ WHAT
Written	何	何処	何故	如何
Spoken	<i>Nani</i>	<i>Doko</i>	<i>Naze</i>	<i>Ikaga / dou</i>

Note that the position of the ‘what’ component in the compounds in the two languages is generally opposite, that is, last in JSL and first in written Japanese. However, neither JSL nor written Japanese are entirely consistent, as ‘where?’ is expressed in JSL in both orders, and the kanji 何 in written Japanese *ikaga / dou* ‘how?’ is in second, not first place. The JSL and Japanese forms under ‘How?’ are included together on the basis of form rather than meaning, as they are not exact matches

<i>Formational group</i>	<i>Members, including compounds</i>	<i>Related non-interrogative signs</i>
WHAT (Figure 4)	WHAT PLACE+WHAT ‘where’ WHAT+PLACE ‘here’ REASON+WHAT ‘why’ GOAL+WHAT ‘what for’ MANNER+WHAT ‘how’	
WHO (Figure 5)	WHO	NOT-KNOW- animate
WHICH (Figure 6)	WHICH	IN-ANY-CASE
HOW-MANY (Figure 7)	(HOW)-MANY <sup>11</sup> ‘how many/much’ DATE-(HOW)-MANY TIME+(HOW)-MANY ‘what time’ AGE+(HOW)-MANY ‘how old’ MONEY+(HOW)-MANY ‘how much money’	(COUNT), MANY (DATE)
HOW-(ABOUT)	HOW-(ABOUT) <sup>12</sup>	Q

Table 1: Question signs

<sup>11</sup>I have decided, perhaps against better theoretical judgement, to list both (HOW)-MANY (and its compounds) and DATE-(HOW)-MANY, but to emphasise the dilemma by putting parentheses around the problematic elements. See the final paragraph of this section for a discussion of the dilemma. The related non-interrogative sign MANY is usually signed with an added lateral motion, the “intensity” of which, together with non-manuals signifying intensity, differentiates nuances ranging from ‘several’ to many’.

<sup>12</sup>I gloss this as HOW-(ABOUT) rather than HOW, since it is mainly used in the sense of ‘how about (going shopping)?’, and only rarely in a sense translated by ‘how (is your health)?’ Note, however, that the former is really a polar question, and only the rare usage in the latter sense motivates its inclusion in this section.



a) WHAT  
video ex.7



b) PLACE+WHAT (= 'where')  
video ex.11



c) GOAL+WHAT (= 'why')



d) MANNER+WHAT (= 'how')

Figure 4: WHAT and some of its compounds



Figure 5: WHO  
video ex.24



Figure 6: WHICH  
video ex.22

in usage, and the Japanese corresponds in usage more closely with the JSL sign glossed HOW-ABOUT.

Elements of compound interrogatives may in fact be separated, especially where the non-interrogative element is topicalised, as seen in (22). In addition, all compounds may also be signed without the content question component, as long as the content question non-manual markings are present (see Figure 8). Thus, any of



the WHAT compounds can be expressed by the first part of the compound alone, that is, without the WHAT. PLACE+WHAT (= ‘where’) is somewhat of an exception in that, although one can sign PLACE alone, with appropriate non-manuals, it is more common to sign WHAT alone. This leads to syncretism, except for differing mouthings, and the possibility that, in the locative sense, the movement is larger. Similarly, for the (HOW)-MANY compounds, the signs TIME, MONEY, and AGE alone (with the appropriate non-manual markings) are also possible. In fact, to sign ‘how much money?’, MONEY alone is often signed with the non-manuals of a content question and with a hold tremolo, a common trait among question signs and a common realisation of the canonic sequential finger tuck of HOW-MANY.

As mentioned above in the section on the question particle (Section 1.1), the form of the sign HOW-(ABOUT) also appears to be a tremolo version of the clause-final question particle, Q. In the following example, HOW-(ABOUT) seems to be used in place of Q:

- \_\_\_\_\_ pol-q
- (23) SHOPPING GO HOW-(ABOUT) (Ta:150)  
 ‘Will you be going shopping?’  
 (approx. ‘How about going shopping with us?’)

It is quite possible that they are variants of a single sign occurring with little or no difference in meaning. It is interesting that in such cases the non-manuals co-occurring with HOW-(ABOUT) are those of a polar question, although it is listed here as a content question interrogative and can on rare occasions be used as such.

This brings us back to the question of whether in fact the content question signs have related non-interrogative signs, differing only by the presence or absence of the non-manual markings (e.g. the HOW-MANY group, noted in footnote 11), or whether it is those non-interrogative signs themselves that are used, with the addition of non-manual markings, to ask content questions. Whether both interrogative and non-interrogative should be posited or not (in which case the difference is in the non-manuals), would appear to be primarily a theory-determined decision. We could assume that the manual and non-manual elements go together as a single form, in which case HOW-MANY and COUNT, on the one hand, and DATE-HOW-MANY ‘when’ and DATE are different signs, and the non-manual loses its independence as a separate form, but only in such instances. Or else we could assume that the non-manual elements are to be kept independent in all cases, on the principle of “once a



a) HOW-MANY  
video ex.27



b) MONEY+(HOW)-MANY  
video ex.34



c) AGE+(HOW)-MANY  
video ex.35



d) TIME+(HOW)-MANY  
video ex.32



e) DATE-(HOW)-MANY  
video ex.36

Figure 7: HOW-MANY and its compounds and formationally related signs



a) REASON (instead of REASON+WHAT)

video ex.18

b) TIME (instead of

TIME+HOW-MANY)

video ex. 31

Figure 8: Content question word-less interrogative signs

morpheme, always a morpheme”, and then the remaining manual portion is in fact identical with the non-interrogative form. Given an assumption of a one form – one meaning relation, this means that there is but one lexical sign for each pair: the non-interrogatives COUNT and DATE. Neither option necessarily sits well with the intuition of signers, who feel both the signs (HOW)-MANY (plus compounds) and DATE-(HOW-MANY) are an integral part of the interrogative system, and that the non-manual is independent. Since strict adherence to the latter analysis would, however, leave a big hole in the chart, and since both signer intuition and how this group acts syntactically indicate that it is a part of the interrogative system, I have included these quantitative interrogatives in the discussion.

### 1.3.3 Content Question Placement

Content question signs are typically, but not necessarily, clause-final (24). Fischer and Osugi reported (1998) that wh-constituents can also occur in situ (25) and on the left (26), in which case placement of a copy at the end of the sentence is not unusual.

- \_\_\_\_\_ cont-q  
 (24) FATHER LIKE WHAT (FO:3)  
 ‘What does father like?’ video ex.10

- \_\_\_\_\_ cont-q  
 (25) FATHER WHAT LIKE (FO:3)  
 ‘What does father like?’ video ex.9

- \_\_\_\_\_ cont-q
- (26) HOW-MANY JAPAN COME HOW-MANY (FO:3)  
‘How many times have you come to Japan?’ video ex. 28

However, repetition of the interrogative sign as indicated above, once in situ and then again question-finally, does not indicate a plurality of referents. The question arises as to whether reduplication of the interrogative is also possible as a form of pluralisation. Thus, take the constructed form in 27, with hypothesised meaning:

- \_\_\_\_\_ cont-q
- (27) BORN WHERE WHERE  
‘Where all were they born?’

This sentence was almost universally interpreted as a simple question ‘Where was he (she, you, etc.) born?’ If, however, the two signs WHERE were clearly differentiated in space, with one located to the left and the other to the right, then the utterance with the hypothesised meaning is accepted as possible. However, when asked how they themselves would ask the same question with the same nuance, again almost universally a different form was proposed, with reduplication not in the question word, but in the pronoun (index point), which would necessarily be two points (‘he and he’) rather than an arc (‘they (collectively)’).

## 2. Negatives

### 2.1 Non-Manual Negation and Non-Manuals in Negation

A negative headshake typically occurs with negative sentences in JSL in the form of a repeated side-to-side headshake. There are also a variety of other facial expression features, including different mouth shapes, mouthing of Japanese negative words, pursing the lips, pulling back one corner of the mouth, etc., that frequently appear in negative sentences. However, the distribution and functional, nuance-motivated characteristics of these other features have not been studied in any detail. Ichida (2001) identifies four varieties of negative headshake, resulting from the combination

of plus or minus “Strong” where the movement is emphatic, and plus or minus “Small” where the distance the head moves is minimalised. In the case of combination with +Small, +Strong should be interpreted as something like “tense”. In answer to the question in (29), the four possible types of negative headshake give the nuances listed in Table 2.

- \_\_\_\_\_ top \_\_\_\_\_ pol-q
- (28) FIELD MIDDLE MARRY NOT-YET  
‘Tanaka isn’t married yet?’

	Minus Small	Plus Small
Minus Strong	Tanaka isn’t married. (English <i>No</i> )	No, that’s not what I was talking about.(Japanese <i>iya</i> )
Plus Strong	No, Tanaka is married. (Japanese <i>iie</i> )	No, I’m not saying that; I don’t know.(Japanese <i>iya</i> )

Table 2: Nuances of negative headshake

Although typical, headshake negation is not mandatory. In addition, the negative non-manual marker cannot, in the absence of a negative sign, negate a sentence by itself, as it can in some other sign languages, such as ASL, where a negative headshake over the sign UNDERSTAND means ‘(I) don’t understand’. In JSL, a negative sign is required, except in the limited case of a simple “one-word” negative reply, in which case a negative headshake alone is sufficient. A combination, however, of manual and non-manual negation is the most common way to negate a sentence in JSL. The scope of the headshake is either the whole sentence minus any topicalised constituent(s) or else the negated constituent alone, in which case it typically occurs clause-finally.

## 2.2 Manual Negation: Lexical Negation

There are a number of negative signs in JSL, of which NOT is the one which comes closest to being the “basic” negator, with DIFFER occurring almost as frequently.

The present analysis identifies ten, with several having both one- and two-handed variants.<sup>13</sup> The major ones discussed in the text are represented in Figure 9 and Figure 12b. The negative signs are:

- 1) **NOT**, with one-handed (NOT.1) or two-handed (NOT.2) variants (Figure 9a).
- 2) **NOTHING**, one-handed (NOTHING.1) or two-handed (NOTHING.2) variants, both typically with accompanying ‘pa’ or ‘wa’ mouthing (Figure 9b).
- 3) **NO**, a one-handed sign, also found in Japanese gesture (Figure 9c).
- 4) **DON’T**, a one-handed sign, distinguished from NO in that the palm of NO faces left, while in DON’T it faces out, and the fingers are also spread. Although this is a major negative sign, it was not found in my video corpus and is not shown here.
- 5) **FROM-SCRATCH**, a two-handed sign only (rare and not shown).
- 6) **EMPTY**, typically two-handed; sometimes one-handed without the passive hand (EMPTY.1) (Figure 9d).
- 7) **BLANK**, either one-handed (BLANK.1) or two-handed (BLANK.2), with the one-handed version being virtually indistinguishable from EMPTY.1 (Fig. 9e).
- 8) **ZERO**, a two-handed sign, with variant handshapes (F and O) on the passive hand (Figure 9f).
- 9) **DIFFER**, with both one-handed (DIFFER.1) and two-handed (DIFFER.2) variants (Figure 9g).
- 10) **NOT-YET**, a two-handed sign, with the distance between the active and passive hands increased to indicate remoteness of prospective completion (Figure 12b, in Section 2.4, where this sign is discussed).

Ichida (2005b) gives a good discussion of the semantics and usage of the three major negators, which correspond to our NOT, DON’T and DIFFER. We can summarise his examples (p. 90) and their possible meanings in the form of Table 3.<sup>14</sup>

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<sup>13</sup> Akahori et al (2001) and Ishida and Kawabata (2000:6) list seven “negative auxiliary verbs”: a) NO (‘iie’), b) NOT-B (‘naiB’), c) Emphatic-NO (‘iya’), d) NOT-F (‘naiF’), e) DIFFER-L (‘tigauL’), f) DIFFER-B (‘tigauB’), and g) NOT-YET (‘mada’). Ishida (2005b) discusses, in addition to presumably b and d, also ‘sinai’, which would seem to be a new name for a. Without pictures or detailed descriptions, though, it is hard to correlate all of them with our list, but certainly d = 2, e = 9 and g = 10, most probably a = 4, b = 1 and c = 4, and f is unclear.

<sup>14</sup> The three signs (EAT, PRETTY and BOOK) were no doubt chosen to represent the categories verb, adjective and noun. However, as Minoura (1998) has shown, JSL does not possess these part of speech distinctions.



(a) video ex. 40



(b) video ex. 44



(c) video ex.48



(d) video ex.51



(e) video ex.54



(f)



(g) video ex.57



Figure 9: Some major negatives: a) NOT, b) NOTHING, c) NO, d) EMPTY, e) BLANK, f) ZERO, and g) DIFFER

	EAT + __	PRETTY + __	BOOK + __
NOT ( <i>nai</i> )	‘I don’t eat’ ‘I’m not eating’ ‘There’s nothing to eat’	‘It’s not pretty’ ‘There’s nothing pretty’	‘There’s no book.’
DON’T	‘I don’t / won’t eat’  ‘I don’t have to eat’  ‘Eating isn’t good’	‘I don’t want to be pretty’ ‘I don’t need anything pretty’ ‘Pretty isn’t good’	‘I don’t read ( <i>sinai</i> ) books’ ‘I don’t need a book’ ‘The book isn’t good’
DIFFER ( <i>tigau</i> )	‘It’s not (the) eating’	‘I wouldn’t say it’s pretty’	‘It’s not a book’

Table 3: Comparison of the semantics of NOT, DON’T and DIFFER

He characterises DIFFER as expressing “meta-linguistic negation”, which I would class as negation of identification, NOT as negation of existence, fact and attribution (and, with added non-manuals, of experience and possibility), and DON’T as negation of necessity and value, as well as negative habit and will.

Expanding the list to all ten negatives listed above, and taking not only meaning but also usage into account, we can further summarise as Table 4.<sup>15</sup>

We can see that only NOT negates both actions/states and existence; NOTHING negates actions in the sense that it negates that the actions took place, that is, negates their existence, as seen in (32). Also, the signs EMPTY, BLANK and ZERO appear more or less synonymous. Negative imperative is more frequently expressed with such signs as FORBID and STOP. All the negators, when they occur in a clause, come after the negated word, whatever its semantics (“part of speech”). Examples of each of the negatives (except NOT-YET, which is treated in Section

<sup>15</sup> Pluses are my impressionistic estimates, and numbers in parentheses are figures from Akahori et al (2000) for negatives found in 12,000 words of sign discourse (assuming the same assignment as in footnote 13).



	Action or State	Negated Existence	Occurrence: O = one-word reply I = imperative S = stage signing	Contrastive or Conjunctive	Most frequent
NOT	+	+	O	+	++ (72)
NO	+	-	O, I, S	(+)	+
DON'T	+	-	O	+	++ (72)
NOTHING	(+)	+	O	-	+(2)
FROM-SCRATCH	?	+	?	-	rare as negative
EMPTY	-	+	O	-	+
BLANK	-	+	O	-	+
ZERO	-	+	(O)	-	(+)
DIFFER	+	-	O, (I)	+	++ (40)
NOT-YET	+	?	O	(+)	++

Table 4: General summary of the meaning and usage of the negative signs

2.4) occur in (30) through (40), in addition to those given in Table 3 and elsewhere in the chapter.

- neg  
(30) NOT.2 NOT-KNOW1 NOT-KNOW-animate INDEX<sub>1</sub> (C)  
'No, I don't know him.'

- top neg  
(31) FATHER BROTHERS NOT.2 (C)  
'My father doesn't have any brothers'

- neg  
(32) COUNTRY GO-AROUND NOTHING INDEX<sub>1</sub> (A:13)  
I haven't traveled around the country much ('much' supplied by mouthing)

- (33) TOMORROW RAIN BECAUSE FLOWER SEE GO NO (C, home-based native)  
'Since it's going to rain tomorrow, I'm not going flower-viewing.'

- neg  
(34) NOT INEPT INDEX INEPT NO (C)  
'No, I'm not good (at it) at all.' (in response to praise)

- top neg  
(35) READ DON'T | READ REMEMBER NEED INDEX<sub>2</sub> (A:14)  
'Don't just read it, you need to read and remember it.'

- (36) LEISURE FROM-SCRATCH (JFD:1309)  
'(I) don't have any free time.'

- (37) EMPTY INDEX<sub>3</sub> NOT NOT EMPTY (C)  
'There's nobody there.'

- (38) TABLE VASE DISAPPEAR ALL-GONE BLANK (C)  
'The vase on the table is gone.'

- top
- (39) YESTERDAY WORK OVER 2-HOURS 3-HOURS | PAY ZERO  
 ‘Yesterday I worked 2 or 3 hours overtime, but got paid nothing.’
- \_\_\_\_\_ neg
- (40) <sub>3</sub>HELP<sub>1</sub> DIFFER | DO INDEX<sub>2</sub>  
 ‘Don’t get help; do it yourself’ (A:13)

### 2.3 Lexically Negative Verbs: Morphological Negation and Suppletion

JSL, like most sign languages, possesses numerous pairs of signs that are opposites, both semantically and, significantly, formationally. In the case of JSL, this usually involves a reverse in the motion component of the sign. Such pairs can often reasonably be considered affirmative and negative sign pairs (see Table 5). These pairs include such sign pairs with opposite meanings as REMEMBER (motion downward and in with hand closing) and FORGET<sup>16</sup> (motion up and out with hand opening), and other signs with opposite movement directions (see Figure 10).

<i>Affirmative Sign</i>	<i>Negative Sign</i>	<i>Formational Relationship</i>
KNOW1, KNOW2	NOT-KNOW <sup>17</sup>	Movement down vs up
NEED	NOT-NEED	Movement towards vs away from body
LIKE	DISLIKE	Movement fingers close vs open

Table 5: Pairs of related affirmative and negative signs

<sup>16</sup> FORGET might be treated as the negative rather than the opposite of REMEMBER. However, since REMEMBER NOT ‘don’t remember’ is possible, it is perhaps useful to make the distinction. In any case, there are many other pairs, like GO and COME, which are opposites rather than positive and negative pairs.

<sup>17</sup> The sign KNOW1, and perhaps on occasion KNOW2, also means ‘understand’, and NOT-KNOW also means ‘not understand’, and can, in this sense, sometimes be replaced by WEAK-AT.



(a)  
video ex.63



(b)  
video ex. 64



(c)  
video ex.77



(d)  
video ex.90

Figure 10: Opposite signs: a) REMEMBER, b) FORGET,  
c) NEED, d) NOT-NEED

Another type of a positive-negative pair is CAN and CANNOT (see Figure 11). These signs are not related formationally or derivationally in any way, that is, they have entirely different handshapes, different locations, and different movement components. They are entirely suppletive. There are two other signs, one seemingly restricted to the Kobe dialect, which mean ‘cannot’. They too are suppletive.



(a)

video ex. 79



(b)

video ex. 80

Figure 11: Suppletive opposite signs: a) CAN, b) CANNOT

While several of these suppletive pairs admit an alternative, though exceedingly rare, syntagmatically expressed negative, (e.g. REMEMBER/FORGET as noted in footnote 16), the KNOW/NOT-KNOW and CAN/CANNOT pairs do not. NOT-NEED is a special case, as it appears formationally to be a blend of NEED+NOT.2.

## 2.4 Aspectual Negation: FINISH versus NOT-YET

There are two completive signs in JSL, which are most frequently interchangeable in this usage. One of them (glossed -ED) occurs only with verbs to mark the completive, while the other, glossed FINISH (Figure 12a), occurs both as a marker of the completive and as an independent verb meaning ‘finish’. NOT-YET (Figure 12b) is the negative partner of both –ED and FINISH. The contrast between FINISH and NOT-YET can be seen in the question-answer pair in (41) and (42):

- |      |                           |      |                 |
|------|---------------------------|------|-----------------|
|      | <u>cont-q</u>             |      |                 |
| (41) | WORK FINISH               | (42) | NOT-YET         |
|      | ‘Have you finished work?’ |      | ‘(No), not yet’ |

The sign NOT-YET is clearly inherently negative, and as such no other negative is required, or even allowed, in the same sentence. FINISH can also be negated itself when it is used as a predicate (example 42).

- |      |                            |
|------|----------------------------|
|      | <u>neg</u>                 |
| (43) | WORK FINISH NOT.2          |
|      | ‘I haven’t finished work.’ |

The other marker of completive aspect, -ED, can generally only be negated indirectly, such as in (44) with a rhetorical question, or it can be replaced by NOT-YET.



Figure 12: Completive opposite signs: a) FINISH, b) NOT-YET

video ex. 92

video ex. 93

- \_\_\_\_\_ pol-q    neg  
 (44) MOVIE SEE -ED | DIFFER (or: NOT-YET)  
 ‘I haven’t seen the movie (yet).’ (lit. ‘Have I seen the movie? No, I haven’t.’)

## 2.5 Negative Existence in JSL

There are two positive existential signs in JSL: a general existential, EXIST-unmarked, used primarily but not exclusively for inanimates, and a second one, EXIST-animate, used for animates only, and also possessing the sense of ‘reside, live at’ (Figure 13). This distinction is roughly (though my impression is, not exactly) the same distinction as in Japanese *iru* vs. *aru*.

In addition to showing mere existence, both are also used where English would use ‘have’ to show possession, and EXIST-unmarked can be made to “agree” with the possessor by placing the palm of the signing hand directed in space as an index point pronoun would be placed (Figure 14).<sup>18</sup>

While EXIST-animate can be negated syntagmatically, as in example (45), such utterances are rare.

- \_\_\_\_\_ top                      neg  
 (45) BROTHERS EXIST-animate NOT.2 (C – home-based native signer)  
 ‘(He) doesn’t have any siblings.’



a)                      b)  
 Figure 13: a) EXIST-unmarked and  
 b) EXIST-animate

video ex. 82    video ex. 89



Figure 14: EXIST-unmarked>2 (= ‘you have’)

<sup>18</sup> I have argued elsewhere (Morgan 2005:34) that this would mean that this verb belongs to a class of affective verbs, a trait of active-stative languages, of which JSL possesses many.

Generally, though, the negative of EXIST-animate is expressed suppletively by either NOT, NOTHING, ZERO or FROM-SCRATCH occurring alone, as in the negative answer in example (47), an answer to question (46);

(46) \_\_\_\_\_ top \_\_\_\_\_ pol-q  
FIELD MIDDLE COUPLE CHILD EXIST-animate  
'Do the Tanakas have children?'

(47) \_\_\_\_\_ top ..... neg  
FIELD MIDDLE COUPLE CHILD NOT.2  
'The Tanakas don't have any children.'

For EXIST-unmarked, syntagmatic negation does not occur, and we only get suppletion, as in the question-answer pair (48) and (49):

(48) \_\_\_\_\_ pol-q.....  
OLDER-BROTHER EXIST-unmarked>3 (INDEX<sub>3</sub>) (49) neg  
'Does he have an older brother?' 'No, he doesn't.'

This is exactly what one might expect from the apparent morphological derivation of NOT.1 from this sign (i.e. EXIST-unmarked + negative wrist rotation > NOT.1 just as NEED > NOT-NEED).

When either EXIST-unmarked or EXIST-animate are used with locative nuance, that is, 'exist in a given place', in addition to the above possibilities, EMPTY and BLANK are also likely, as found in (37) and (38).

### 3. Pragmatics of Asking and Answering Questions

#### 3.1 Introducing Questions

There is no special way to introduce questions in JSL. However, it is frequently the case that questions can be introduced by calling the attention of the addressee, with a sign best glossed as HEY. In the case of potentially personal or invasive questions,



questions may be introduced by either BREECH-OF-ETIQUETTE (BUT) or EXCUSE-ME (BUT), followed by the personal question to be asked.

### 3.2 Simple Affirmative and Negative Answers

Answers to questions are generally straightforward, with the affirmative being expressed by either YES or THUS. The latter is often signed with both hands, one nearer the signer and the other nearer the addressee, literally: ‘I’m thus and you’re thus too.’ = ‘I agree with you (your statement).’ Alternatively, the sign could be seen as a variant of the sign SAME, basically a two-handed THUS, and would thus mean ‘You and I are the same (in our way of thinking, etc.)’

Both of these signs are normally accompanied by an affirmative up-and-down head nod, marked by nod above the gloss line, though this is sometimes absent. Negative answers to polar questions typically involve NOT or NO, or else the sign DIFFER, which is also possibly glossed as WRONG, together with a side-to-side negative headshake (see Figure 8 for these negative signs). NOT and DIFFER occur in either the one-handed or the two-handed version. The headshake and head nod themselves, without supporting sign, are also common as replies. In this they act similarly to the head movements found accompanying hearing discourse, and, like them, are best interpreted as part of a broader communicative, rather than a narrowly linguistic, semiotic system. The non-manual headshake or head nod typically occurs together with the manual affirmative or negative sign, although they may also occur before them as in (51) through (54).

- \_\_\_\_\_ pol-q
- (50) HOKKAIDO GO EXIST-unmarked>2 INDEX<sub>2</sub> (KI:152)  
 ‘Have you (ever) been to Hokkaido?’



Figure 15: (a) YES



(b) THUS

- (51) nod | FINISH (KI:153) (52) nod | EXIST-unmarked>1 (KI:153)  
‘Yes, I have.’

- (53) neg | NOT-YET (KI:153) (54) neg | NOT.2 (KI:153)  
‘No, not yet./No, I haven’t.’

- (55) pol-q  
SKI FORTE INDEX<sub>2</sub> (KI:142)  
‘Are you a good skier?’

- (56) neg  
NO | INEPT INDEX<sub>1</sub> (KI:144)  
‘No, I’m not very good.’

The head nod or shake may also occur together with some other word(s) as response, typically the predicate repeated from the question. Thus:

- (57) pol-q  
MOUNTAIN FIELD KNOW INDEX<sub>2</sub> (KI:174)  
‘Do you know Mr/s Yamada?’

- (58) nod | KNOW (KI:174) (59) neg | DIFFER NOT-KNOW  
‘Yes, I know (him/her).’ ‘No, I don’t know him/her.’

### 3.3 Use of Clefted Rhetorical Questions

As in some other sign languages, e.g. ASL, both content and polar rhetorical questions, as in (60) and (61), are quite common. Ichida (2005a) calls the former wh-cleft sentences.

cont-q

- (60) BOX-LUNCH MAKE WHO | FIELD MIDDLE (I2:93)  
 ‘It was Tanaka who made the box-lunch.’ (lit. ‘Who made the box-lunch? Tanaka did.’)

An example of this rhetorical device with a polar question is:

\_\_\_\_\_ pol-q \_\_\_ neg

- (61) INDEX1 B-M-W EXIST-unmarked>3 | DIFFER | HONDA EXIST-unmarked>3  
 ‘I don’t have a BMW, I have a Honda.’ (lit. ‘Do I have a BMW? No, I have a Honda.’)

Since non-predicate constituents are not normally negated in JSL, a similar rhetorical device is used, as in (62):

\_\_\_\_\_ top \_\_\_ pol-q \_\_\_ neg

- (62) NEW CAR BUY FATHER | DIFFER | OLDER-BROTHER  
 ‘It was my brother, not my father who bought the new car.’

In fact, the non-manuals of polar questions are remarkably similar to those used to signal topic (raised eyebrows, chin tuck, etc.), which raises the question as to whether topics in JSL are not, in purely structural terms, simply a type of fronted rhetorical question.

### 3.4 Complications: Answering Negative Polar Questions

Negative polar questions can be answered in more than one way. Thus, for example, in answer to a negative polar question such as in (63), all answers given in (64) through (67) are possible, in addition to answers involving an affirmative head nod, as in example (51) and (52) above.

\_\_\_\_\_ pol-q

- (63) OKINAWA GO NOT-YET INDEX2 (KI:154)  
 ‘You haven’t / Haven’t you been to Okinawa yet?’

- (64) neg | NOT-YET (KI:155)      (65) neg | NOT.2 (KI:155)  
'No, I haven't (yet).'

- (66) neg | FINISH (KI:155)      (67) neg | EXIST-unmarked>1 (KI:155)  
'Oh yes, I have.'

Thus a negative headshake can be used as either a negative or affirmative response, the negative or affirmative nature of the response being indicated manually after the headshake (see also Section 2, concerning nuances conveyed by different types of headshakes). For comparison, Japanese allows only the 'opposite' answers to English, that is, 'Yes' (*hai*) means 'Yes you're right, I haven't.' and 'No' (*ie*) means 'No you're wrong, I have.'

#### 4. Conclusion

As we can see from the above, JSL does indeed present a rich morphological and syntactic array of interrogatives and negatives. While the forms are clear, their functions have not yet been thoroughly examined in the literature. The present chapter has been an attempt to summarise what is known, and to raise questions and point out directions for potentially fruitful future research.

A number of points of usage clearly warrant further study. In particular, an examination of the nuances expressed by the different variant combinations of non-manual markings occurring with the negatives and interrogatives is to be desired. Also further work on determining the different semantic and pragmatic functions of the various negatives would be desirable, as would work on the various alternative ways of expressing many content interrogatives (e.g. 'where' = WHAT+PLACE, or PLACE+WHAT, or WHAT). Finally, an examination of the conditions under which the question particle is used merits further study, especially focusing on which usages are within and which are clearly without the range of JSL as opposed to SJ (and SJ-influenced) usage.

Linguists often restrict their discussions to *what cannot be said* in a given language (proscriptive grammar, the infamous starred forms), and *what should be said* (prescriptive grammar, describing what is “proper” usage). Not uncommonly, grammatical descriptions also describe *what must be said* (obligatory rules). Much less rarely are we presented with the full range of *what can be said* (descriptive grammar in the usual sense). In addition, very rarely but with increasing frequency thanks to the development of more extensive corpora and the computers to analyze them, we can find discussions of *what actually is said* (truly descriptive, corpus-based grammar). Hopefully over the next few years, sufficiently large and diverse corpora of JSL in all its spatial, temporal and sociolinguistic variety can be gathered, transcribed and analyzed, and we can reach a more comprehensive understanding of some of these issues. For the time being, however, this remains no more than a desideratum.

### **Additional abbreviations used**

COP = copula

GEN = genitive case marker

TOP = topic marker

..... = optional extent of co-occurring non-manual markings

>1, >2, >3 = movement and placement of the existential sign, similar to that of index point or object agreement

## Chapter 5

# Negative and interrogative structures in Turkish Sign Language (TID)

Ulrike Zeshan

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### TÜRK İŞARET DİLİ (TURKISH SIGN LANGUAGE)

Türk İşaret Dili (Turkish Sign Language, TID) is the sign language used in the deaf community across Turkey. TID varieties in western and central Turkey can be considered dialects, with the same grammar, and variation mainly in the lexicon. The status of sign language varieties in eastern Turkey is less clear and may involve comparatively greater differences. There are currently no reliable estimates of the size of the sign language community in Turkey.

As there is currently no evidence to suggest that TID has developed on the basis of or under heavy influence from another sign language, it can be assumed that TID is indigenous to Turkey. It has not been determined whether TID can be grouped with other sign languages into a larger language family. While it does share a number of features with sign languages in adjacent Arabic-speaking countries of the Levantine area, and also with the sign language used in Greece, these are certainly separate, mutually unintelligible languages. The history of sign language in Turkey is particularly interesting, including evidence for the existence of a sign language used at the Turkish Ottoman court from as early as 1500 onwards (Miles 2000). However, its relationship with modern TID remains unknown at present.

The Turkish deaf community is centrally organised, headed by the National Turkish Federation of the Deaf (*Türkiye İşitme Engelliler Milli Federasyonu*).

Affiliated deaf clubs and associations all over the country are in regular contact with each other. The first deaf schools in Turkey were established in the western part of the country (e.g. Istanbul, Izmir). Some of these early private schools followed a bilingual approach, using both Turkish and sign language. In the 1950's, a centralised deaf education system was introduced following an oral-only policy, which excluded the use of sign language in the classroom. A somewhat more open approach to the use of sign language is only just entering the educational system. Importantly, new disability legislation in 2005 included provisions relating to sign language for the first time. Deaf people now have the right to sign language interpreting services, and TID is to be introduced as an option into the deaf education system.

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## 1. Data and methodology<sup>1</sup>

The results presented here are mainly based on fieldwork in central and western Turkey conducted in 2001 (Eskişehir, Istanbul, Izmit, Ankara) and 2002 (Istanbul). The data include video recordings of both spontaneously produced texts and elicited examples, part of which were transcribed and analysed with the help of the SignStream computer program. A preliminary account of some negative and interrogative structures based on data from the first fieldwork in 2001 can be found in Zeshan (2002b, 2003c), together with basic information about the deaf community in Turkey and the history of Türk İşaret Dili.

Negatives		Interrogatives	
Elicited examples:	61 utterances	Polar questions:	61 utterances
Examples from texts:	71 utterances	Content questions:	56 utterances
Total:	132 utterances	Total:	117 utterances

Table 1: Number and type of utterances in the data

Table 1 gives a summary of the extent and type of data. For negative utterances, both elicited examples and examples taken from texts are equally represented. By contrast, interrogative examples taken from texts are rare because the texts were monologues, which naturally have few instances of true questions, that is, questions other than reported or rhetorical questions. Therefore, a special technique was used to elicit questions in a natural communication situation between two signers. Signers were playing a guessing game in pairs where partner A would think of a person and partner B was to guess who partner A was thinking of. In order to guess the answer, partner B was allowed to ask any kind of polar or content question, which produced a large number of instances of both types of interrogatives. Five deaf signers participated in this experiment, all of whom have been educated at schools for the deaf, are active members of the deaf community and were trainees in a first pilot course for sign language teachers that I conducted in Turkey in 2002. Three of the informants have deaf family members (parents and/or older siblings), that is, they are native signers.

<sup>1</sup> I am grateful to all my friends, informants and assistants in Turkey who have contributed sign language data for this research, especially Miraç Bayhan, Sinem Dal, Şule Kibar, Nermin Merdanoğlu, and Elvan Tamyürek Özparlak. I particularly thank my deaf research assistant Hasan Dikyuva.



The negative examples were elicited by directly asking three informants to produce examples that contained a particular negative sign. All three informants, two deaf signers and one hearing signer with deaf parents (CODA), had worked with me as sign language research assistants and had been trained in sign language research methodology. Direct translation from Turkish into Türk İşaret Dili was not used as an elicitation technique because the value of data so obtained can be severely compromised by interference from the spoken language. That is, signers may produce utterances that are influenced by the structure of the spoken/written language and that would not be used under natural circumstances in direct communication between sign language users.<sup>2</sup> I also avoid more indirect techniques, such as the method employed here to elicit negatives, when working with untrained informants because the outcomes can be unpredictable. Therefore, this part of the data is restricted to the three informants who had a basic understanding of the aims and methods of sign language research due to their involvement as research assistants. The informants were free to use the negative signs in any context they chose. Therefore, the examples often contained more than one clause because the informants were describing a coherent situation rather than providing an isolated sentence, and this was exactly the aim of the elicitation session.

In addition to the elicited examples, negatives from signed texts, taken from a database of 568 transcribed utterances, were also included in the analysis. These utterances are part of a wider corpus of spontaneously signed texts in Türk İşaret Dili which is described in detail in Zeshan (2002b), and I occasionally referred to this wider corpus to cross-check for examples of both negatives and questions.

Finally, both interrogative and negative structures were again discussed in detail with a deaf signing research assistant in 2004, and examples were checked for validity. This process was part of creating video-based instructional materials for teaching Türk İşaret Dili at the beginner's level.

## 2. Interrogatives

This section deals with the two basic types of interrogatives, polar questions (a.k.a. “yes/no-questions”) and content questions (a.k.a. “wh-questions”). The study is limited to the most prototypical kind of interrogative, that is, direct questions. Other types of interrogatives such as reported questions or rhetorical questions are

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<sup>2</sup> This phenomenon is well known in the sign language research community. See Chapter 2, Section 2.3 in this volume for details on methodological issues of this kind.

not included in the analysis. Both parts of this section deal with both manual and non-manual ways of marking polar questions (section 2.1) and content questions (section 2.2).

## 2.1 Polar questions

### 2.1.1 Non-manual marking

Polar questions in Türk İşaret Dili have non-manual marking that is similar to, but distinct from non-manual marking in content questions (see Section 2.2.1). The non-manual configuration in direct questions, that is, excluding reported questions and rhetorical questions, usually involves widened eyes with eye gaze on the addressee and a forward head position (see Figure 1). This is the same configuration that occurs as part of the non-manual configuration used in content questions. However, content questions are additionally characterised by a side-to-side headshake. Moreover, the relative frequency of eyebrow movements differs between polar questions and content questions. While not being obligatory, a marked eyebrow position is much more frequent in polar questions, with the eyebrows either raised or lowered in 75% of all cases.<sup>3</sup>



Figure 1: Non-manual marking in polar questions

<i>Eyebrow position</i>	<i>Number of occurrences</i>	<i>Percentage</i>
raised eyebrows	29	48%
lowered eyebrows	14	23%
Neutral content question non-manuals	13	21%
non-manuals	5	8%
Total	61	100%

Table 2: Eyebrow position in polar questions

<sup>3</sup> This figure includes all examples in the categories “raised eyebrows” and “lowered eyebrows” in Table 2, as well as three examples in the category “content question non-manuals”. By contrast, eyebrow position is unmarked in 45% of all cases in content questions (see Table 3 in Section 2.2.1).

Table 2 summarises eyebrow position in the polar questions in the data. Raised eyebrows are more common than lowered eyebrows, but neither seems to be frequent enough to be included as a definite component in a grammatical facial expression. Rather, it seems to be the change in eyebrow position more than the actual position which adds to the interrogative function of the entire non-manual configuration in a given utterance. When eyebrow position remains neutral, the other non-manual behaviours (wide eyes, eye contact, forward head position) are usually still present, so that a polar question can always be identified as such. The scope of non-manual marking in polar questions is usually the whole clause.

In a particular context, a polar question can have content question non-manuals. This happens regularly in alternative questions. Alternative questions are very common in Türk İşaret Dili. For example, signers will usually say ‘Is s/he deaf or hearing?’, rather than just ‘Is s/he deaf?’. Example (1) is an alternative question from the data:

			pol-q	
(1)	ADAM/BABA	TÜRKİYE	AVRUPA	AVUÇ
	MAN/FATHER	TURKEY	EUROPE	PALM-UP
	‘Is the man Turkish or European?’			video ex.1

Unlike prototypical polar questions, alternative questions can be construed as content questions, that is, as containing a kind of underlying question word ‘which’, as if to say, for instance, ‘Is s/he married or unmarried, which (of the two is true)?’. This construal can license a polar question with content question non-manual marking, which would be in between a prototypical polar question and a prototypical content question. Thus the question ‘Is it a man or a woman?’, which was frequently asked as the first question in the guessing game, occurred in all three forms represented in Example (2), with Example (2b) showing the intermediate case of a polar question with content question non-manuals. The question word WHAT in (2c) is a general interrogative that also covers the function of ‘which’ (see Section 2.2.2).

			pol-q	
(2a)	KIZ	ADAM/BABA		
	FEMALE	MAN/FATHER		video ex.2

			cont-q	
(2b)	KIZ	ADAM/BABA		
	FEMALE	MAN/FATHER		video ex.4

- (2c)  $\overline{\text{KIZ}} \quad \text{ADAM/BABA} \quad \text{NE}$   
 FEMALE      MAN/FATHER      WHAT
- cont-q
- ‘Is it a woman or a man?’ video ex.3

The example in (2b) is similar to a content question where the question word has been left out, as described in Section 2.2.3. We thus find not only prototypical polar and content questions, but also intermediate categories. It is in these intermediate types that we can get seemingly anomalous non-manual marking. The range of question types can be illustrated as in Figure 2.

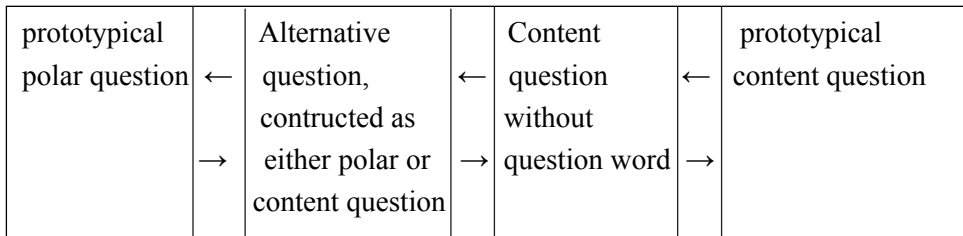


Figure 2: Prototypical and intermediate types of questions

### 1.2 Manual marking

In many sign languages, there is a tendency for pronominal index points to occur clause-finally in polar questions (e.g. Van Herreweghe & Vermeerbergen, Fischer, McKee, this volume). This also seems to be true in general for Türk İşaret Dili, but does not occur frequently in the data discussed here because the utterances do not contain many pronominal forms. There are few questions relating to the addressee and thus few second person pronouns. Moreover, since both signer and addressee know that a certain third person is the target of the guessing game, third person singular reference also often remains unexpressed.

Spoken Turkish uses a question particle *mi* in polar questions.<sup>4</sup> By contrast, Türk İşaret Dili has no general question particle, but, like other sign languages, uses

<sup>4</sup> The question particle is subject to vowel harmony and thus occurs as *mi*, *mi*, *mü* or *mu*, depending on the quality of the preceding vowel.

non-manual marking as the main mechanism for forming polar questions. There are, however, two signs, PALM-UP and QUESTION-MARK, that do occur as manual question markers in polar questions with some regularity.

PALM-UP consists of one or two hands held with the palm turned upwards. This manual configuration is very widespread across sign languages and is at the same time a widespread gesture. In fact, it is not quite clear whether this form should be classified as a gesture or a sign, and I therefore adopt a more neutral terminology, referring to it as the PALM-UP marker. As a gesture, this marker has the basic meaning of expressing uncertainty (often translatable as ‘I don’t know’, especially in combination with a shoulder shrug). In Türk İşaret Dili the marker occurs both in questions, that is, polar and content questions, and in negatives (see Section 3.1.7) and is always clause-final, as in example (1) in the previous section.<sup>5</sup>

The second sign QUESTION-MARK, represented in Figure 3, is based on drawing a question mark into the air. This sign seems to be pragmatically stronger than PALM-UP and occurs more rarely, but in the same clause-final position. An utterance as in (3) occurred more than once in the elicited data at the end of the guessing game, to suggest a final answer. The expression in (4) is not uncommon and was used by several signers in both the elicited data and the wider text corpus. Unlike PALM-UP, QUESTION-MARK was never used in content questions in the data.



Figure 3: QUESTION-MARK

- |     |                      |               |
|-----|----------------------|---------------|
|     | <u>pol-q</u>         |               |
| (3) | [isim]               | SORU-İŞARETİ  |
|     | [sign name]          | QUESTION-MARK |
|     | ‘Is it [sign name]?’ | video ex.5    |

<sup>5</sup> In fact, it might be more accurate to regard it as being external to the clause, but I will not pursue this argument here.

With signers who use mouthing when they sign, PALM-UP and QUESTION-MARK, as well as a final pronominal index, may be accompanied by mouthing corresponding to a form of the question particle *mi*. However, mouthing of the question particle can also freely occur on any final sign in the clause. Examples (4) and (5) are taken from the data of a native signer who uses mouthing quite extensively (the mouthing is indicated in a separate line in the transcription). The mouthing of a question particle can be considered an additional, though non-essential, marker of a polar question.

		<u>pol-q</u>	
(4)	EVLİ/EŞ MARRY/SPOUSE "evli" married	SORU-İŞARETİ QUESTION-MARK "mi" QM	
	‘Is s/he married?’		video ex.6
		<u>pol-q</u>	
(5)	EVLİ/EŞ MARRY/SPOUSE "eşi" spouse-3Sg:POSS	İŞ WORK "çalışıyor" work-PROG:3Sg	O INDEX <sub>twd</sub> "mu" QM
	‘Does his wife work?’		

## 2.2 Content questions

### 2.2.1 Non-manual marking

Non-manual marking of content questions in Türk İşaret Dili is interesting in that it is quite different from non-manual features that have been reported for other sign languages in relation to questions. Non-manual marking of content questions typically involves a side-to-side headshake in combination with direct eye contact and a forward head position. I am not aware of any other sign language for which the use of a headshake for marking questions has been reported.

Headshakes occurring in content questions are slightly different in form from the headshake used in negative clauses (see Section 3.2). In content questions, the side-to-side headshake tends to be smaller, that is, the head does not move to the right and left as much as in a negative headshake. On the other hand, the headshake that marks content questions tends to be faster and produced more tensely than a

negative headshake. With very few exceptions, this headshake occurs in all examples of content questions in the data. Eye contact and a forward head position also seem to be obligatory features of this non-manual configuration. The negative headshake, by contrast, is mostly accompanied by lowered eyebrows and a frown. We thus have two different configurations that each involve a headshake:

- (a) headshake large/slow + lowered eyebrows/frown for negation
- (b) headshake small/fast/tense + eye contact/forward head position for content questions

In addition to being formationally different from the negative headshake, the headshake used in content questions also has different scope preferences. Whereas the negative side-to-side headshake most frequently has scope over the negator only, the headshake in content question quite easily spreads over a larger part of the utterance, often the whole clause. In 73% of all utterances in the category of content questions, the headshake spreads over either the whole utterance or a larger final part of the utterance. In the latter case, one or more initial constituents, for example, the subject of the clause or a peripheral constituent such as a temporal or locational expression, are outside the scope of non-manual marking (cf. Examples in Section 2.2.2). In a minority of cases (22%), the non-manual marking spreads over the question word only. If the question word is in initial or medial position, this can result in non-final marking (Examples 6 and 7), which is disallowed in a number of other sign languages.

- (6)           cont-q  
 SENE KAÇ SÜRE İŞ  
 YEAR NUMBER TIME-DURATION WORK  
 ‘How many years has s/he been working?’

- (7)           cont-q  
 EV NE OTURMAK  
 HOUSE WHAT SIT

‘Where does s/he live?’

video ex.7

In one particularly interesting example, the signer hesitates before the question, thinking about what to say. However, the characteristic non-manual marking already appears early, which results in the non-manual configuration (slight, fast headshake with eye contact and head forward position) being present for quite some time before

the onset of the first manual sign. Clearly, an intention to use a content question resulted in the early production of the suitable non-manuals in this example. There are a number of further examples in the data where the non-manual configuration appears early in the clause, before the onset of the first manual sign.

Eyebrow position does not seem to play a major role in the formation of content questions in Türk İşaret Dili. In the data, eyebrow position is variable. Table 3 shows the eyebrow positions appearing in the data for content questions.

<i>Eyebrow position</i>	<i>Number of occurrences</i>	<i>Percentage</i>
Lowered	5	9%
Raised	26	46%
Neutral	25	45%
Total	56	100%

Table 3: Eyebrow position in content questions

Although there are a number of instances of raised eyebrows, this is not significant enough to warrant an analysis as an obligatory grammatical marker. Coerts (1992) put the threshold of a non-manual activity to be significant as a non-manual marker at 50% of occurrences. If anything, I would be inclined to choose a higher threshold, but the “raised eyebrows” feature falls short even of the comparatively conservative mark of 50%. Moreover, the fact that there was no distinctive eyebrow position in almost half of all utterances (45% for neutral eyebrow position in Table 3), also strongly speaks against classifying this feature as part of non-manual marking in this case. The distribution shown in Table 3 is in evident contrast with the occurrence of the headshake and eye contact/head position features, which appear in almost all instances. Finally, eyebrow position seems to vary across individuals to some extent. Most of the instances with lowered brows were produced by one and the same informant, another person produced many instances of raised eyebrows, while a third retained mostly neutral eyebrow position and the two other informants showed mixed patterns. Again, the headshake and eye contact/head position features do not vary individually but are essentially identical for all informants. I therefore conclude that eyebrow position in content questions is not a grammatical marker but rather an affective-intonational feature that is quite variable, as would be expected for a facial expression in this function.



### 2.2.2 *Question words*

Türk İşaret Dili has an extensive question word paradigm. Some question words have an interrogative function only, but the majority of question words are either the same as or derived from non-interrogative items. The range of non-interrogative signs used as question words is similar to other sign languages around the world (cf. Zeshan 2004b), that is, the same signs are used in the same interrogative functions in a number of unrelated sign languages. However, Türk İşaret Dili is interesting in that the extent of non-interrogative signs used as the basis of question words is greater than in other known sign languages, so that in fact the majority of question words are of this type.

Question words in Türk İşaret Dili are of three different types. The first type consists of question words that are used as interrogatives only and have no non-interrogative function. This applies to WHAT (Figure 4) and WHO (Figure 5). These are usually considered to be among the most basic interrogative meanings, and so it is not surprising that these two meanings are covered by signs that function only as interrogatives.

The second type includes question words for ‘where’ and ‘when’, as well as a more unusual interrogative ‘which-grade’, referring to school grades. These signs are very similar to or derived from non-interrogative signs. The question words for ‘where’ and ‘when’ are very similar to the signs PLACE and DAY. The only difference is a slight phonological change in the interrogatives consisting of a repetitive movement pattern. The interrogatives derived in this way are therefore glossed PLACE-qu and DAY-qu, where ‘-qu’ stands for the repetitive movement pattern that turns the non-interrogative signs into question words. In PLACE-qu (Figure 6), the repetition is at the same location, whereas DAY-qu (Figure 7) can be made with the hand either remaining at the same location or moving forward in space. The interrogative ‘which-grade’ is related to a paradigm for school grades that incorporates a numeral into the sign for the unit. In this sign, the hand touching the opposite upper arm has a handshape corresponding to the number of the school grade, for example GRADE+THREE with three extended fingers. For the interrogative GRADE-qu, this is replaced by a different movement pattern.

Finally, a few non-interrogative signs are used as question words without any formational change. These include the signs REASON (Figure 8) and NUMBER (Figure 9), which are used to mean ‘why’ and ‘how many’ respectively as question words. Both signs are used freely in both their interrogative and their non-interrogative functions. Disambiguation between the two functions is achieved through facial expressions, and sometimes mouthing.



Figure 4: WHAT



Figure 5: WHO



Figure 6: PLACE-qu



Figure 7: DAY-qu

Further details concerning the use of individual question words are as follows:

The interrogative WHAT has a basic meaning of ‘what’, but is also used for ‘how’ (Example 8) and ‘which’ (Example 9). There are no separate question words for ‘how’ and ‘which’. This sign is based on a corresponding gesture that is used in the surrounding hearing community. The sign is similar in form to PALM-UP, and it is sometimes difficult to distinguish between the two, especially in fast signing



Figure 8: REASON



Figure 9: NUMBER

where the duration of the sign is short. Sometimes, WHAT can also be used in place of more specific question words, then functioning as a general interrogative (see example 7 in section 2.2.1, where WHAT is used to mean ‘where’). It is not clear yet from the data to what extent WHAT can replace some or all of the more specific question words.

- |     |   |                         |                        |  |
|-----|---|-------------------------|------------------------|--|
|     |   | cont-q                  |                        |  |
| (8) | NE<br>WHAT  | ARKADAŞ<br>FRIEND       | TANIMAK<br>GET-TO-KNOW | SEN AVUÇ<br>INDEX <sub>2</sub> PALM-UP |
|     | ‘How did you get to know the friend?’                           |                         |                        | video ex.8                             |
|     |   | cont-q                  |                        |  |
| (9) | KIZ<br>FEMALE   | ADAM/BABA<br>MAN/FATHER | NE<br>WHAT             |  |
|     | ‘Is it a boy or a girl?’ (lit. ‘Which is it, a girl or a boy?’) |                         |                        |  |

The sign WHO occurs in two forms, one of which consists of only the second part of the variant shown in Figure 5, without the part articulated on the face, but typically with repetition of the second part of the sign. The repetitions may be distributed over several spatial locations and may additionally be accompanied by a wandering eye gaze and/or repeated mouthing of Turkish *kim* ‘who’. Though the exact nature of the distinction between the two variants needs further investigation, it seems that the difference between the two is a difference in specificity, where the latter variant is used to ask about a specific referent ‘which person’, especially from among a particular assumed group of possible referents, where the target has to be picked out from among the group. By contrast, the full variant as in Figure 5 is used for open, generic ‘who’ questions and in contexts that are neutral with respect to specificity of the referent.<sup>6</sup> In both instances, WHO is used irrespective of whether the interrogative is singular or plural and irrespective of whether it is the subject or the object of a clause.

- |      |                             |                |            |
|------|-----------------------------|----------------|------------|
|      |                             | cont-q         |            |
| (10) | O<br>INDEX <sub>fwd,l</sub> | KİŞİ<br>PERSON | KİM<br>WHO |
|      | ‘Who is that person?’       |                | video ex.9 |

<sup>6</sup> Compare this to the use of two types of WHO in New Zealand Sign Language (McKee, this volume), and in Icelandic Sign Language (chapter 2, this volume), which are related, but not identical distinctions.

DAY-qu ‘when’ is used to ask questions about a point in time, but is also used with reference to duration, that is, to ask ‘how long’/‘how many days’. DAY-qu referring to a point in time is only used in the sense of ‘what day’ (Example 11), but not in the sense of ‘what time’. Similarly, DAY-qu in the sense of ‘how long’ can only refer to duration in terms of days, months or years (Example 12), not to duration in terms of hours. To express ‘when’ in the sense of ‘at what time’ and ‘how long’ in the sense of ‘how many hours’, a content question without a question word is used (Example 13).

- |      |                            |         |          |      |               |
|------|----------------------------|---------|----------|------|---------------|
|      |                            |         |          |      | <u>cont-q</u> |
| (11) | ÖNCE                       | GÜN-qu  | GÖRÜŞMEK | AVUÇ |               |
|      | BEFOREDAY-qu               | MEET-UP | PALM-UP  |      |               |
|      | ‘When did I meet him/her?’ |         |          |      | video ex.10   |

- |      |  |       |                       |        |               |             |
|------|--|-------|-----------------------|--------|---------------|-------------|
|      |  |       |                       |        | <u>cont-q</u> |             |
| (12) | KIZ  | HEPSİ | ORADA                 | AVRUPA | GÜN-qu        | GEZMEK      |
|      | FEMALE   | ALL   | INDEX <sub>r.up</sub> | EUROPE | DAY-qu        | GO-OUT/TRIP |
|      | ‘How long were all the girls travelling around in Europe?’ |       |                       |        |               |             |
|      | video ex.11  |       |                       |        |               |             |

- |      |  |       |              |  |               |
|------|--|-------|--------------|--|---------------|
|      |  |       |              |  | <u>cont-q</u> |
| (13) | YARIN  | VAKİT | BULUŞMAK     |  |               |
|      | TOMORROW                                     | TIME  | GET-TOGETHER |  |               |
|      | ‘When (at what time) will we meet tomorrow?’ |       |              |  | video ex.12   |

PLACE-qu ‘where’ occurs in two slightly different variants. The interrogative derivation of the sign PLACE results in an added small tremolo movement which can be either up-down (as in Figure 6) or inward-outward. PLACE-qu occurs in a frequent conventionalised collocation which seems to be partially calqued from spoken Turkish (compare examples 14 from Turkish Sign Language and 15 from spoken Turkish) and is used to ask about someone’s place of residence using the sign SIT. Alternatively, signers may use the sign STAY but add a mouthing based on the word ‘sit’ in Turkish.

- |      |                             |          |         |  |               |
|------|-----------------------------|----------|---------|--|---------------|
|      |                             |          |         |  | <u>cont-q</u> |
| (14) | ŞİMDİ                       | YER-qu   | OTURMAK |  |               |
|      | NOW                         | PLACE-qu | SIT     |  |               |
|      | ‘Where is s/he living now?’ |          |         |  | video ex.13   |

- |      |                             |                |                      |
|------|-----------------------------|----------------|----------------------|
| (15) | Şimdi                       | ne-re-de       | otur-u-yor-Ø         |
|      | now                         | what-PLACE-LOC | sit-EP-PRES.PROG-3Sg |
|      | ‘Where is s/he living now?’ |                |                      |

GRADE-qu ‘which grade’ occurs in two variants. The hand is at the upper arm location with either all fingers wiggling or the fingers opening successively as in the sign NUMBER (see Figure 9).

- |      |   |                          |                      |
|------|---|--------------------------|----------------------|
|      |   |                          | <u>cont-q</u>        |
| (16) | KARDEŞ<br>SIBLING                                     | ÜNİVERSİTE<br>UNIVERSITY | SİNİF-qu<br>GRADE-qu |
|      | ‘In which grade is the brother/sister at university?’ |                          | video ex.14          |

REASON and NUMBER are interpreted as non-interrogatives when there is no interrogative non-manual marking.<sup>7</sup> With non-manual marking for content questions, they are interpreted as question words (examples 17 and 18). Sometimes mouthing provides an additional clue, adding, for example, *kaç* (‘how many’) for interrogative uses of NUMBER. When being used in a non-interrogative function, these signs can regularly co-occur with another question word, as shown in example 19. In this example, REASON is not interpreted as a question word in spite of the presence of non-manual marking for content questions because there is already another question word WHAT in the same clause.

- |      |                                     |                 |                 |
|------|-------------------------------------|-----------------|-----------------|
|      |                                     |                 | <u>cont-q</u>   |
| (17) | BEKAR<br>BACHELOR                   | SEBEP<br>REASON | AVUÇ<br>PALM-UP |
|      | ‘Why is s/he unmarried?’            |                 | video ex.15     |
|      |                                     |                 | <u>cont-q</u>   |
| (18) | KARDEŞ<br>SIBLING                   | SAYI<br>NUMBER  |                 |
|      | ‘How many siblings does s/he have?’ |                 | video ex.15     |
|      |                                     |                 | <u>neg-tilt</u> |
| (19) | EVLİ/EŞ^DEĞİL<br>MARRY/SPOUSE^NOT   | SEBEP<br>REASON | NE<br>WHAT      |
|      | ‘Why did s/he not get married?’     |                 | video ex.17     |

It may be noted that the paradigm of question words in Türk İşaret Dili is in many ways very different from the corresponding paradigm in spoken Turkish. All question

<sup>7</sup> There are two signs for ‘number’ in Türk İşaret Dili: One refers to ‘number’ in general (cf. Turkish *sayı*), and it is this sign that functions as a question word. The other sign refers to a ‘specific number’ (cf. Turkish *numara*), such as, for instance, a telephone number. This sign is not used as a regular question word.

words in spoken Turkish are interrogative only and bear no immediate relationship with any non-interrogative items. A sub-paradigm in spoken Turkish question words is based on combinations with *ne* ‘what’, for example, *ne zaman* ‘when’ (‘what time’) and *neden* ‘why’ (‘what-ABL’, ‘from what’). Some question words in spoken Turkish inflect for case (cf. example 15), and there is no one-to-one correspondence between the meanings of question words in the two paradigms.

### 2.2.3 Syntactic patterns

The position of question words in the clause can be quite variable in Türk İşaret Dili. Consider the following sets of examples, each with the same or very similar meanings, but different word order:

- (20a) ADAM/BABA O İŞ cont-q  
 MAN/FATHER INDEX<sub>i</sub> WORK WHAT  
 ‘What does the man do?’ video ex.18

- (20b) cont-q  
 NE İÇİNDE İŞ NE  
 WHAT IN WORK WHAT  
 “ne” “ne”  
 what what  
 ‘What (what kind of job) does s/he do in there?’ video ex.19

- (21a) cont-q  
 İSTANBUL YER-qu EV KALMAK  
 ISTANBUL PLACE-qu HOUSE STAY  
 ‘Where in Istanbul does s/he live?’ video ex.20

- (21b) cont-q  
 EV YER-qu KALMAK  
 HOUSE PLACE-qu STAY  
 ‘Where does s/he live?’ video ex.21

In (20), the question word appears in the possible peripheral clause positions, that is, clause-initially and/or clause-finally, with a double question word in (20b). In (21), the question word PLACE-qu appears in medial positions within the clause.

The details of the syntactic regularities are not entirely clear yet, except for the observation that a significant degree of variability is allowed. This is also what informants report, and is a significant observation in itself. The syntactic rules

governing the placement of question words in Türk İşaret Dili are substantially different from a sign language such as Indo-Pakistani Sign Language with its very strict word order patterns (see the contribution about IPSL in this volume).

From the available data, it seems that three main syntactic patterns can be identified in Türk İşaret Dili (see Table 3). As in a number of other sign languages, question words may appear in clause-initial or in clause-final position, with clause-final position being used more frequently. Utterances with a final question word followed by the clause-final marker PALM-UP were included in the category of clause-final question words, that is, the presence of PALM-UP was not taken to be relevant.

There are a few instances of questions with doubling of the question word in the data, but this is definitely not a major strategy. In the case of examples involving the question word WHAT, it can be difficult to decide whether a particular example is an instance of a double question word WHAT, or an example of a single WHAT and a clause-final marker PALM-UP, because WHAT and PALM-UP often look quite similar.<sup>8</sup> Adding to the difficulty is the fact that in constructions with a double question word, the second question word is always in final position, which is also the position of the marker PALM-UP. If both co-occur in one and the same clause, PALM-UP follows the second question word. In Example (20b), the mouthing “ne” (‘what’) identifies the final sign as WHAT rather than PALM-UP.

In addition to these patterns, a third pattern with the question word occurring in what would seem to be a pre-verbal position is also quite frequent (24.5% of all cases). Although this is a common position for negatives (Dahl 1979) and is also found with negatives in some sign languages, notably American Sign Language

<i>syntactic position</i>	<i>number of occurrences</i>	<i>percentage</i>
clause-initial	10	20.5%
clause-final	19	39%
pre-verbal	12	24.5%
doubling	3	6%
Other	5	10%
Total	49	100%

Table 3: Syntactic position of question words

<sup>8</sup> Exactly the same problem of analysis also occurs in American Sign Language and is discussed in detail in the contribution by Fischer in this volume (the ASL signs are glossed WHAT and WELL).

(Fischer, this volume), pre-verbal position is not commonly reported for question words in sign languages, and this pattern is therefore typologically interesting. In about half of the cases, non-manual marking begins on the question word, with the beginning of the sentence unmarked, as in examples (22) and (23).

- |      |                                      |            |                   |                 |
|------|--------------------------------------|------------|-------------------|-----------------|
|      |                                      |            |                   | cont-q          |
| (22) | İŞARET DİL<br>SIGN TONGUE/LANGUAGE   | NE<br>WHAT | ÖĞRETMEK<br>TEACH | AVUÇ<br>PALM-UP |
|      | ‘How does s/he teach sign language?’ |            |                   | video ex.22     |

- |      |                                      |                        |                  |                   |
|------|--------------------------------------|------------------------|------------------|-------------------|
|      |                                      |                        |                  | cont-q            |
| (23) | İŞ<br>WORK                           | GİDİP-GELİP<br>COMMUTE | GÜN-qu<br>DAY-qu | BAŞLAMAK<br>START |
|      | ‘When did s/he start going to work?’ |                        |                  | video ex.23       |

If all examples were of this type, it might be possible to argue that the initial part of the sentence that does not fall under the scope of the content question non-manuals is a kind of topic that happens to have no non-manual marking of its own. This kind of topic without non-manual marking has been described for Indo-Pakistani Sign Language (Zeshan 2003a). In this case, these examples would just be a slightly different sub-type of questions with clause-initial question words, since topicalised elements can be interpreted as being outside the clause itself. That is, Example (23) would consist of a clause-external topic WORK COMMUTE followed by a regular content question with a clause-initial question word WHAT.

However, the other half of examples consists of utterances with the content question non-manuals over the whole clause, and no intonational boundaries can be observed before the question word, as shown in Example (24).

- |      |                              |                      |  |             |
|------|------------------------------|----------------------|--|-------------|
|      |                              |                      |  | cont-q      |
| (24) | ÇOCUK KİM<br>CHILD WHO       | BAKMAK<br>LOOK-AFTER |  |             |
|      | ‘Who looks after the child?’ |                      |  | video ex.24 |

It is also difficult to argue for in situ position of question words in all the examples. For instance, a number of utterances in this category include the question word DAY-qu ‘when, what day’, although temporal expressions usually occur close to the beginning of the clause in Türk İşaret Dili. In other examples, such as (24), it is



not possible to determine at this stage what the in situ position would be because the unmarked constituent order in a corresponding declarative clause, if indeed there is a single unmarked order, is not yet known. It therefore seems more appropriate to describe the syntactic position of question words in these examples as being pre-verbal, at least until further examples for a more detailed analysis become available.

Negative content questions are possible in Türk İşaret Dili. However, in the available examples, the non-manual markings for negative and interrogative do not overlap. Rather, the negator sign keeps its own negative non-manuals and the non-manual configuration marking the content question appears over the final part of the clause only (Example 25).

(25)	İŞ	YOK	SEBEP	AVUÇ
	WORK	NOT-EXIST	REASON	PALM-UP
	‘Why doesn’t s/he have a job?’			video ex.25

Questions without question words, other than the use of non-interrogative signs as question words discussed in Section 2.2.2, also regularly occur in Türk İşaret Dili. Thus the question in Example (26) is the most common way of asking about someone’s age (the sign YEAR-OF-AGE (Turkish *yaş*) differs slightly from the sign YEAR (Turkish *sene*) in location only, being produced on the teeth rather than on the chin).

(26)	(SEN)	YAŞ	SEN	
	(INDEX <sub>2</sub> )	YEAR-OF-AGE	INDEX <sub>2</sub>	
	‘How old are you?’			video ex.26

Again, due to the close similarity between the sign WHAT and the marker PALM-UP, it is sometimes difficult to say whether a question contains the question word WHAT or is an example of a question without question word that happens to include the clause-final marker PALM-UP. In the available clear examples of questions without question words, the scope of the non-manual marker is always over the whole clause, as in Example (26).

### 3. Negatives

#### 3.1 Manual negators

##### 3.1.1 NOT

Türk İşaret Dili has a basic clause negator NOT, which reverses the polarity of the clause (see the last sign in Figure 10). It usually appears in clause-final position immediately following the predicate it negates. In fact, in many instances it is difficult to decide whether NOT is in post-predicate position or in clause-final position because Türk İşaret Dili is a predicate-final language. Therefore, in a syntactic pattern such as //ARGUMENT - PREDICATE - NEGATOR//, the negator is both in post-predicate and in clause-final position.

NOT often cliticises to a preceding host sign. The examples in (27) and (28) are quite similar, except that NOT follows the sign SPEAK in (27), but is cliticised to a first person pronominal in (28).

- |      |  |          |                 |             |
|------|--|----------|-----------------|-------------|
|      |  |          | <u>neg-tilt</u> |             |
| (27) | BEN  | KONUŞMAK | DEĞİL           |             |
|      | INDEX <sub>1</sub>                           | SPEAK    | NOT             |             |
|      | ‘I am not a speaking (person).’ <sup>9</sup> |          |                 | video ex.27 |

- |      |   |          |                         |             |
|------|---|----------|-------------------------|-------------|
|      |   |          | <u>neg-tilt</u>         |             |
| (28) | İÇİNDE BEN                              | KONUŞMAK | BEN^DEĞİL               |             |
|      | IN <sub>1</sub> INDEX <sub>1</sub>      | SPEAK    | INDEX <sub>1</sub> ^NOT |             |
|      | ‘Inside, I am not a speaking (person).’ |          |                         | video ex.28 |

It is quite rare for NOT to be followed by another sign in the same clause, but it can be followed by a pronominal index point or by the uncertainty marker PALM-UP. As will be detailed in section 3.2, NOT is usually accompanied by non-manual marking consisting of a backward head tilt and raised eyebrows. This non-manual negative marker (transcribed as ‘neg-tilt’) is cross-linguistically unusual and seems to be an areal phenomenon found in some sign languages of the Eastern Mediterranean region. It is also found in Greek Sign Language (see Antzakas, this volume).

<sup>9</sup> Turkish signers refer to hearing people as “speaking” people. A hard-of-hearing person is referred to with the sign “half” signed downwards across the face.

The formational differences between NOT as an independent sign and NOT as a clitic, exemplified in Figures 10 and 11, are the following:

When NOT is an independent sign...

- it is of comparatively longer duration (that is, fully syllabic), and consists of full wrist bending bringing the fingers from facing downwards to facing upwards;
- it is articulated in neutral signing space and has a two-handed and a one-handed variant (that is, it is subject to optional weak hand drop, the dropping of the non-dominant hand in symmetrical signs).

When NOT is a clitic...

- it is of much shorter duration, with strongly reduced wrist bending (that is, the sign loses its syllabicity);
- it is assimilated to the preceding host sign in hand orientation and location;
- it must be two-handed after a two-handed host sign and one-handed after a one-handed host sign (assimilation of handedness);
- the non-manual marking spreads over the whole host-clitic combination.

Cliticised forms are very frequent after high-frequency predicates, such as KNOW, UNDERSTAND and LIKE, and also occur after pronominal index points. The combination MONEY^NOT, with cliticised negative, has become lexicalised to mean ‘free of cost’. The combinations listed in (29), taken from the data, are typical examples of NOT in environments as a clitic and as an independent sign.

	NOT as a clitic:	NOT as an independent sign:
(29)	KNOW^NOT	COLD NOT
	GO^NOT	BIRTH NOT
	UNDERSTAND^NOT	TWENTY-SIX NOT
	INDEX <sub>1</sub> ^NOT	BAYRAM <sup>10</sup> NOT

### 3.1.2 NOT-EXIST

Türk İşaret Dili has both a positive existential particle EXIST (see Figure 12) and a negative existential particle NOT-EXIST (see Figure 13). These forms are suppletive,

<sup>10</sup> “Bayram” is a Muslim festival and a national holiday in Turkey.



- (30) TÜRKİYE TÜM-TÜRKİYE TELEVİZYON İŞARET PROGRAM  
 TURKEY ALL-TURKEY TELEVISION SIGN PROGRAM

	<u>neg-tilt</u>	
	<u>shrug</u>	
KOYMAK	YOK	AVUÇ
PUT-IN	NOT-EXIST	PALM-UP

‘There are no sign language programs on television anywhere in Turkey.’

video ex.29

The positive and the negative existential are also used to express possession in Türk İşaret Dili (Example 31), and sometimes both an existential and a possessive reading are possible (Example 32). Again, a very similar pattern is found in spoken Turkish.



Figure 12: EXIST



Figure 13: NOT-EXIST

- |      |                               |   |                 |  |
|------|-------------------------------|---|-----------------|--|
|      | <u>pol-q</u>                  |   | <u>neg-tilt</u> |  |
| (31) | SEN İŞ VAR                    |   | YOK             |  |
|      | INDEX <sub>2</sub> WORK EXIST | - | NOT-EXIST       |  |

‘Do you have a job?’

-

‘No.’

video ex.30

- |      |  |  |  |                 |
|------|--|--|--|-----------------|
|      |  |  |  | <u>neg-tilt</u> |
| (32) | BEN AMERİKA GİTMEK İSTEMEK / PASAPORT VİZE YOK               |  |  |                 |
|      | INDEX <sub>1</sub> AMERICA GO WANT / PASSPORT VISA NOT-EXIST |  |  |                 |

‘I want to go to America, but there is no visa in my passport.’

‘I want to go to America, but I have no visa in my passport.’

video ex.31

Suppletive forms for negative existentials are frequent across sign languages, and so is the tendency to use existentials to express possession in both signed and spoken languages (Zeshan 2004a, Heine 1997). Therefore, although the patterns in Türk İşaret Dili and spoken Turkish are parallel, there is no strong reason to believe

that EXIST and NOT-EXIST have necessarily evolved under the influence of the spoken language.

### 3.1.3 NO

The sign NO consists of a single sideways movement of an upright index finger and is an interjection with a very limited distribution, occurring only in three narrowly defined contexts. NO may occur by itself as a one-word utterance, like English *no* or Turkish *hayır*. However, NO does not seem to be a very common response to a question in Türk İşaret Dili, not even as part of a more extended answer. Rather, common negative responses include the negative existential as a response to existential questions (as in 31 above), or a repetition of the predicate in combination with the basic clause negator NOT as a response to non-existential questions, as in (33):

	<u>pol-q</u>	<u>neg-tilt</u>	
(33)	İNGİLİZCE	BİLMEK	BİLMEK^DEĞİL
	ENGLISH	KNOW	KNOW^NOT
	‘Do you know English?’	‘No.’	video ex.32

The available examples suggest that NO in all its occurrences is a pragmatically rather strong negative that carries connotations of being impolite and of implying an imperative meaning component. It seems to be mostly used in situations where the signer has authority over the addressee. The examples in this section are typical in that the context includes a person of authority denying a request or suggestion. Also note the context of the verb SNAP-AT in Example (36).

Besides a one-word utterance, the other syntactic frames where NO can occur are almost always in the context of ‘saying no (to someone)’. To this effect, NO may follow a pronominal or nominal subject in a verbless clause (Example 34). In such utterances, a predicate ‘to say’ is understood from the context, and the subject always precedes the negative.

(34)	BEN	KIZ	ÇOCUK	BEN	ELBİSE	ALMAK	İSTEMEK	/
	INDEX <sub>1</sub>	FEMALE	KID	INDEX <sub>1</sub>	CLOTHES	TAKE-altern	WANT	/
		<u>frown</u>						
		<u>neg-shake</u>						
	BEN	HAYIR						
	INDEX <sub>1</sub>	NO						
	‘My daughter wants to get new clothes all the time, but I say no.’							

It is common in Türk İşaret Dili and other sign languages to just point out the subject and then relay what was said, without an explicit predicate of saying. In Example (33), the content of what was said is a single sign NO. It would be theoretically possible to argue that in these examples, NO actually means ‘to say no’ rather than just ‘no’. However, since predicates of saying can generally be left out and be understood from the context, there is no compelling argument for this interpretation. The examples can be accounted for in the same way as other instances of a predicate of saying being left out.

The third context where NO occurs is with an actual predicate of saying which may either precede the negative (Example 35) or follow the negative (Example 36). In addition to predicates of saying, it also seems possible for NO to occur with semantically related predicates. There is one example with THINK in the predicate slot in the data.

- |      |   |            |                                       |   |
|------|---|------------|---------------------------------------|---|
|      |   |            | <u>neg-shake</u>                      |   |
| (35) | SUBBAY  | DEMEK      | HAYIR                                 |   |
|      | OFFICER   | SAY        | NO                                    |   |
|      | ‘The officer says no.’  |            |                                       | video ex.34                               |
|      |   |            |                                       |   |
| (36) | BEN   | ARKADAŞ    | EĞİTİM                                | ŞORT ŞORT-GIYMEK /                        |
|      | INDEX <sub>1</sub>  | FRIEND     | <sup>fwd.l</sup> EDUCATE <sub>1</sub> | SHORTS PUT-ON-SHORTS /                    |
|      |   |            | <u>neg-tilt</u>                       | <u>upright</u>                            |
|      | BEN   | ADAM/BABA  | İZİN^DEĞİL                            | /HAYIR YÜZE-VURMAK                        |
|      | INDEX <sub>1</sub>  | MAN/FATHER | ALLOW^NOT                             | /NO <sup>fwd.r</sup> SNAP-AT <sub>1</sub> |
|      | ‘My friend is prompting me to wear shorts, but my father doesn’t allow it, he snaps a ‘no!’ at me.’ |            |                                       |   |
|      |   |            |                                       | video ex.35                               |

NO can be accompanied by two different non-manual configurations. The most common marking is a sideways headshake, as in (34) and (35) which may optionally be complemented by a frown, as in (34). An alternative non-manual expression consists of a rigidly upright head and body posture, often in combination with the eye gaze fixed squarely on a real or imaginary addressee, as in (36). The examples in the data suggest that this non-manual configuration is used for stronger, more emphatic negation. This argument is supported by the fact that the predicate of saying in (36) is SNAP-AT, which expresses a rude, curt and sudden utterance. By contrast, NO in (35) is marked by the usual headshake, which agrees with the use of the more neutral predicate SAY.

## 3.1.4 CANNOT

CANNOT (see Figure 14) is a semantically interesting negative modal in Türk İşaret Dili. Although the gloss might suggest otherwise, the sign cannot be used to make negative statements about an acquired skill or ability, such as in ‘cannot drive a car’, ‘cannot speak English’, ‘cannot use a computer’, and so on. In this case, the expression KNOW NOT is used, as in example (37). Substituting CANNOT in such sentences would be either impossible or would result in a very different meaning.

		<u>neg-tilt</u>
(37)	BEN KONUŞMAK	BİLMEK^DEĞİL
	INDEX <sub>1</sub> SPEAK	KNOW^NOT
	‘I cannot speak.’	video ex.36

Example (37) is taken from a context where a deaf person explains that he communicates with hearing people by writing because he never learned to speak, that is, he has not learned speaking as a skill and is thus physically unable to speak. Substituting CANNOT in this utterance would result in a possible sentence, but with a quite different meaning. The utterance INDEX<sub>1</sub> SPEAK CANNOT could be used in a situation where it is inappropriate to speak, for example when people are praying or meditating, or in a situation where the signer cannot or does not want to speak to a certain person for some other reason, for example because s/he does not want to interfere in a situation. It is not possible for the utterance with CANNOT to refer to an acquired skill.

In general terms then, the sign CANNOT means that something cannot happen or cannot be done because it is either improper in some way or impossible due to circumstances other than ability in the sense described above. The following examples from the data, given in the translation only, serve to illustrate the meaning of CANNOT:

a) meaning “improper”

(38) ‘I am newly married, I can’t go and visit anyone.’

(39) ‘All my friends call me, they want to take me to the congress of the association, but I cannot, I have only just joined the sports association.’



b) meaning “impossible”

- (40) ‘I have to go and work on Thursday, I can’t (go elsewhere).’
- (41) ‘To buy a new one, I cannot come up with the money, I cannot pay again and again.’

CANNOT is usually accompanied by the backward head tilt and is in clause-final position, as illustrated in example (42). It thus behaves very similarly to NOT and NOT-EXIST, but does not occur as frequently in texts as the other two negatives.

- |      |  |              |         |                    |          |             |                          |
|------|--|--------------|---------|--------------------|----------|-------------|--------------------------|
| (42) | BEN  | EVLİ/EŞ      | VAR /   | BEN                | BERABER  | GEZMEK      | <u>neg-tilt</u><br>OLMAZ |
|      | INDEX <sub>1</sub>   | MARRY/SPOUSE | EXIST / | INDEX <sub>1</sub> | TOGETHER | GO-OUT/TRIP | CANNOT                   |
|      | ‘I am married, I can’t go out together (with someone else).’ |              |         |                    |          |             |                          |
|      | video ex.37  |              |         |                    |          |             |                          |



Figure 14: CANNOT

### 3.1.5 NO-NO

The sign NO-NO has an open handshape with all fingers extended upright, the palm facing outward and repeated side-to-side movement. The sign may be one-handed or two-handed. The usual non-manual configuration that accompanies this sign is a side-to-side headshake, as with other signs that have movement along a sideways trajectory (NO, NONE). Like most other clause negators, NO-NO usually appears in clause-final position. The behaviour of this sign is thus quite similar to other negatives with the same properties. However, the function and meaning of NO-NO is not entirely clear from the data.

The available examples suggest that NO-NO is used to contradict an assumption on the part of the addressee. The sign would thus be similar to the contrastive negative in Indo-Pakistani Sign Language (see the contribution on IPSL

in this volume). The assumption may be overtly expressed or implied. In example (43), the negative NO-NO serves to express a contrast with what has been said before. The signer seems to be contradicting the assumption that she might be enjoying the same kinds of activities as her friends.

- (43) BEN ARKADAŞ HEPSİ LOKANTA OYNAMAK / BEN  
 INDEX<sub>1</sub> FRIEND ALL RESTAURANT PLAY / INDEX<sub>1</sub>  
neg-shake  
 O YO  
 INDEX<sub>1</sub> NO-NO  
 ‘My friends are all into dining out and entertainment, but I am not.’  
 video ex.38

The interpretation of NO-NO as a contrastive negative that is used for contradiction or refutation becomes more plausible when we observe the range of predicates that NO-NO occurs with in the data. It is interesting to note that in the majority of the examples, NO-NO is used to negate a predicate expressing something that is undesirable, wrong or bad in one way or another. This may either be a generally accepted judgment (as in Example 44), or a personal opinion on the part of the signer (as, presumably, in Example 43). Example (44) is taken from a spontaneously signed text:

- (44) ÇOCUKLAR DÖVMEK neg-shake  
 CHILD-pl BEAT YO  
 NO-NO  
 ‘(I) don’t beat my children.’  
 video ex.39

Other predicates with similarly negative connotations that are negated by NO-NO include FIGHT, VIOLENT-FIGHT, BAD, ANGER, BACKBITING, LIE and WAR. In all these cases, it would seem that the signers prefer to use the contrastive negative NO-NO in order to distance themselves from the negative content expressed in the predicate, as if to say ‘no, you shouldn’t think there is anything like that’. Although NO-NO is not exclusively used in these contexts, its frequent occurrence with a range of predicates with negative connotations agrees well with an interpretation as a contrastive negative.

## 3.1.6 NONE

In addition to the negators described so far, Türk İşaret Dili also has a negative quantifier which occurs in two distinct variants, NONE(1) and NONE(2) (see Figure 15). NONE(1) has a two-handed variant (cf. Figure 12), however, the one-handed form seems to be more common. The regional or dialectal distribution of NONE(1) and NONE(2) is not clear at the present stage of research. However, NONE(1) is much more frequent than NONE(2) in the spontaneously signed texts in the data. No differences in use have been observed between the two variants.

Unlike Turkish *hiç*, the closest equivalent in the spoken language, the sign NONE<sup>12</sup> occurs freely in both positive and negative clauses. By contrast, Turkish *hiç* is restricted to interrogative and negative clauses in most of its uses. In the data, NONE occurred in both positive and negative clauses with equal frequency. However, it was noticeable that examples taken from texts included more utterances with NONE in positive clauses, while elicited examples included more utterances with NONE in negative clauses. It is possible that the elicited examples resulted in structures that more closely resemble the structure of spoken Turkish. However, this is not to say that those utterances constitute examples of a kind of “Signed Turkish”. NONE does occur in negative clauses in spontaneously produced texts as well, and conversely, there are examples of NONE in positive clauses among the elicited examples. The difference is merely one of relative frequency between the two types of data. Examples (45) and (46) illustrate the use of NONE in positive and negative clauses.

- |      |   |           |                    |                           |                  |
|------|---|-----------|--------------------|---------------------------|------------------|
|      |   |           |                    |                           | <u>neg-shake</u> |
| (45) | MEMLEKET  | HİNDİSTAN | BEN                | BAKMAK                    | HİÇ              |
|      | COUNTRY   | INDIA     | INDEX <sub>1</sub> | LOOK                      | NONE(1)          |
|      | ‘I haven’t seen India at all. / I have never seen India.’ |           |                    |                           | video ex.40      |
|      |   |           |                    |                           | <u>neg-tilt</u>  |
| (46) | BEN   | HİÇ       | ŞANS               | OLMAK <sup>z</sup> ^DEĞİL |                  |
|      | INDEX <sub>1</sub>  | NONE(1)   | LUCK               | BECOME^NOT                |                  |
|      | ‘I’ve had no luck at all.’                                |           |                    |                           | video ex.41      |

Although NONE and Turkish *hiç* show different syntactic behaviour, both cover the same range of meaning, translating into ‘nothing/none (at all)’, ‘never’ or ‘not at all’ depending on the context of use. In Türk İşaret Dili, multiple use of negatives in a

<sup>12</sup> The gloss NONE (without a number) is used when there is no need to differentiate between the two variant forms.

clause never results in a positive interpretation. The clause always stays negative, independently of how many manual and non-manual negative it contains. For example, the utterance in (46) contains three manifestations of the negative, the two manual signs NONE and NOT, as well as the non-manual negative marking ‘neg-tilt’ (backward head tilt).

Non-manual marking of NONE is much less consistent than with other negative signs in Türk İşaret Dili. In a third of all utterances in the data, there is no clearly recognizable non-manual marking on NONE, although there may be non-manual marking of other negative signs occurring in the same clause. In the remaining examples, NONE is usually accompanied by a side-to-side headshake, sometimes in combination with a frown. This is the same pattern as found with the negative NO, which has a similar movement pattern with sideways movement.



Figure 15: NONE(1) and NONE(2)

When NONE occurs together with another negative sign in the same clause, there are several possibilities for the combination of non-manual marking. The following are attested in the data:

a) NONE remains unmarked:

neg-tilt

(47) NONE(1) GO^NOT video ex.42

b) With two negatives that are usually marked by a headshake, the headshake simply spreads over both signs:

\_\_\_\_\_ neg-shake

(48) NONE(2) APPEAR NO-NO video ex.43

c) With two negatives that are usually marked by different non-manuals, both signs keep their respective configurations:

(49)      neg-shake      neg-tilt  
 NONE(2)      GO^NOT      video ex.44

d) With two negatives that are usually marked by different non-manuals, the side-to-side headshake spreads from NONE to the other negative:

(50)      neg-shake  
 NONE(2) GO^NOT

e) With two negatives that are usually marked by different non-manuals, the non-manual configuration spreads from the other sign to NONE:

(51)      neg-tilt  
 NONE(1) GIVE^NOT

### 3.1.7 PALM-UP

The clause-final marker PALM-UP is included here although it is not a negator as such. Rather, negation is a sub-function of this sign, which is very frequent in discourse and is used for several other functions in addition to negation. In negative contexts, PALM-UP often co-occurs in the same clause with the negative signs described in the previous sections. PALM-UP occurs at least in the following functions:

- As a hesitation marker in any position in a clause, filling a pause where the signer has not finished a turn, but needs time to think (similar to saying *umm...* in English);
- At the end of an utterance, as a marker of uncertainty or inconclusiveness on the part of the signer;
- At the end of questions, both polar questions and content questions (see Section 2.2.2 and the examples there);
- At the end of a negative clause, in combination with another negative (as in example 30 in Section 3.1.2);
- As the only manual negative marker in a clause.

It is the last function that particularly concerns us here. PALM-UP can function as a negative marker in place of the basic clause negator NOT (Examples 52 and 53) and in place of the negative existential NOT-EXIST (Example 54). PALM-UP does not function to replace any of the other negatives discussed in the previous sections.

When PALM-UP functions as a negative, it is sometimes accompanied by negation non-manuals (Example 53) or by a silent mouth pattern corresponding to a Turkish negative (Example 54), but this is not always the case.

- |      |   |                    |                            |             |
|------|---|--------------------|----------------------------|-------------|
|      |   |                    | <u>frown</u>               |             |
| (52) | KONUŞMAK<br>SPEAK                                     | DUYMAK<br>HEAR     | AVUÇ<br>PALM-UP            |             |
|      | ‘I couldn’t hear what was said.’                      |                    |                            | video ex.46 |
|      |   |                    | <u>neg-tilt</u>            |             |
| (53) | BAKMAK <sup>^</sup> AVUÇ<br>LOOK <sup>^</sup> PALM-UP |                    |                            |             |
|      | ‘I haven’t seen it.’                                  |                    |                            |             |
|      |   |                    | <u>shrug</u>               |             |
| (54) | BEN SEVMEK<br>INDEX <sub>1</sub> LIKE/LOVE            | YARDIM /<br>HELP / | PARA AVUÇ<br>MONEY PALM-UP |             |
|      |   |                    | “(y)o(k)”<br>not-exist     |             |
|      | ‘I would like to help, but there is no money.’        |                    |                            | video ex.48 |

PALM-UP can cliticise to a preceding predicate in the same way as NOT. In Example (53), <sup>^</sup>PALM-UP is affected by assimilation of handshape, location and handedness, and the backward head tilt spreads to <sup>^</sup>PALM-UP in the same way as it spreads to a cliticised <sup>^</sup>NOT. We also find the same distributional patterns, that is, PALM-UP is often cliticised to high-frequency predicates, as in KNOW<sup>^</sup>PALM-UP or UNDERSTAND<sup>^</sup>PALM-UP.

### 3.2 The status of negative head movements

Non-manual negation in Türk İşaret Dili principally occurs in the form of head movements. The realisation of non-manual negation in head movements is particularly interesting in that there are two major head configurations with negative force, a side-to-side headshake (‘neg-shake’) and a backward head tilt (‘neg-tilt’).

The side-to-side headshake may optionally be accompanied by additional facial features, in particular, narrowed eyes and lowered brows, whereas the backward head tilt is usually accompanied by a brow raise. An interesting negative facial expression that has not been investigated in detail yet consists of a puff of the cheeks with subsequent release of air (cf. Zeshan 2003c for details on types of manual negation in Türk İşaret Dili).

In this section, I do not go into the details of facial expressions, but instead concentrate on the status of negative head movements, with respect to the following questions:

- How does the entire range of manual negative signs combine with negative head movements?
- How does the scope of the side-to-side headshake compare to the scope of the backward head tilt?
- Can head movements of any kind by themselves negate a clause?

Various aspects of the structure of negation in Türk İşaret Dili suggest that this sign language has a manual-primary negation strategy (cf. Chapter 2, Section 3.2 in this volume). That is, negation is primarily expressed through manual signs, and non-manual negatives, in particular negative head movements, are tightly bound to and subordinate to manual negators. This is not to say that negative head movements in Türk İşaret Dili are not grammatical markers - they clearly are, but their status seems to be different from the status of negative head movements, in particular the negative headshake, in some other known sign languages. In many sign languages, there is only one main negative head movement, a side-to-side headshake, which applies to all contexts of negation in the same way. This headshake frequently has scope over the whole clause (or the whole clause minus any topicalised constituents), and a headshake can by itself signal negation, without a manual negator having to be present in the same clause (see, for instance, Vogt-Svendsen 2000 for Norwegian Sign Language; Berthiaume & Rinfret 2000 for Langue des Signes Québécoise).

Use of negative head movements in Türk İşaret Dili has quite different properties. First of all, the two negative head movements each occur in their own specific environments. These are best described in terms of the manual signs that they co-occur with. As detailed in Section 3.1, the negators NOT, NOT-EXIST and CANNOT mainly co-occur with the backward head tilt, whereas the negators NO, NONE and NO-NO mainly co-occur with the side-to-side headshake. It therefore

seems that the choice of a manual negative sign usually determines which non-manual configuration will be used. In the data, there are very few examples of headshake-negated signs with a backward head tilt or head tilt-negated signs with a side-so-side headshake. In a few examples with more than one manual negator, non-manual marking may spread from one negative sign to another, or each of the negators keep its “own” negative head movement, as was illustrated in examples (47) - (51) with NONE above.

Another aspect supporting the analysis of non-manual negation being tied to manual negators lies in the scope of the negative head movements. The backward head tilt, by the very nature of the movement involved, does not spread easily over more than one sign. In the data, the backward head tilt has scope over the manual negator only, or, in the case of the basic negator NOT, over both the cliticised negator and the preceding host sign in 75% of all cases. In addition, the backward head tilt can spread to a single sign preceding or following the negator sign, but only if the sign in question is unstressed. This commonly happens in the case of pronominal index points or with the marker PALM-UP. Other than these patterns, very few examples of a backward head tilt with wider scope can be found, although this is not entirely impossible.

The fact that the backward head tilt usually co-occurs with one sign, and that this sign happens to be the manual negator, may not be very surprising. What is unexpected, however, is that the negative headshake follows largely the same pattern. There is no articulatory difficulty at all for a headshake to have a longer scope, and this does indeed happen very frequently with the headshake used in content questions (see section 2.2.1). However, the negative headshake still has scope over only the manual negator (plus, optionally, an adjacent unstressed sign) in most examples in the data (76%), and there are only three examples where the headshake spreads over the entire clause. This indicates that there is a strong link between the manual negator and its corresponding negative head movement in Türk İşaret Dili even where the head movement could be articulatorily quite independent of the manual negative.

Finally, probably the strongest argument for a secondary status of negative head movements comes from the fact that neither of the two head movements usually negates a predicate or a clause by itself. It is possible in many known sign languages to negate a clause by adding a negative headshake only, without necessarily having a manual negator, and sometimes this is even said to be the most basic pattern (cf. Bergman 1995 for Swedish Sign Language). However, it is difficult to find such



instances in Türk İşaret Dili. There was not a single such example either in the data used for this chapter or in the wider corpus of texts, either for the backward head tilt or for the side-to-side headshake. While it seems at this stage that such structures are still possible in Türk İşaret Dili, and further investigation is needed to find out exactly under which conditions they may occur, it is also very clear that the pattern is at best a marginal one. Thus, for instance, whereas all utterances in (55a-c) are possible renditions of ‘don’t know’ in Türk İşaret Dili, (55d) and (55e) are impossible, and no such examples with any other predicate have been found in the data corpus so far. For a more exact conclusion on this point, it would be necessary to use different research techniques, in particular direct elicitation and grammaticality judgments, which I did not attempt for the purpose of this chapter.

	<u>neg-tilt</u>		<u>neg-tilt</u>
(55a)	KNOW NOT video ex.49	(55d)	* KNOW
	<u>neg-tilt</u>		<u>neg-shake</u>
(55b)	KNOW^NOT video ex.50	(55e)	* KNOW
	<u>neg-tilt</u>		
(55c)	KNOW^PALM-UP video ex.51		

All the evidence taken together makes a strong case for saying that Türk İşaret Dili uses a manual-primary negation strategy where negative head movements are closely tied to the manual negators they co-occur with. The system thus constitutes a type that differs from many known sign languages where the status of negative head movements is more prominent and more independent of manual negators.

#### 4. Conclusion

Türk İşaret Dili is a sign language that is predictably interesting for comparative typological research. The language is indigenous to Turkey, without major identifiable influence from other sign languages, and it may well have a long history of its own. Determining the details of this history, and in particular the link between the old

Ottoman signing and the current sign language, will be one of the most intriguing issues in further research. For instance, the number signs from 6 to 10 in Türk İşaret Dili are clearly based on written Arabic numerals. Since the Arabic script or Ottoman Turkish was in use until the orthographic reform in the wake of the new Turkish Republic in 1923 (see Zeshan 2003c for details), these number signs are at least older than this cut-off date, having their origin in Ottoman times. At the same time, reports and even pictures from the last phase of the Ottoman empire clearly show that deaf servants were present at the court right until its end, and at the same time when the first schools for the deaf were set up. If the age and history of Türk İşaret Dili can be further substantiated, this could well explain the many unusual features of the language that are strikingly different from the better-known Western sign languages.

Interesting structural features occur in Türk İşaret Dili at all levels of linguistic description. Most of the non-manual markers of questions and negation are particular to Turkey, and at times typical of the wider Eastern Mediterranean region. Moreover, this sign language is one of only a few documented clear instances of a manual-primary negation strategy. The syntactic regularities governing the placement of question words in the sentence are complex and unlike most other, more straightforward, sign languages. The paradigms of both question words and clause negators uniquely belong to this sign language and have their very own internal sub-structures, evidenced, for example, by the three different types of interrogatives. They also include items that are semantically unusual from a cross-linguistic point of view, such as the signs GRADE-qu and CANNOT.

Finally, another interesting issue that will have to be raised is the relationship between Türk İşaret Dili and spoken Turkish. It is striking to see that in some instances, there is a clear parallelism between both languages, as, for instance, in the range of meanings covered by the sign CANNOT (Turkish *olmaz*). In other cases, however, both languages are very different: The question word paradigms are not at all similar, and neither are the mechanisms for basic clause negation, where spoken Turkish uses a verbal suffix *-ma/-me*, but Türk İşaret Dili has a clause-final particle which often occurs as a post-clitic.

It is not at all clear why the similarities and differences between Türk İşaret Dili and spoken Turkish should be distributed in the way they are. Further studies will have to address such issues in a more comprehensive way than has been possible for the purpose of this chapter. Meanwhile, it can only be hoped that the positive developments towards full recognition of Türk İşaret Dili continue, and that sign language linguistics can play a supporting role in this process.

## Chapter 6

# Questions and Negation in American Sign Language

Susan D. Fischer

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### AMERICAN SIGN LANGUAGE

American Sign Language (ASL, previously also known as Ameslan) is used in English-speaking North America. Varieties of ASL are also used in education in the Philippines and some other developing countries. ASL has regional dialects, varying mostly at the lexical level. There used to be different dialects for African-Americans and Caucasians based on a racially segregated school system, but those differences have mostly disappeared.

There are probably about 1,000,000 prelingually deaf persons in the US. However, not all use ASL. On the other hand, there are hearing children of deaf parents who are users of ASL. In terms of native signers, there are probably around 100,000 in the US and perhaps 10,000 in Canada. For a larger number, ASL is their *best* if not necessarily their *first* language.

ASL is primarily derived from Langue de Signes Française (LSF, France). Early on in the history of ASL, there was influence from British Sign Language via the deaf community on Martha's Vineyard. Many signs for the names of countries have been borrowed from the sign languages of those countries.

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## 1. Introduction

Since every language has some way of expressing interrogation and negation, it is important to show how sign languages too express these important functions. In this paper, I shall be discussing the expression of negation and interrogation in American Sign Language (ASL). Because ASL is the most-studied and longest-studied sign language to date, it is important to include it in a volume of this type. However, despite the long history of ASL research, there is still much that we do not understand, especially about the topics under review here. To my knowledge, for example, there has been little detailed study of negation in ASL.

In what follows, unless otherwise stated, I am relying on data that I have collected or observed over the last 30+ years. Observations could occur in the course of conversation or watching a narrative, and have, of necessity, to be transcribed on the fly. As to formal data collection, early on those data were not videotaped but only transcribed, and thus some details such as exact scope of facial expression could be missing; if those details are crucial, they are not included here. Later they were videotaped, but were not fully transcribed, as one of my techniques for forming a rapport with linguistic consultants is to alternate between conversation and elicitation on a specific topic (if the conversation ends up illustrating what I have been getting at in the elicitation, that portion will also be transcribed).

One of the problems in ASL research is the variability of the attested data (see Fischer, 1980, for some discussion), as we shall see particularly in the discussion of *wh*-questions. This variation is due to a number of reasons, including regional differences, age differences, and types of elicitation. I have found for example that translation from the spoken language often yields skewed results, both because of the influence of the spoken language and because of possible misunderstandings by signers of the intent. In this paper I rely on the judgments of native signers with whom I have worked directly, as well as my own observations. I shall try to indicate in the text areas where unresolved problems and issues remain.

## 2. Questions

### 2.1 Polar questions

#### 2.1.1 *Non-manual marking*

ASL has non-manual marking for polar questions. It consists of an eyebrow raise accompanied by a widening of the eyes. Optionally, the hands will be raised higher at the end of the question, the body leans forward, and the chin can be tucked. Non-manual marking is for all practical purposes obligatory. If for pragmatic reasons non-manual marking is not present throughout the entire question, the question will often be marked with a question particle at the end to reinforce the fact that a question is being posed.<sup>1</sup>

The non-manual marking spreads over the entire question minus any topicalised constituents, if any. Examples:

- (1)  $\frac{\text{pol-q}}{\text{(INDEX}_2\text{)WANT GO MOVIE?}}$   
'Do you want to go to a movie?'
- (2)  $\frac{\text{top} \quad \text{pol-q}}{\text{CAT, INDEX}_a \text{ ALLERGIC?}}$   
'As for cats, is s/he allergic to them?'

#### 2.1.2 *Question particles*

There is a question particle consisting of either a single or reduplicated and shortened form of a question mark. The single form traces a question mark with the extended index finger, while the reduplicated form consists of repeatedly bending the extended index finger. It is used in the following syntactic and pragmatic situations:

- When one is requesting permission to ask a question, the particle will occur at the beginning of the question. Example (where Q-M (short for “question-mark”) is the question particle):

- (3)  $\frac{\text{pol-q}}{\text{Q-M, NOW NIGHT (INDEX}_2\text{) GO-TO PARTY?}}$   
'I'm asking, are you going to the party tonight?'

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<sup>1</sup> Question particles also occur sentence-initially, where they seem to have a pragmatic function. See below. Thanks to Patrick Graybill for pointing this out.

- When one wants to reinforce the fact that one is asking a question, Q-M or its reduplicated form will occur at the end.

(4) \_\_\_\_\_ pol-q  
 (INDEX<sub>2</sub>) THINK INDEX<sub>a</sub> STUPID Q-M++  
 ‘Do you think s/he’s stupid, huh?’

- Often interpreters will not know a question is being asked until it is “too late” to add a question facial expression. In that case, they employ Q-M as a repair. Example:

(5) \_\_\_\_\_ pol-q  
 INDEX<sub>a</sub> TRUE DOCTOR Q-M?  
 ‘S/he’s really a doctor?’

Non-manual marking of Q-M seems to be obligatory.

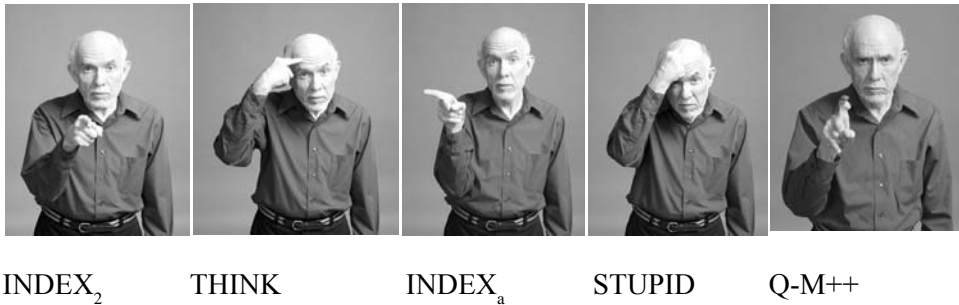


Figure 1: Illustration of ‘Do you think s/he’s stupid, huh?’

### 2.1.3 Syntactic mechanisms

The only syntactic mechanism that I am aware of in yes-no questions is the greater frequency of postposed subjects, especially pronominal (indexical) subjects. However, this mechanism is not unique to questions, as in (6); it also occurs in sentences with pronominal subjects as in (7). Examples (non-manuals generally omitted but extend over the entire sentence, excluding topics):

(6) LIKE CHOCOLATE (INDEX<sub>2</sub>)?  
 Do you like chocolate?’

- (7) CHOCOLATE, NOT CRAZY-ABOUT, INDEX<sub>1</sub>  
'As for chocolate, I'm not crazy about it.'

As mentioned above, topics are always outside questions (both polar and content), see (2) above.

#### 2.1.4 Answers to questions

ASL uses both headshakes and headnods as well as manual signs. Some discussion of headshakes in ASL can be found in Baker-Shenk & Cokely (1996) as well as Veinberg & Wilbur (1990). There are two each manual signs for "yes" and "no". One consists of a closed fist standing in for the head, which twists side to side for no and nods for yes. The other, much more frequent, is the fingerspelled loan signs #YES and #NO, which differ from the usual fingerspelling in a number of ways: #YES differs from Y-E-S by the near-deletion of the E and the angling up of the hand from the wrist. #NO differs from N-O in the assimilation of the N to the O and the repetition of the sign. See Baker-Shenk & Cokely (1996) for examples. Both #YES and #NO are directional and can be used as verbs, meaning respectively "say yes to" and "say no to". See Example (8) below:

- (8) INDEX<sub>1</sub> WANT GO-TO MOVIE TITLE [fs]ARMAGEDDON,  
MOTHER #NO<sub>1</sub>, MUST FIRST CLEAN ROOM.  
'I wanted to go to the movie "Armageddon", but my mother refused me permission, saying that I had to clean my room first.'

One-word answers are the norm; however, indirect responses are permitted. For example, if asked to go to the movies, one could respond with (9):

- (9) SORRY, (INDEX<sub>1</sub>) #BUSY.  
'Sorry, I'm busy.'

Responses to existentials would be [positive] HAVE or [negative] NONE (HAVE). Expanded answers (complete sentences) are not frequent.

Responses to negative questions are inconsistent. My feeling is that underlyingly, ASL would follow the Japanese pattern, where when one replies to a negative question in the affirmative it means that the negation is true. However, ASL has been influenced by English enough that an affirmative answer to a negative



question is affirming the [positive] presupposition rather than the negation. Note that even English can be inconsistent depending on the placement of the negative, to wit:

- (10) A: Aren't you going? B: Yes (that's right) = I am going.  
 (11) A: Are you not going? B: Yes (that's right) = I am not going.  
           (especially if "not" has been stressed in the question)  
           **or** B: No (you're wrong) I am going

In ASL, the equivalent of the second answer in (11) is (12): note the unusual case where a positive headnod is over a negation:

- (12)                               nod  
 #NO INDEX<sub>1</sub> GO

ASL does not seem to have an equivalent of French *si*, i.e., a response that negates the expectation of a negation.

### 2.1.5 Negative questions

Negative questions do occur in ASL. It is possible to overlay the negative NMM (non-manual marking) on the yes-no question NMM, as seen in the following:

- (13)                               neg  
                                         pol-q  
 INDEX<sub>2</sub> UNDERSTAND?  
           '[Is it the case that] you don't understand?'

Negative content questions are more difficult to elicit, though not impossible; see discussion below.

## 2.2 Content questions

It is in the area of content questions in ASL that the greatest controversy over data and its interpretation lies, especially in the order and position of elements. While

I will mention both sides of the issue, I will come down on the side of the party with which I agree.

### 2.2.1 *Non-manual marking*

ASL has a special NMM for content questions: the eyes are narrowed and the brows furrowed and raised (see Baker-Shenk & Cokely, 1996, for examples). Even when the question phrase is in situ, the NMM can spread over the entire domain of the question. There is some dispute over whether it *must* spread. The controversy seems to center around the issue of whether the material that is not being questioned must be topicalised in order to block the spread of the NMM. In any case, when a wh-phrase occurs in sentence-initial position, the NMM *must* spread over the entire domain of the question, excluding topic. This marking is obligatory in root questions, but does not occur in embedded questions.

### 2.2.2 *Question words*

The following are what are traditionally referred to as question words in ASL: WHO, WHAT(2), WHY, HOW, WHEN (2), WHERE, WHAT-FOR, and HOW-MANY, illustrated below. Another wh-sign is WHICH, formed by alternately moving two “thumbs-up” hands up and down in the space in front of the signer.<sup>2</sup> There is no case marking on wh-questions, so the signs WHAT and WHO are invariant in form whether they function as subjects, direct objects, or indirect objects. Of the two signs glossed respectively as WHAT and “WHAT”, (see Figures 3-4), the first is used more on the west coast of the US; on the east coast, it is considered to be signed English, although it is not in fact derived from English but rather from a root sign meaning ‘enumerate’.<sup>3</sup>

The *sign* usually glossed as WHEN (index finger circling then touching other index finger, Figure 6) is also considered by many signers to be signed English. In the West, a different sign is used, which seems to be related to the sign HAPPEN (Figure 7). In the East, the most common way to express the idea ‘when’ is to fingerspell it as the loan sign #WHEN (Figure 9). Parallel to #WHEN, a number of other question words are also fingerspelled frequently, especially for emphasis.

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<sup>2</sup> As mentioned in the text, this sign originally meant ‘which of two’ and utilises a remnant of the LSF (langue de signes française) number system; the handshapes are the same as the LSF ‘1’.

<sup>3</sup> In the Southwest, the sign shown in Figure 1 is the sign for ‘where’ rather than ‘what’. The sign in more standard ASL for ‘where’ is used to mean ‘what’ in the Southwest. As ASL becomes more homogenised, these meanings are in the process of disappearing.



Figure 2: WHO Figure 3: WHAT Figure 4: "WHAT" Figure 5: HOW



Figure 6: WHEN<sub>1</sub> Figure 7: WHEN<sub>2</sub> Figure 8: WHERE

Thus, for example, #WHAT is used as an interjection indicating disbelief or surprise: that is, it cannot function as an argument; an abbreviated form, which consists of the rapid repetition of a supine "T" (Figure 10) is not limited in this way; rather, its usage is almost coextensive with that of WHAT, though it may also be used as a tag or in echo questions. #HOW is similarly used for emphasis.<sup>4</sup>

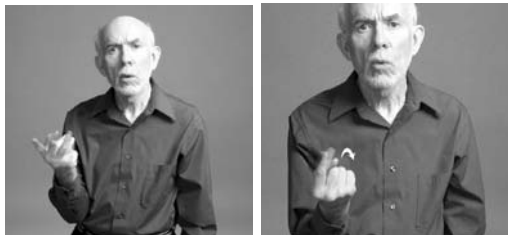


Figure 9: #WHEN Figure 10: #WHAT (abbreviated)

<sup>4</sup> I have never seen WHO fingerspelled in neutral space, though WHY can be. Both WHO and WHY are, in fact derived from their fingerspelled counterparts. The sign WHY (Figure 6) is signed with the middle 3 fingers touching the forehead (relic of W) then moving out and down and closing to a Y handshape. 25 years ago one of my first informants at RIT was older than I; He was from a large Deaf family in Kentucky, and used many signs that might now be considered old-fashioned. One of the signs he used was an older variant of WHO, which consisted of fingerspelling W-H-O with the signing hand facing and touching the chin; the individual letters were still recognizable.

Without resorting to English, ASL must use periphrasis to ask ‘how+adjective’ questions, e.g., to ask ‘how tall is your father?’ one might utter (14):

- \_\_\_\_\_ pol-q
- (14) POSS<sub>2</sub> FATHER TALL SHORT WELL<sup>5?</sup>

One cannot indicate plurals of wh-words manually, but non-manual signals such as head movement and eye gaze may indicate plurality. Subject and objects are not indicated by any marking on the wh-words themselves but rather by their position in the sentence. I have found it almost impossible to elicit the equivalent of ‘whose’. When I have asked for direct translations, which I do extremely infrequently, I get strange things like the following: when I asked for a direct translation of ‘whose baby is that?’ the native signer produced a sentence like (15), where the ‘a’ locus is the real or established position of the baby rather than the imagined possessor:

- (15) WHO POSS<sub>a</sub> BABY<sub>a</sub>?

In addition to the question words I have already discussed, there is a semi-productive set of question words that consist of non-interrogative signs with a question facial expression added. The most frequently used instances also have a phonological change (see Lillo-Martin & Fischer, 1992). Two intransitive predicates can add the wh-NMM with a slight phonological change and a wh-subject will be understood. The two predicates are WRONG and HAPPEN. In the case of WRONG when signed with a wh-NMM softly and repeatedly, the sign means ‘what’s wrong?’ In the case of HAPPEN, if it is signed with the wh-NMM and an extra-long hold at the beginning of the sign, it means ‘What happened?’ Many objects of transitive verbs can also be elided when questioned with a NMM. See Examples (16)-(20) below. Example (17) is illustrated in Figure 11.



Fig. 11: wh-EAT?



Fig. 12: wh-#DO



Fig. 13: wh-FOR?  
(‘what for’)



Fig. 14: wh-MANY  
(‘how many’)

<sup>5</sup> We shall discuss this sign WELL below.

(16) cont-q  
 SAY INDEX<sub>a</sub>  
 ‘what did s/he say?’

(17) cont-q  
 EAT INDEX<sub>a</sub>  
 ‘what did s/he eat?’

Other cases where the wh-NMM seems to substitute for an argument include (18)-(20); (19) is illustrated in Figure 12:

(18) cont-q  
 NAME INDEX<sub>a</sub>  
 ‘What’s his/her name?’

(19) cont-q  
 D-O-D-O-D-O  
 ‘What am I/are you going to do?’

(20) cont-q  
 THRILL?  
 ‘What’s happening?’ ‘What’s new?’

Sentences (19) and (20), as well as the signs usually glossed as HOW-MANY and WHAT-FOR are examples of wh-signs that are related derivationally to non-wh counterparts. Thus, WHAT-FOR is actually the sign FOR, with repetition and the addition of a wh-NMM. HOW-MANY is the sign MANY with the loss of repetition and the addition of an upward movement and a wh-NMM (Figure 14). Similarly, Example (19) is the fingerspelled loan #DO with repetition and additional wh-NMM, and WHAT’S-UP is the sign THRILL with the addition of a wh-NMM (Example 20). Henceforth, for these pairs of signs, we shall use the shorthand of wh-SIGN for the wh-equivalent with the wh-NMM, so that for example, wh-MANY would stand for HOW-MANY and wh-FOR would be equivalent to WHAT-FOR.

There are also many cases where the wh-NMM takes the place of a specifying “what.” These include such common locutions as wh-TIME (where again wh-TIME is shorthand for the sign TIME accompanied by a wh-NMM) and wh-COLOUR. For many signers, this is totally productive, so that they can also sign things like (21)

- (21)  $\frac{\text{cont-q}}{\text{wh-DRESS USE TOMORROW?}}$   
 ‘What dress are you going to wear tomorrow?’

In ASL, a wh-NMM cannot occur by itself; it must be attached to segmental material that is questioned. This is not universal to all sign languages; in NS (Nihon Shuwa, Japan), one type of wh-NMM can occur by itself sentence-finally, where it can optionally attach as a clitic to the last element in the question, even if it is not a question word. See Fischer & Osugi (1998) for more detail.

### 2.2.3 *Position of question word*

In root clauses, three question word placements are possible: first position (excluding topicalised material), final position, and in situ. According to Petronio and Lillo-Martin (1997), only wh-*words*, not wh-*phrases*, can occur in sentence-final position, though frequently it is difficult to distinguish between in situ and sentence-final positions. In embedded sentences, wh-words and phrases are limited to first position. These regularities are evidenced by the following examples:

- (22)  $\frac{\text{cont-q}}{\text{WHO INDEX}_2 \text{ SEE YESTERDAY?}}$   
 ‘Whom did you see yesterday?’
- (23)  $\frac{\text{cont-q}}{\text{INDEX}_2 \text{ SEE WHO YESTERDAY?}}$
- (24) INDEX<sub>1</sub> NONE IDEA WHO INDEX<sub>a</sub> SEE YESTERDAY  
 ‘I have no idea whom s/he saw yesterday’
- (25) \*INDEX<sub>1</sub> NONE IDEA INDEX<sub>a</sub> SEE WHO YESTERDAY

The exception to the idea that wh-fronting is required in embedded sentences is the case where the entire embedded sentence is fronted, as in (26)-(27). However, in that case, it is not clear that the wh-clause is still in an embedded position.<sup>6</sup>

<sup>6</sup> It is difficult to argue for or against embedding in sentences like (26) within ASL grammar, but one can show that the equivalent sentences in English do not necessarily involve embedded questions, since subject-auxiliary inversion can occur:

- (i) Who she saw yesterday I don’t know  
 (ii) Who did she see yesterday? I don’t know

(26)  $\frac{\text{pol-q}}{\text{WHO INDEX}_a \text{ SEE YESTERDAY? INDEX}_1 \text{ NONE IDEA.}}$

(27)  $\frac{\text{pol-q}}{\text{INDEX}_a \text{ SEE WHO YESTERDAY? INDEX}_1 \text{ NONE IDEA.}}$ <sup>7</sup>

In (22)-(27), a single wh-word is being used. In (22), the wh-word or phrase is fronted; in (23) it is in situ, and in (29), it has moved to the end of the sentence (the adverbial YESTERDAY being the test here for in situ vs. final position). Judgments of (29) degrade considerably if a wh-*phrase* rather than a single wh-word is sentence-final:

(28)  $\frac{\text{cont-q}}{* \text{INDEX}_2 \text{ SEE YESTERDAY WHAT MOVIE?}}$

(29)  $\frac{\text{cont-q}}{?( \text{INDEX}_2 ) \text{ SEE YESTERDAY WHO?}}$ <sup>8</sup>

Further discussion of this issue can be found in Petronio and Lillo-Martin (1997). Note that Neidle et al (2000) have argued that wh-phrases, not just single-word wh-elements, can be moved rightward to sentence-final position. However, the grammaticality judgments reported by Neidle's group have generally not been replicated by other sign linguists. I shall return to their claim in the next section. It is quite common (see Petronio & Lillo-Martin, 1997) for question *words* to occur at both the beginning and end of the sentence. In these cases, it is most common for the question word to be fronted rather than in situ. Examples:

<sup>7</sup> I believe that in these cases the use of the polar question marker is equivalent to what Baker & Cokely (1996) refer to as rh-q.

<sup>8</sup> In sentences like (29), if the wh-word occurs both sentence-initially and sentence-finally (that is, WHO INDEX<sub>2</sub> SEE YESTERDAY WHO?), the wh-NMM can spread over the entire sentence (See Petronio, 1993) but it is not clear that it can spread in (29), which is judged as more grammatical if the first part of the sentence is topicalised, as in (iii).

(iii)  $\frac{\text{top cont-q}}{\text{INDEX}_2 \text{ SEE YESTERDAY WHO}}$

Topicalisation will block the spread of the wh-facial expression. However, even with the wh facial expression spreading, (29) is still better than (28), since it contains only a word, not a phrase. The presence of the adverbial YESTERDAY is again the diagnostic for in situ vs. sentence-final.

- \_\_\_\_\_ cont-q
- (30) WHAT EAT YESTERDAY WHAT?  
‘What on earth did [you] eat yesterday?’

- \_\_\_\_\_ cont-q
- (31) ?\*EAT WHAT YESTERDAY WHAT?

Petronio (1993) suggests that the copying construction is a focalizing construction. It occurs not only in questions, but in declaratives, as in (32) (non-manuals ignored):

- (32) INDEX<sub>1</sub> CAN’T UNDERSTAND CAN’T  
‘I absolutely can’t understand[it].’

#### 2.2.4 *Question particles*

We saw in section 2.1.2 that there is a particle we are calling Q-M, which sometimes shows up in polar questions. There is another element that occurs after many wh-questions, but I hesitate to call it a question particle because it is not limited to questions. Unlike wh-words, which occur in situ more than they do at the very end of the sentence, this element routinely occurs truly sentence-finally. It has been glossed as WELL or sometimes HUH. Because it is so ubiquitous and occurs not only in wh-questions but also in polar questions as in (14), and declaratives, it has often been overlooked. A third reason why it might have been overlooked is that it seems to function syntactically as a tag or afterthought. Below are a few examples of its occurrence. WELL is illustrated in Figure 15; note its similarity to “WHAT” as shown in Figure 4.

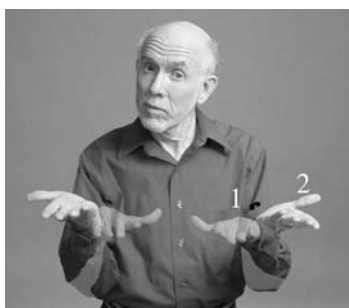


Figure 15: WELL





### 2.2.5 Combinations with question words

In many Slavic languages such as Polish, several *wh*-elements may appear at the beginning of the sentence. Thus, the equivalent of (38), with both subject and object in sentence-initial position, is grammatical in Polish and some dialects of Russian and Czech; this is not possible in English:

(38) Who what saw? = who saw what?

As in English, ASL can front at most one question element. Further, multiple *wh*-questions even with one element in situ occur rarely. While it is possible to elicit questions like (39) below, they do not occur spontaneously.

(39) WHO EAT WHAT?  
 ‘Who ate what?’

With respect to combinations with negation, as in the case of multiple *wh*-questions, they are grammatical but rarely occur spontaneously. Also, in a content question context, I do not see much negative NMM, as in the following:

(40)            cont-q            *Or*                       top cont-q  
 NOT EAT WHAT?            NOT EAT WHAT?  
 ‘What *didn't* [you] eat?’

As in the case of other kinds of questions, the particle/tag WELL can occur at the end of these sentences:

(41)            top cont-q b.r.  
 NOT EAT WHAT, WELL?

### 2.2.6 Other uses of question words

In English and many other Indo-European languages, *wh*-words double as relative clause markers. This is not the case in ASL. However, there is one place where *wh*-words do occur in non-*wh* contexts. This is in what might be called free relative constructions. A free relative is a construction containing a relative marker and, effectively, a zero head (Smits, 1989). An example in English is given in (42); contrast with (43), which is a pseudocleft.

- (42) What he ate was terrible (=the thing that he ate was terrible)  
 (43) What he ate was ice cream

There are two differences in the formation of these items vis-à-vis normal wh-constructions in ASL: first, the wh-NMM is not present; and second, the eyegaze is not fixed; rather it varies continuously. A typical example is given below:

- \_\_\_\_\_ eyegaze wanders  
 (44) WHO UNDERSTAND ALGEBRA CAN GET GOOD WORK  
 ‘Whoever (anyone who) understands algebra can get a good job.’

The use of the same words for indefinites and wh-questions occurs in other languages, notably in Japanese. Note that not all free relatives consist of indefinites, as shown in (42).

Perhaps related to this phenomenon are so-called rhetorical questions (rh-q). I say so-called because they are not true rhetorical questions, since they answer themselves rather than going unanswered entirely. Wilbur (1995) considers them as pseudoclefts. An example is given in (45) below (I follow Baker-Shenk & Cokely’s convention by continuing to refer to the NMM as rh-q).

- \_\_\_\_\_ rh-q \_\_\_\_\_ hn  
 (45) NOW MORNING EAT WHAT? SAUSAGE.  
 ‘What I ate this morning was sausage.’

The fact that the wh-element is truly clause-final is shown by sentences like (46):

- \_\_\_\_\_ top \_\_\_\_\_ rh-q \_\_\_\_\_ hn  
 (46) TELEPHONE INVENT WHO? [fs]BELL.  
 ‘It was Bell who invented the telephone/the one who invented the telephone was Bell.’

## 2.3 Pragmatic factors for questions

### 2.3.1 *Introducing questions*

Most of the time questions are introduced just by asking them or by introducing them with a quasi-performative Q-M particle, as in (3) above. However, if one is asking a personal question, it is considered polite to introduce it with something like INDEX<sub>1</sub> CURIOUS, e.g., (47)

- (47) INDEX<sub>1</sub> CURIOUS,  $\overline{\text{HOW-MANY INDEX}_2 \text{ EARN?}}^{\text{cont-q}}$   
 ‘If you don’t mind my asking, how much money do you make?’

Another polite way of introducing a question would be the following, using a question particle or the full verbal sign, which is much less frequent than (47):

- (48) (INDEX<sub>1</sub>) ASK-QUESTION<sub>2</sub>  $\overline{\text{HOW-MANY INDEX}_2 \text{ EARN?}}^{\text{cont-q}}$   
 ‘I have a question for you: how much money do you make?’

### 2.3.2 *Questions used as polite commands*

Much of this section is based on Campbell (2001), who examined speech act theory as applied to ASL, and which concentrates on indirect directives. She found that while ASL seems to have fewer options for indirect directives than a language like English, it nonetheless does have some. In the case of ASL, they don’t involve modals such as CAN’T, WILL, or WON’T. But they can involve signs like DON’T-MIND (which, despite its traditional gloss, is actually not negative) as in (49):

- (49) DON’T-MIND CLOSE-WINDOW (INDEX<sub>2</sub>)?  
 ‘Would you mind closing the window?’/ ‘Could you close the window?’

Another way of forming a polite directive is by making a suggestion using the compound WHY^NOT, as shown in (50):

- (50) WHY^NOT GO-TO<sub>a</sub> #EARLY?  
 ‘How about going there early?’

### 2.3.3 Rhetorical questions

As mentioned above, what have traditionally been called rhetorical questions in the ASL literature are neither rhetorical nor questions. However, true rhetorical questions (which do not expect answers) do indeed occur in ASL. For example, if someone's interlocutor is very condescending, one might utter (51):

- (51) THINK INDEX<sub>1</sub> STUPID, (INDEX<sub>2</sub>)?  
 'Do you think I'm stupid?' (=you must think I'm stupid)

True rhetorical questions like (51) mostly occur in sarcastic or ironic contexts.

### 2.3.4 Elliptical questions

Elliptical questions are quite frequent in ASL, as it has zero-pronominalisation and other zero pro-forms. (53) below as an answer to (52) is one example of an elliptical question in ASL:

- (52) HOW INDEX<sub>2</sub> FEEL? 'How are you feeling?'  
 (53) OK. INDEX<sub>2</sub>? 'I'm ok. How about you?'

Another example occurs in the dialogue below:

- (54) TOMORROW INDEX<sub>1</sub> GO-TO TOWN MUST.  
 'I have to go downtown tomorrow.'  
 (55) Wh-FOR? 'What for?'

Note that this is similar to elliptical questions in English.

### 2.3.5 Alternative questions

There are a number of ways to ask alternative questions in ASL. One involves the sign WHICH, as in the following example:

- (56) INDEX<sub>a</sub> MARRY DOCTOR LAWYER WHICH?  
 'Was it a doctor or a lawyer that s/he married?'

I have also observed the sign WHICH occurring between the two alternatives, especially in older signers. The equivalent of (56) in this type of structure would be (57):

- (57) INDEX<sub>a</sub> MARRY DOCTOR WHICH LAWYER?  
 ‘Did s/he marry a doctor or a lawyer?’

Some view sentences like (57) as being more influenced by English.

When the sign WHICH is used, the question is intended as an exclusive (one or the other, but not both) rather than inclusive (one and/or the other and/or some other option as well) “or”. In older signers, WHICH specifically means “which of two.” The answer must be one of the alternatives, not some third choice, as one might have in the case of an inclusive “or” reading.

While A-not-A questions are not that common in ASL, they are possible in the following type of form, where only the verb is repeated with the negative:

- (58) top \_\_\_\_\_ cont-q  
 EAT WANT DON'T-WANT, WHICH?  
 ‘Do you want to eat or not?’

There are two other ways of showing alternative choices in ASL. One is the sign THEN, which historically is derived from sequential counting one-two in Old French Sign Language (see Fischer, 1996). In signed English, it is often initialised with an “O” handshape on the dominant hand to signal the meaning “or”. A second way is to fingerspell O-R between the two alternatives. ASL signers tend to prefer O-R to initialised versions of THEN for signed English. Here is one example:

- (59) INDEX<sub>a</sub> FAVORITE CHOCOLATE O-R VANILLA?  
 ‘Does s/he prefer chocolate or vanilla?’

In general, as we shall see below with regard to wh-questions, fingerspelled “signs” are seen as more emphatic than actual signs. Another use of O-R that shows this emphasis is given below:

- (60) INDEX<sub>2</sub> MAYBE FAVORITE CHOCOLATE O-R MAYBE FAVORITE VANILLA.  
 ‘You might prefer chocolate; alternatively, you might prefer vanilla.’



### 3. Negation

#### 3.1 Sentence negation

##### 3.1.1 Non-manual negation

ASL has a negative headshake that can be used to either negate a positive sentence or reinforce the negation of a negative sentence. A frown can also reinforce negation either of a syntactically negated sentence as in (64) or a psychologically or “affective” (Klima 1964) negation to be discussed later, Section 3.1.3.3.

- (64) (INDEX<sub>1</sub>)  $\overline{\text{UNDERSTAND}}^{\text{neg}}$   
'I don't understand.'

The negative NMM can extend to the subjects of both these sentences. When the negative NMM is present (which it almost always is), it generally must spread to the scope of the negative operator. Thus, if the negative NMM spreads over the subject of (64), the meaning is more like “It is not the case that I understand.” The obligatory spreading of the NMM to the scope of the negative operator is apparently not universal. Tang (this volume) has a few examples of sentences where the negative NMM does not extend to the full scope of the negative operator. So does Coerts (1992) for Sign Language of the Netherlands (SLN). Example (65) (taken from Coerts, 1992) would be ungrammatical in ASL:

- (65)  $\overline{\text{INDEX}_{2,3b}(2h) \text{ NOT ANGRY.}}^{\text{neg}}$   
'[The parents] are not angry any more.' (Coerts, 1992:130)

##### 3.1.2 Basic negator

The basic syntactic negator in ASL is NOT, illustrated in Figure 16. It occurs either pre-verbally or at the end of the sentence when the rest of the sentence has been topicalised. Examples:

- (66)  $\overline{\text{FATHER NOT SICK}}^{\text{neg}}$   
'Father isn't sick.'





motion) in place of NOT. In the Deaf people with whom I have worked, NONE and NOTHING are reserved for negative existentials (see Section 3.1.3.1).

### 3.1.3 Other negators

#### 3.1.3.1 Negative existential

The sign most often used for existentials is HAVE. The most common negative existential is NONE (two “O” hands moving outward from chest or shoulder level), which occurs most frequently with HAVE, and also functions as a quantifier, as we shall see below. As in the case of the quantifier wh-MANY, which can move to sentence-initial position leaving behind the noun phrase that it quantifies, NONE and the NP it quantifies can be separated, with NONE moving into verb phrase or even sentence-initial position, as in (72) - (73) (non-manuals omitted). See Boster (1996) for more discussion.

- (70) INDEX<sub>1</sub> (HAVE) NONE CHILDREN.  
‘I don’t have any children.’
- (71) Wh-MANY INDEX<sub>2</sub> HAVE CHILDREN?  
‘How many children do you have?’
- (72) INDEX<sub>1</sub> NONE (HAVE) CHILDREN.  
‘I don’t have any children.’
- (73) NONE INDEX<sub>1</sub> HAVE CHILDREN  
‘I don’t have any children’

#### 3.1.3.2 Negative completive

The sign FINISH is the most common completive in ASL. It can be both an aspect marker and a main verb (Fischer & Gough, 1999). When FINISH occurs either with the basic negator NOT or the negative completive NOT-YET/LATE, however, it can function only as a main verb. A typical example is given in (74) (non-manuals omitted):

- (74) INDEX<sub>1</sub> NOT-YET FINISH HOMEWORK  
‘I haven’t finished my homework.’

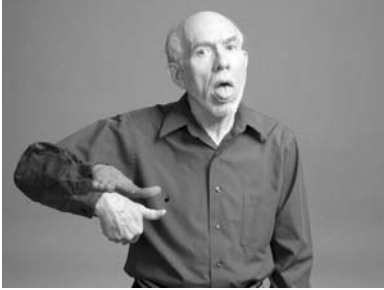


Figure 17: NOT-YET

The negative marker NOT-YET, which also functions as an auxiliary (Fischer, 1974b) and as an adverb, is the negative counterpart of the completive aspect marker FINISH. Here is an example; NOT-YET is illustrated in Figure 17:

- (75)  $\overline{\text{FATHER NOT-YET \#BACK}_a \text{WORK.}}^{\text{neg}}$   
 ‘Father hasn’t gone back to work yet.’

### 3.1.3.3 Prohibitive

NOT seems to have become the basic negator around 50-70 years ago. Prior to that, the basic negator was what is now glossed as DON’T. NOT is head-initial, while DON’T was head-final when it was the basic negator in ASL. It is now used by younger signers only in negative imperatives (prohibitives) as in (76):

- (76) (INDEX<sub>1</sub>) #BUSY, DON’T BOTHER<sub>1</sub>  
 ‘I’m busy; don’t bother me.’<sup>10</sup>

While DON’T is still used in sentences like (76), in other contexts it has become rarer among younger signers. Instead of DON’T SMOKE, for example, a younger signer would instead say (77):

- (77) SMOKE FORBID ‘No smoking’

DON’T is illustrated in Figure 18.

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<sup>10</sup> Another way to express this prohibitive is with an emphatic sign BOTHER accompanied by a negative headshake.



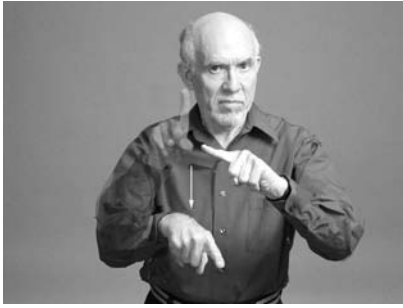


Figure 19: CAN'T

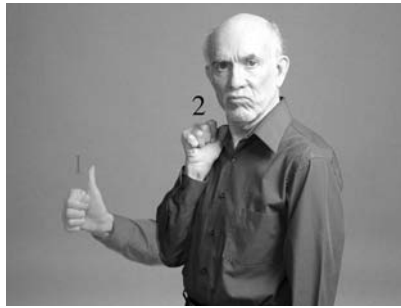


Figure 20: WON'T

### 3.1.3.6 Negative marking in non-negative sentences

There are inherently negative items that are not exactly true negatives, such as WRONG, DIRTY, UGLY, or KLUTZY (unskilled); when the negative headshake accompanies items in this class, it does not negate the item but merely reinforces the psychological or “affective” negation that is implicitly there; in order to negate them, an explicit negator, usually NOT, is required. Equivalents in English would trigger negative polarity in a lower clause but not the same clause, as shown in (81)-(83). (Klima, 1964).

- (81) She doesn't own any ashtrays.  
 (82) I'm sorry that anything disturbed you.  
 (83) \*I'm sorry about anything.

Other examples would include such items as CARELESS, DISGUSTED, UGLY, DISAPPOINTED, DOUBT/DISBELIEVE (V hand palm toward face, V pulls away and crooks the two extended fingers), and HATE. An example is given in (84). The signs WRONG and UGLY are illustrated in Figures 21 and 2

- (84) INDEX<sub>2</sub>  $\overline{\text{neg}}$  WRONG<sup>11</sup>  
 'You're wrong.'

<sup>11</sup> In (84) the index is optional if the head leans forward.

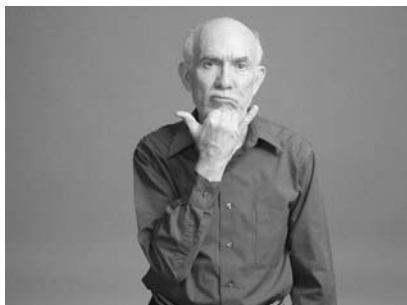


Figure 21: WRONG

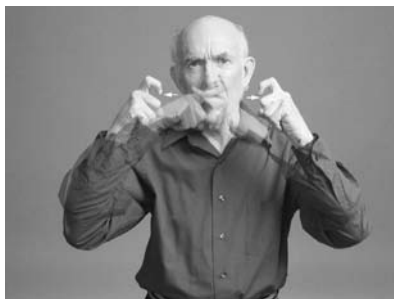


Figure 22: UGLY

One interesting adverbial is the sign usually glossed as BY-A-HAIR, which can in some cases be translated as “barely” or “almost but not quite.” I cannot think of any non-negative uses of negative signs in ASL except for some possibly pleonastic negations (using NOT) in constructions involving DISBELIEVE and BY-A-HAIR. I have observed sentences like the following, which seem to be ambiguous between positive and negative readings:

- (85) INDEX<sub>1</sub> DISBELIEVE HE NOT COME  
 ‘I doubt that he will come/ I doubt that he won’t come’ (first reading preferred)
- (86) INDEX<sub>1</sub> BY-A-HAIR [CL:legs] GET-ON [CL:container] TRAIN.  
 ‘I barely made the train. (almost missed the train)
- (87) INDEX<sub>1</sub> BY-A-HAIR [CL:vehicle] COLLIDE [CL:vehicle]  
 ‘I barely missed being in an accident.’ (I was almost in an accident)

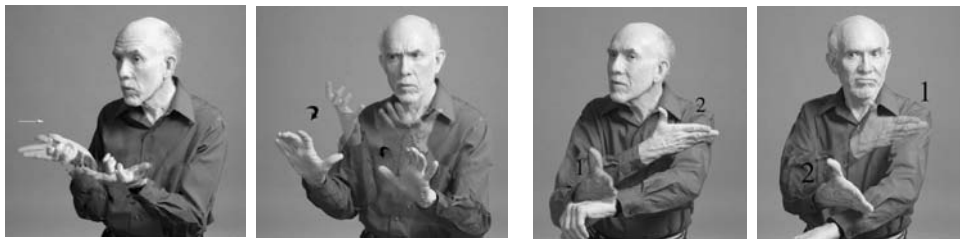
### 3.2 Constituent negation

#### 3.2.1 Negative derivation

In addition to syntactic negation, there is a small set of predicates that can be negated by reversing the orientation of the hands and moving the hands downwards and/or outwards. According to Woodward (1974), these predicates include GOOD, WANT, LIKE, and, now very marginally, HAVE. Note that they are all stative predicates. Note also that they would appear to be derived from compounding the original predicate with DON’T. The signs WANT and DON’T-WANT are illustrated in Figure 23.

Interestingly, just as DON'T has formed compounds with signs like WANT or GOOD in the past, NOT has more recently formed compounds with other verbs, notably to form signs like NOT^WANT (which is distinct from DON'T-WANT) and NOT^MUST. Particularly interesting for typological considerations is the order of the signs in the older vs. newer compounds: DON'T or its remnant occurs after the verb with which it is in construction, while NOT occurs initially, thus providing further evidence for the historical change from head-final to head-initial argued for by Fischer (1975, 1990).

In addition to this process, there are many signs that reverse rather than negating their meanings by reversing the direction of motion. These include JOIN/DISCONNECT, EXPAND/SHRINK, IMPROVE/WORSEN, and TALL/SHORT. The pair IMPROVE/WORSEN is illustrated in Figure 24. WILL/WON'T and CAN/CANNOT are unrelated pairs.



WANT  
Figure 23

DON'T-WANT

IMPROVE  
Figure 24

WORSEN

### 3.2.2 *Negating constituents*

I have already shown one example of constituent negation above in sentence (78). I do not know if it is generally possible to have constituent negation in ASL using NOT or only the NMM negative headshake unless the negation is contrastive. However, it is possible to negate constituents using NONE, as in (70) above, and as shown in example (88) below:

- (88) NONE PEOPLE SHOW-UP POSS<sub>1</sub> PARTY  
'Nobody showed up at my party.'

In order to say something like "the cat caught the mouse today, not yesterday", one would sign something like (89), where NOT and THAT are optional; with THAT,





## 4. Beyond grammar

### 4.1.1 *Non-manual marking of question and negation in hearing culture*

In hearing American culture, the non-manuals used for negation and at least yes-no questions in ASL do appear as paralinguistic accompaniments to negation and questions in spoken American English. Thus, a negative headshake or frown is used paralinguistically with negative sentences. Hearing people also widen their eyes for polar questions, and have rising intonation for polar questions, which could be viewed as analogous on some metaphorical level to the widening of eyes and the raising of eyebrows for questions in ASL.

### 4.1.2 *Signs and gestures for question and negation used in hearing culture*

Most of the signs used for question and negation are not directly related to any signs or gestures in American culture. However, the sign NOT may be related to a French gesture meaning “I don’t believe you.” See Figure 25. NOT is signed against the chin, while the French gesture is against the teeth (Wyle, 1977). The handshape, orientation, and movement are the same.

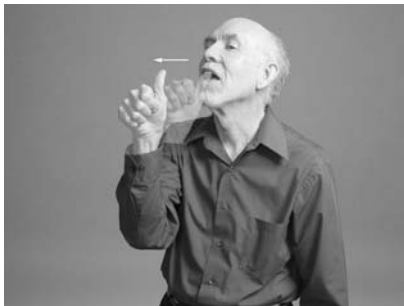


Figure 25: French gesture “I don’t believe you.”

A gesture very like the sign DON’T appears in hearing American culture for utterances such as “no way”. The sign WELL is probably related to a gesture in American culture that is often accompanied by (and may be equivalent to) a shrug.

The relative lack of interaction between signs and culture-dependent gestures in ASL is in contrast to what we find in some other sign languages. In Chinese Sign Language, for example (see Yang & Fischer, 2002), there are positive and negative handshapes that form morphologically complex signs; these handshapes are also used in the hearing Chinese culture. Nihon Syuwa has a manual negator that serves as a negative gesture in hearing Japanese culture (Morgan, this volume).

## 4.2 Conventionalised interrogative and negative phrases

There are a number of interrogative phrases that are used for phatic communication. These include one-word greetings like wh-THRILL (‘what’s up?’), and expressions of concern such as wh-WRONG (‘what’s wrong?’) and wh-HAPPEN (‘what happened?’), but also phrases such as HOW INDEX<sub>2</sub> (‘how are you?’), though this last may be influenced by English. As mentioned above, WHY^NOT is often used for suggestions. While something like DON’T BOTHER<sub>1</sub> (‘don’t bother me’) is used, a more colloquial equivalent does not use negation at all (FINISH<sub>2</sub> – ‘cut it out’).

## 5. Summary, conclusions, and future research

Questions and negations in ASL have a number of characteristics in common: both involve syntactic as well as non-manual components; both permit the questioning or negation of selected elements; and both interact in interesting ways with other structures such as topicalisation. We have seen that non-manual components interact with segmental (in this case manual) material. We have also examined the role of hearing culture in influencing the grammar of negation and interrogation in ASL, in terms of the borrowing of word order and fingerspelled items, and also the grammaticalisation of gesture and non-manual behaviours. It seems that younger signers are more influenced by English grammar than older signers. The reasons for this change are many: first, younger signers have used some form of signing in English for most of their lives; their parents tended by contrast more frequently to be educated orally, thus providing fewer opportunities for the direct influence of one language on another. We are also seeing a trend in the United States toward mainstreaming, where a child may be the only deaf student in a school, with fewer opportunities to be exposed to native signing; that child’s parents would likely have attended a residential school where exposure to native signing occurred earlier, though often outside of the classroom. These demographic factors can indeed have an effect on the resulting grammar of ASL, even in native signers.

ASL is no exception to the rule that any language can express any idea. So it is not surprising perhaps that the means of expression of interrogation and negation in ASL is elaborate. But there is still much we do not know about these areas of ASL grammar. One area in which I would like to see more research is the interaction between interrogation and negation, and also the further interactions

between the structures we have been examining and such factors as definiteness and reality. It strikes me that it is rare in ASL to pose a question equivalent to ‘what didn’t you eat?’; I have tried to elicit such questions in the course of working on this chapter, and it was remarkably unsuccessful.

My impression is that there is a conflict in ASL structure between the kind of irrealis embodied in negatives and questions on the one hand and definite constructions on the other. Among definite constructions I would place classifiers, since they generally require an antecedent and are therefore definite information that assumes the existence of the things in the world to which they refer. These are areas that deserve further research. This sketch is intended as a beginning and a basis for comparison with other sign languages.

### **Acknowledgements**

I am grateful to the many Deaf ASL signers who have served as native language consultants over the years, including, notably, collaborators Bonnie Gough and Keith Cagle, numerous NTID students, including Sara Bianco Riggio and Nathan Kester. Thanks to Ulrike Zeshan for her insightful suggestions, and thanks especially to Patrick Graybill, for his comments on an earlier draft of this paper, his insights into his native language, and his willingness to serve as “talent” for the illustrations. All errors of course remain my own.

## Chapter 7

# Questions and negation in Hong Kong Sign Language

Gladys Tang

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### HONG KONG SIGN LANGUAGE

Hong Kong Sign Language (HKSL) is the name given to the sign language variety used by the deaf signers of Hong Kong. Records about the history of Hong Kong Sign Language are few and far between. The earliest records date back to a book entitled *The Origin and Development of Hong Kong Sign Language* compiled by the Hong Kong Society for the Deaf in 1987. From the recollections of the authors of that book, Hong Kong Sign Language owes its origin to the sign language varieties of Nanjing, Hangzhou and Shanghai from where the deaf signers emigrated to Hong Kong during the Communist liberation in the late 1940's. They set up schools for deaf children and sign language was used as a medium of communication. In fact, Woodward (1993) observed that Hong Kong Sign Language and the sign language variety of Shanghai shared 77% of their basic vocabulary. Over the years, Hong Kong Sign Language has been influenced by the varieties of China and Taiwan. There is no official record concerning the number of deaf signers in Hong Kong but one can estimate that there are about 7000-14000 deaf signers, assuming that 1-2 babies out of 1000 are born deaf or become deaf by age 2. Earlier analysis involving HKSL and Chinese Sign Language (CSL) data had been documented in Yau (1977, 1986). Also in the 1980's, a group of researchers conducted some systematic analysis on HKSL at the SALK Institute for Biological Studies (Fok, van Hoek, Klima & Bellugi 1991; van Hoek, Bellugi & Fok 1986). For a fuller description of the works on HKSL, see Tang (in press).

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## **Introduction**

This chapter provides a preliminary discussion on two grammatical constructions in Hong Kong Sign Language: Negative and interrogative constructions. We focus specifically on the word order of these constructions, as well as the related linguistic markers, manual and non-manual. The data were collected from two signers of HKSL: Signer A was born of a deaf family and acquired HKSL from his parents. He was prelingually deaf and diagnosed to be suffering from profound to severe hearing loss. He attended a deaf school that offered education in the oral mode. Signer B was born of a hearing family. She was twenty years older than Signer A and acquired deafness due to illness at the age of three and attended the same deaf school as Signer A. She learned HKSL from her peers at school. Both claimed to be using HKSL in daily communications. The data were elicited first through the researcher preliminarily observing the signing of the informants during free conversations, which provided the first hunch of the word order patterns of the constructions in question. These observations were compared with data collected through video-taping their interactions in two task-based information exchange activities, which induced the use of interrogative and negative constructions. The relevant data were transcribed and details of word order and non-manual markings were noted. The data were then presented to the signers for further confirmation and verification. This set of data was also subsequently presented to four more signers of HKSL, who confirmed that they were representative constructions of HKSL.

## **1. Questions**

### **1.1 Polar questions**

There are two distinct forms of polar questions in HKSL. The first type involves no word order changes but the questions are marked by brow raise only. The second type involves attaching a question sign in the form of 'A+~A' in the clause final position. It will be shown that these two forms of polar questions serve different



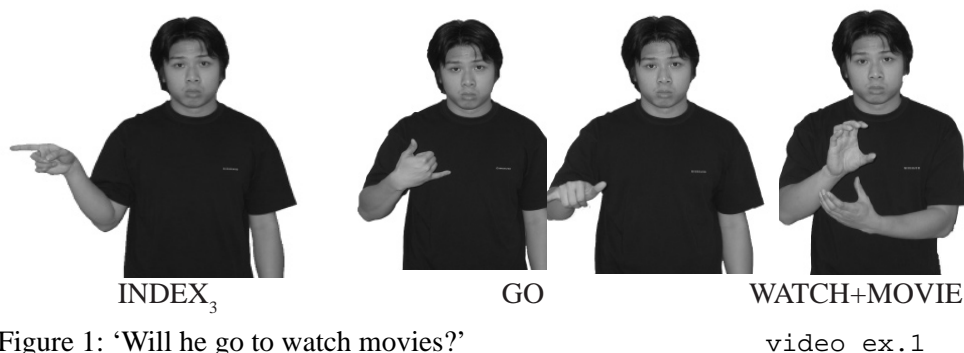


Figure 1: ‘Will he go to watch movies?’

Semantically, this form of polar questions is neutral to either an affirmative or a negative response. Responses to polar questions are primarily expressed non-manually by nodding or shaking one’s head to signal affirmative and negative responses respectively. Alternatively, the signs YES and NO/NOT are the usual responses to polar questions. The handshape of YES is A with an extended thumb and that of NO/NOT is B with an extended thumb. YES is signed with an epenthetic movement to the neutral signing space<sup>4</sup>. NO/NOT involves a waving motion of the palm which faces out. NO and NOT (ref. Section 2.1) are the same sign but they are distributed in different syntactic positions. NO is usually an interjection and NOT is clause final, as a syntactic negator. These responses are usually accompanied by Cantonese mouthing<sup>5</sup>.

In some cases, we also observe that responses to polar questions can be by repeating part of the question as an affirmative response<sup>6</sup>. In (4) below, the signer asks whether the mother of the other signer is fond of watching TV.

- (4) pol-q  
 INDEX<sub>2</sub> MOTHER LIKE WATCH-TV?  
 a. ‘Is it true that your mother likes watching TV?’  
 b. ‘Does your mother like watching TV or not?’

<sup>4</sup> Sometimes a small waving motion of the A-handshape is also observed.

<sup>5</sup> Mouthing here is defined as part of the non-manual expression of the sign that follows the mouth patterns of the Cantonese vocabulary. It is different from mouth gesture that is unrelated to the spoken language (Emmorey 2001).

<sup>6</sup> Zeshan (p.c) also observes that this is common in many sign languages documented so far. In fact, responding to polar questions by repeating part of the questions is also observed in Chinese disjunctive as well as particle questions (Li and Thompson 1989; Matthews and Yip 1994). So far as Cantonese is concerned, this type of response patterns is also allowed even in negative responses.



According to the informants, a question like (4) is ambiguous. One reading is that the signer is questioning the truth or falsity of the entire proposition, meaning ‘Is it true that your mother likes watching TV?’. A typical response would be either YES or NO/NOT, meaning ‘true’ or ‘not true’. Another reading requires a choice between ‘like watching TV’ or ‘doesn’t like watching TV’ – as implied by the question. An affirmative response to reading (b) will be ‘LIKE’ while a negative response remains NO/NOT or simply DISLIKE. As such, reading (b) may be perceived as a specific type of disjunctive question, with the presupposed values being  $p$  or  $\sim p$ , where  $p$  is the proposition set up by the verbal predicate LIKE WATCH-TV. Other examples are FINISH, GO and most of the modals such as CAN (5).

- (5) A:                    \_\_\_\_\_ pol-q  
 KENNY DRIVE CAN?  
 ‘Can Kenny drive?’  
 B:                    CAN.  
 ‘Yes, he can.’

The data above suggest that those polar questions that also invoke a disjunctive reading are ambiguous in HKSL. In cases where a negative response is required, LIKE has its counterpart DISLIKE, FINISH may be responded to by NOT-YET, and there are negative modals like CAN’T and WON’T. Nevertheless, we also observe that with the verb GO, one way to disambiguate the question is to modify its articulation by adding the feature [repeat]. GO in (6a) is monosyllabic and the question is ambiguous:

- (6a) A:                    \_\_\_\_\_ pol-q  
 INDEX<sub>2</sub> GO BUY CAR?  
 a. ‘Is it true that you are going to buy a car?’  
 B:                    YES  
 b. ‘Are you going to buy a car or not?’  
 B:                    GO
- (6b) A:                    \_\_\_\_\_ pol-q  
 INDEX<sub>3</sub> GO+ BUY CAR?  
 b. ‘Is he going to buy a car or not?’  
 B:                    GO

We can posit two readings with (6a), hence both answers are possible. However, (6b) is not ambiguous because it yields a disjunctive reading only and the affirmative response is GO, rather than YES. One plausible explanation is that modulating the articulation of GO by adding [repeat] has a semantic consequence — to assign the focus of interrogation to the verb. Yet, we argue that it could be a case of borrowing from Cantonese. (6b) has an equivalent translation in spoken Cantonese, *keoi<sub>3</sub> heoi<sub>3</sub>-m<sub>4</sub>-heoi<sub>3</sub> maai<sub>3</sub> ce<sub>1</sub>* ('he go-not-go buy car'), which triggers a disjunctive reading. Our native informants comment that GO+ is a translation of Cantonese *heoi-m-heoi* ('go not go') with 'not' being deleted in the signing process. GO+ in (6b) is mouthed as "heoi<sub>3</sub>-m<sub>4</sub>-heoi<sub>3</sub>" rather than "heoi<sub>3</sub>" as observed when the reading is aligned with (6a). It could be that GO+ in simple word order is a form of polar question that stems from spoken Cantonese and becomes part of HKSL.

Another aspect of ambiguity in the study of polar questions is the scope of interrogation. In the spoken language literature, the scope of interrogation may be varied by stress shift. In sign language, it seems that scope may be varied by (a) word order permutations, and (b) non-manual markings. In (7), we assume that VIDEO-TAPE BABY is being topicalized, leaving NEXT WEEK in the clause final position. We observe that non-manual marking does not extend to the topicalized constituents. From a discourse perspective, it appears that topicalizing VIDEO-TAPE BABY allows NEXT WEEK to receive end-focus, in this case the focus of interrogation, confirming the time when the activity of video-taping the baby is conducted with the addressee.

- (7) A: VIDEO-TAPE BABY \_\_\_\_\_ pol-q  
 NEXT WEEK?  
 'As for video-taping the baby, are you going to do it  
 next week?'  
 B: YES

A second way to avoid ambiguity in polar questions seems to be by varying the scope of non-manual markings. In some of our data, we observe that the scope of non-manual marking varies according to the constituent being questioned. Example (8a) is ambiguous between 'Is it true that you are going to videotape the baby next week?' and 'Is it the baby that you are going to video-tape next week?'. The



is just marked with repeated handshape change. Depending on context, this sign may be translated into Cantonese *hou<sub>2</sub>-m<sub>4</sub>-hou<sub>2</sub>* ('good-not-good'), *ho<sub>2</sub>-m<sub>4</sub>-ho<sub>2</sub> ji<sub>3</sub>* ('can-not-can'), or *ngaam<sub>1</sub>-m<sub>4</sub>-ngaam<sub>1</sub>* ('right-not-right'). Cantonese mouthing is one way to disambiguate the meaning of the sign.

The second sign HAVE+NOT-HAVE occurs in questions that concern the existence or non-existence of a certain entity, state or event. It is formed by combining HAVE and NOT-HAVE (Figure 3). (9) - (11) show that these signs are consistently marked by brow raise, but it does not spread to the preceding part of the sentence (12).

- (9) INDEX<sub>2,1</sub> FLY BEIJING pol-q GOOD+BAD?  
'Will you and I fly to Beijing?'
- (10) TIN INDEX<sub>1</sub> BISCUIT pol-q HAVE+NOT-HAVE?  
'Are there any biscuits inside the tin?'
- (11) INDEX<sub>2</sub> YESTERDAY NIGHT WATCH-MOVIE pol-q HAVE+NOT-HAVE?  
'Did you watch the movie last night?'
- (12) pol-q \*TIN INDEX<sub>1</sub> BISCUIT HAVE+NOT-HAVE?  
'Are there any biscuits inside the tin?'

Semantically, this type of polar questions is adopted to question the truth or falsity of propositions (9), the existence or non-existence of entities and events (10 &



Figure 2: GOOD + BAD

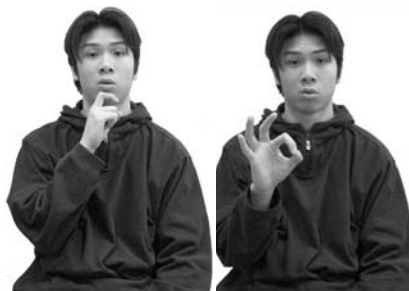


Figure 3: HAVE + NOT-HAVE

11), as well as the modality of events. Unlike the tag questions in Cantonese and English, which normally presuppose a biased response, the questions in (9) - (11) are neutral polar questions, which means the signer's expectation is not biased towards an affirmative or a negative response. In (11), if the signer's assumption is biased towards an affirmative response, such that he thinks that the addressee did watch the movie the night before, HAVE instead of HAVE+NOT-HAVE will be signed instead.

Syntactically, these Q-signs are obligatory as far as this type of polar questions is concerned. Also, they are consistently clause final and not clause initial (13 & 14).

- (13)            \_\_\_\_\_ pol-q  
 \*GOOD+BAD FATHER COME?  
 'Did father come back?'

- (14)            \_\_\_\_\_ pol-q  
 \*HAVE+NOT-HAVE GO TRAVEL?  
 'Did you go traveling?'

(15), however, poses an interesting counterexample to our generalization. While accepting the clause final Q-sign HAVE+NOT-HAVE, a lot of signers of HKSL also accept sentences such as (15a). When occurring sentence initially, HAVE+NOT-HAVE is not a Q-sign but behaves like a main verb of existence or possession and brow raise is observed to extend over the entire clause, otherwise it is unacceptable, as shown in (15b). In fact, (15a) parallels the syntactic pattern of the existential constructions in spoken Cantonese, *yau<sub>3</sub> mou<sub>3</sub> cin<sub>2</sub>?* ('Have not-have money?'), the translation being 'Is there any money?'. As such, we argue that the sign HAVE+NOT-HAVE in fact stems from spoken Cantonese and it is eventually borrowed into the system of natural HKSL. During the process, the sign HAVE+NOT-HAVE acquires two grammatical status: it serves as a verb of possession or existence or as a Q-sign that appears consistently in the clause final position<sup>7</sup>.

- (15a)            \_\_\_\_\_ pol-q  
 HAVE+NOT-HAVE MONEY?  
 'Do you have any money?'

<sup>7</sup> In spoken Cantonese, *yau<sub>3</sub> mou<sub>3</sub>* ('have not-have') never occurs in clause final position as a question tag, which is different from the syntactic pattern of HAVE+NOT-HAVE in HKSL.

- \_\_\_\_\_ pol-q
- (15b) \*HAVE+NOT-HAVE MONEY?  
 ‘Do you have any money?’

One may ask which grammatical category these Q-signs belong to? There are two potential analyses. One possibility is that they are question tags having their origin in spoken Cantonese. Tag questions in Cantonese are formed by short A-not-A forms (Matthews and Yip 1994), where the negator ‘not’ is morphologically realized though phonologically reduced. In (16) and (17), the speaker assumes positively that the addressee broke the bowl, and a tag is used to confirm his presupposition. Prosodically, tags in Cantonese are preceded by an intonation break. The usual A-not-A forms are *hou<sub>2</sub>-m<sub>4</sub>-hou<sub>2</sub>* (‘good-not-good’), *hai<sub>6</sub>-m<sub>4</sub>-hai<sub>6</sub>* (‘right-not-right’), and *dak<sub>1</sub>-m<sub>4</sub>-dak<sub>1</sub>* (‘can-not-can’).

- (16) Nei      daalaan      zo                      zek              wun      a<sub>4</sub>?  
 you      break      PVF-marker      classifier      bowl      Q-particle  
 ‘Did you break the bowl?’
- (17) Nei      daalaan      zo                      zek              wun,      hai<sub>6</sub>-m<sub>4</sub>-hai<sub>6</sub>?  
 you      break      PVF-marker      classifier      bowl      right or not right  
 ‘You broke the bowl, didn’t you?’

Typical tags are also observed in HKSL, such as TRUE, or OK, as in (18):

- \_\_\_\_\_ pol-q
- (18) JOHN      <sub>3</sub>TELL-ME<sub>1</sub> INDEX<sub>2</sub> PREGNANT, TRUE?  
 ‘John told me you are pregnant, is it true?’

In certain respects, these Q-signs in (9) and (10) are like tag questions in spoken Cantonese. Morphologically, they are formed by juxtaposing the positive and the negative element of the same grammatical category. Second, the pattern of non-manual marking of these Q-signs is similar to the typical tag questions in other sign languages such as BSL or ASL, in the sense that the non-manual marking never spreads to the preceding part of the sentence. Third, they are consistently clause final. However, unlike typical tag questions in either spoken or sign languages, there is no intonation break between the preceding part of the sentence and the Q-signs.

This suggests that the Q-sign together with the preceding part forms a single clause, rather than being a clause followed by a tag. In the sign phonology literature, it has been well-established that a clause boundary, is usually marked by a pause and an eye blink (Wilbur 1994b; Sandler 1999). In the data from HKSL, an intonation break in any of these non-manual forms before the Q-signs is not obvious and a pause certainly leads to ungrammaticality. Therefore, polar questions in HKSL that adopt these Q-signs form a specific type of disjunctive questions, one that juxtaposes the positive and negative value of the proposition in the question. Disjunctive questions presuppose no biased assumptions.

Could these Q-signs be question particles? According to Zeshan (2004b), Q-particles are not observed in BSL, German Sign Language (DGS), and Sign Language of the Netherlands (SLN) but they are found in the sign languages in Finland, Denmark, Spain, South Korea, Turkey, Japan, Taiwan, and possibly Kenya and Tanzania. Q-particles in sign languages display the following characteristics: First, they fall within the same prosodic unit as the actual question and are not preceded by an intonational break. Second, where the Q-particles originate from some other signs, the original meanings may not be retained. Third, Q-particles are pragmatically marked; and finally, they can be clause final, clause initial, or they may occur in both positions. The Q-signs documented in HKSL do share some of these characteristics, in particular, an intonational break before the sign is not allowed. However, they differ from typical Q-particles in that they appear to be morphologically complex and they are distributionally restricted - they are clause final and occur in just one sub-type of polar questions. One possibility is that these signs originate from tag questions in Cantonese; however, when being incorporated into the natural sign language system, they undergo semantic shift and at the same time a change in the grammatical status, to the extent that they no longer behave strictly like question tags, but like a kind of clause final Q-expression that makes use of a disjunctive A-not-A pattern.

In sum, we have analyzed two main forms of polar questions. The basic form does not involve word order change but brow raise to mark a polar question. The second form involves attaching an 'A+~A' Q-sign clause finally. Apparently, these Q-signs are not many and their distribution appears to be restricted to the specific semantics of polar questions. HAVE+NOT-HAVE as a Q-sign questions the existence of states and events, as well as entities. GOOD+BAD seeks confirmation to the truth or falsity of a proposition; or poses a request for permission.

## 1.2 Content questions

### 1.2.1 Question signs

There are two generic wh-signs in HKSL, which are articulated by the a 1-handshape or an open 5-handshape. The wh-signs with a 1-handshape (glossed as WH1) involves a pivoting motion of the wrist and may be translated as ‘who, whose, what, which, why, where, and how’ (Figure 4). It is also common to combine WH1 with other lexical signs to form question compounds: FACE+WH1 means ‘who’ (Figure 5) and PLACE+WH1 means ‘where’ (Figure 6). In addition to WH1, ‘why’ may also be signed by a 1-handshape tracing a question mark in the signer’s neutral signing space.

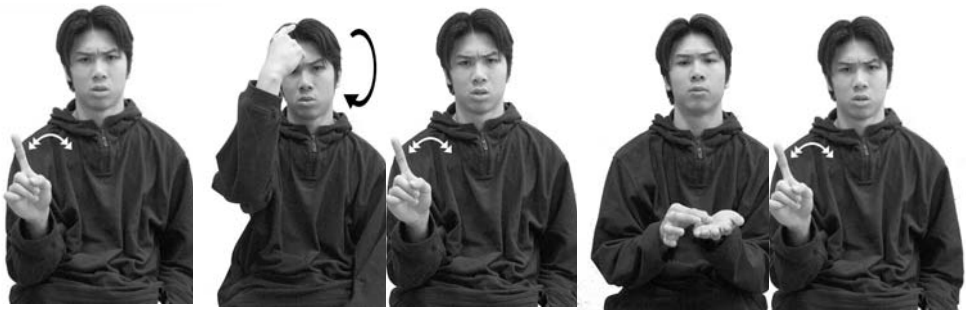


Figure 4: WH1 Figure 5: FACE+WH1 ‘who’ Figure 6: PLACE+WH1 ‘where’

video ex. 4-6

The second generic wh-sign is glossed as WH5. It is articulated by an open 5-handshape with the fingers in a wiggling motion. By itself, this wh-sign is associated with questioning measures or degrees and can be glossed as HOW-MUCH/MANY (Figure 7). Also, various time concepts are articulated through specific compounds with an underlying WH5 sign, rendering a general ‘when’-question unnecessary. Thus TIME+WH5 means ‘what time’ with respect to the hour of the day (Figure 8). HOW-LONG is articulated by placing the wiggling WH5



on the back of the wrist. Pointing at the contralateral side of the top of the torso area in an open 5-handshape followed by a wiggling WH5 in the neutral signing space is glossed as DAY-OF-THE-WEEK+WH5, meaning ‘what day of the week’ (Figure 9)<sup>8</sup>. WH5-MONTH-WH5-DATE is a double-handed sign formed by two wiggling WH5 in identical orientation towards the signer’s torso area (Figure 10). WHAT-MONTH is similar to WH5-MONTH-WH5-DATE except that WH5-DATE (articulated usually by the dominant hand) is replaced by a curved G-handshape in repeated downward movement (Figure 11). Therefore, in HKSL, the type of variable being questioned is signified by the handshape, and the movement of the signs



Figure 7: WH5    Figure 8: TIME+WH5  
video ex.7-9

Figure 9: DAY-OF-THE-  
WEEK+WH5



Figure 10: WH5-MONTH-WH5-DATE



Figure 11: WH5-DATE

video ex.10-11

<sup>8</sup> In HKSL, the signs for days of the week are formed by incorporating number signs into the place of articulation, (that is, top of left torso). It seems that number signs have the tendency to adopt a place of articulation which may have its origin from another lexical sign. MONDAY, for instance, is articulated by combining ONE with a place of articulation. It is also possible to use the 1-handshape (that is, index finger) instead of 5-handshape to point at the top of the torso.

seems to imply uncertainty. The open 5-handshape in a wiggling motion is used to question time, duration, and quantity, which may be measured conceptually on a scale. Identification of persons, entities, manner, reason and purpose is covered by the 1-handshape.

### 1.2.2 Non-manual marking in content questions

In the sign language literature, brow furrow is typically regarded as having the grammatical function of marking content questions. It is an obligatory feature and its scope varies; either it is restricted to the wh-sign only or it spreads over the entire question (Baker-Shenk 1983, Sutton-Spence and Woll 1999, NKMBL 2000). In HKSL, brow position is obligatory in content questions. However, we observed a frequent use of brow raise and eye-gaze at the addressee as markers of content questions.

- (19) ELDER-BROTHER BUY WH1 (Figure12)  
‘What did the elder brother buy?’
- (20) BUY BOOK FACE+WH1?  
‘Who bought a book?’
- (21) FACE+WH1 BUY BOOK?  
‘Who bought a book?’



Figure 12: ‘What did the elder brother buy?’

video ex. 12

However, we do observe occasional brow furrow and it is usually associated WH1 (see Figure 12). This brow position is accompanied by a round, open mouth pattern and is co-extensive with the wh-sign, as shown in (19). Occasionally, we observe a spread of non-manual marking over the entire question when it is a subject question and the wh-sign is in clause initial position (21).

### 1.2.3 Word order in content questions

Cross-linguistically, wh-signs are most often placed in either clause initial or clause final position. In BSL and Indo-Pakistan Sign Language, the wh-signs may occur clause finally (Sutton-Spence & Woll 1999, Zeshan 2000). It has also been reported in some sign languages that the wh-signs may be clause initial, clause final or the two positions combined (Lillo-Martin 1990, Aarons 1994; NKMBL 2000 for ASL; Bouchard & Dubuisson for LSQ (Quebec, Canada); Pfau 2002 for DGS). In HKSL, the wh-signs for argument questions are either in situ (19 & 21) or in clause final position (20). In (19) above, the wh-sign WH1 ‘what’ overlaps between in-situ and clause final positions. However, in Cantonese, the in-situ wh-words are observed in both argument and adjunct questions. Except for in-situ subject questions, as in example (21), the wh-signs never occur clause initially in HKSL; therefore, (22) and (23) are ruled out.

cont-q  
 (22) \*WH1 ELDER-BROTHER BUY?  
 ‘What did the elder brother buy?’

cont-q  
 (23) \*WH1 POLICEMAN CATCH?  
 ‘Who did the policeman catch?’

Unlike many sign languages, HKSL does not allow wh-pronoun copies, that is, having two identical question signs for the same variable in a question to occur clause initially and clause finally. (24) is ruled out in HKSL.

cont-q  
 (24) \* WH1 ELDER-BROTHER BUY WH1?  
 ‘What did the elder brother buy?’

As for ‘which’-questions, we observe that the wh-sign seldom combines with a noun, forming a ‘WH1 +N’ phrase. As the variables of ‘which’-questions are definite referents in the signing discourse, this referential property seems to have an effect on the formation of ‘which’-questions. (25) and (26) indicate that the signing of WH1 assumes that the referents are already assigned a locus in space.

- cont-q
- (25) HOUSE INDEX<sub>i</sub> INDEX<sub>j</sub>, MALE LIKE WH1?  
 ‘This house or that house, which house does the man like?’

In (25), where the referents for the houses are already established in space, the movement parameter of WH1 is modified from local to path movement between the two loci to signal a request for a choice between the referents previously located in space. Where number is incorporated into a ‘which’-question, the following pattern results:

- cont-q
- (26) HOUSE THREE, MALE LIKE WH1?  
 ‘Of the three houses, which does the man like?’

In this question, the sign THREE is signed and held by the non-dominant hand until the end of the sentence. Then, WH1 is signed by the dominant hand that moves towards the number sign held by the non-dominant hand, meaning ‘which one of the three (houses)’. We argue that when combined with WH1, this number sign is pronominal and assumes the referential property of [+definite], providing a specific range of variables for identification.

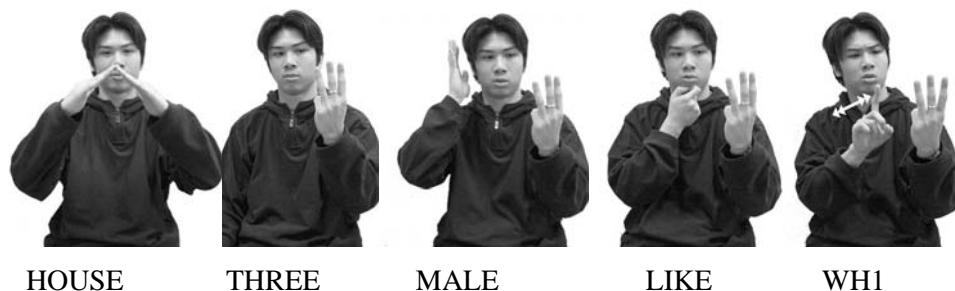


Figure 13: ‘Of the three houses, which does the man like?’ video ex.13

As for adjunct questions, we observe that the informants are aware of the difference in the syntactic pattern between Cantonese and HKSL. As noted, the question word in adjunct questions is in-situ in Cantonese, but this seldom occurs in HKSL. Wh-signs for adjunct questions in HKSL are generally clause final (27a & 28a). (27b) and (28b) show the original site of the temporal or locative adverbials in the sentence; placing the adjunct question sign in clause initial position is unacceptable (29a & 29b).

- (27a) FATHERGO SIGN-CONTRACT LOCATION+ WH1? cont-q  
 ‘Where did father go to sign the contract?’
- (27b) FATHERGO CENTRAL SIGN-CONTRACT.  
 ‘Father went to Central to sign the contract.’
- (28a) ELDER-SISTER GET-MARRIED WH5-MONTH-WH5-DATE? cont-q  
 ‘What month and date will the elder sister get married?’
- (28b) ELDER-SISTER FIRST-OF-MAY GET-MARRIED  
 . ‘The elder sister will get married on the first of May.’
- (29a) INDEX<sub>2</sub> KILL DOG WH1 ? cont-q  
 ‘Why did you kill the dog?’
- (29b) \*WH1 INDEX<sub>2</sub> KILL DOG? cont-q  
 ‘Why did you kill the dog?’

In sum, one may posit that wh-signs are generally clause final, and this is true for both argument and adjunct questions; but we also observe some instances of in-situ wh-questions with the younger signer, and this may be due to influence from Cantonese, which is a language with wh-in-situ questions. Non-manual marking can be brow raise or brow furrow in some instances, but it is usually restricted to the wh-signs.

## 2. Negation

Systematic typological surveys on negation in spoken languages have been reported in Dahl (1979) and Payne (1985); Zeshan (2004a) provides the first systematic typological survey in sign languages. As reported in her study, most of the analysis focuses on the syntactic position of the negator NOT and its associated non-manual marking. NOT is reported to occur in different syntactic positions in different sign languages. Specifically, in ASL it tends to be preverbal (Newport and Meier 1987, Aarons 1994), but postverbal and affixal to the verb in German Sign Language (Pfau 2000). Bergman (1995) documents the syntactic position of NOT in Swedish Sign Language (SSL) and claims that it is dependent upon the type of verbal categories and predicates. NOT is postverbal in sentences containing a main verb, such as SEE NOT, or KNOW NOT. If the main verb is preceded by a modal, NOT follows the modal instead. NOT also precedes the adjectival and nominal predicates. In ASL, negative verbs such as WANT+NOT, LIKE+NOT, KNOW+NOT involve the incorporation of a negative morpheme into the verb stem morphologically (Woodward and De Santis 1977).

As for non-manual marking, a side-to-side headshake is common across sign languages to mark the grammatical property of negation. Most sign language researchers would agree that this is the most fundamental non-manual feature accompanying negation in sign languages. A recent acquisition study on ASL also reveals a systematic development from a communicative, gestural headshake to one that reveals the linguistic property of negation in the language (Anderson and Reilly 1997). Other non-manual markings include wrinkled nose, frowns and brow furrow, as well as spread lips. Many sign languages also report negative constructions in the absence of a manual negator, in which case non-manual expressions are obligatory as the only marker of negation (Zeshan, chapter 2, this volume).

There are quite a few manual negators in HKSL, the most common ones being NO/NOT, NOT-HAVE, and NOT-YET. There are also negative quantifiers like NOTHING, and negative modals like CAN'T and WON'T. In this section, I provide an analysis of the syntactic and semantic properties of these negators as well as the non-manual marking for negation. We also take a look at a negative morpheme realized by the I-handshape.

## 2.1 Clause negators in HKSL

As mentioned, NO/NOT is articulated by a B-handshape with a waving motion. NO/NOT can be translated as ‘no’ when it is an interjection. This sign is accompanied by a Cantonese mouthing pattern  $m_4$ - $hai_6$  (‘no’). In the following discussion, we will focus on the clause final NOT. Semantically, NOT denies the truth of a proposition, expressed as ‘It is not true that P where P = proposition’, as shown in (30) and (31).

- (30) INDEX<sub>3</sub> TOMORROW FLY NOT. (Figure14)  
 ‘It is not true that he is flying tomorrow.’

- (31) HOUSE BIG NOT, SMALL.  
 ‘It is not true that the house is big, it is small.’

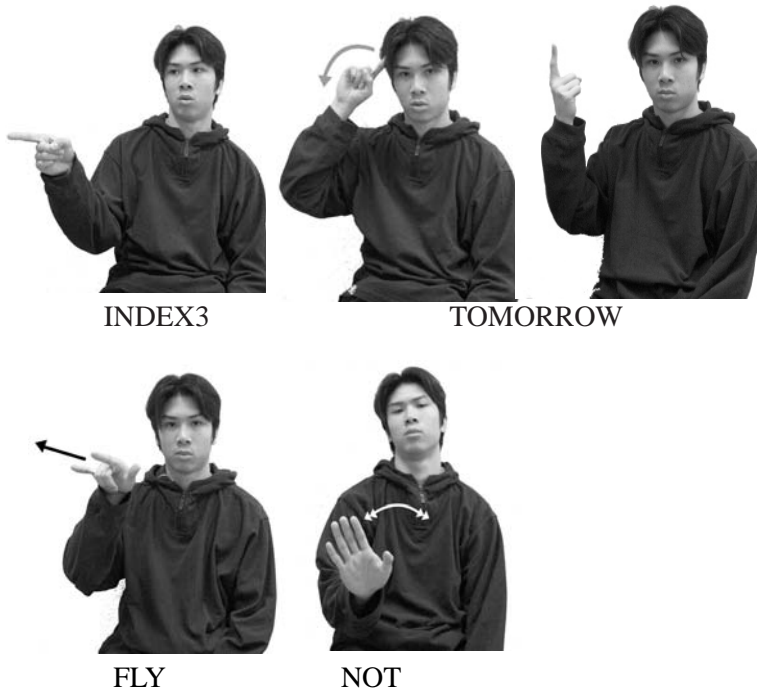


Figure 14: ‘It is not true that he is flying tomorrow.’ video ex.14

Another negator, NOT-HAVE, is articulated by an F-handshape with a waving motion. NOT-HAVE is taken to be the negative counterpart of HAVE, the latter translatable as ‘there is’ or ‘have’ in English. However, HAVE can be negated by NOT, as in (32):

- (32) INDEX<sub>3</sub> HAVE MONEY NOT.  
neg  
 ‘It is not true that he has money.’

Instead of denying the truth of a proposition using NOT, the negative sentence with NOT-HAVE simply asserts the non-existence or non-possession of entities and states (33 to 35):

- (33) FATHER CAR NOT-HAVE. (Figure 15)  
neg  
 ‘Father does not have a car.’

- (34) DRAWER INDEX<sub>1</sub> MONEY NOT-HAVE.  
neg  
 ‘There is no money in the drawer.’

- (35) MARY PREGNANT NOT-HAVE.  
neg  
 ‘Mary isn’t pregnant.’

Also, it is typical in HKSL to adopt NOT-HAVE to assert the non-existence of an event that occurs either in the past or at present but not in the future (36 & 37). For instance, (37a) asserts that ‘Father didn’t go to the shop yesterday’, and whether ‘he went somewhere else’ is not an issue. The reading of the sentence is different if NOT-HAVE is replaced by NOT (37b), which means ‘It is not true that father went

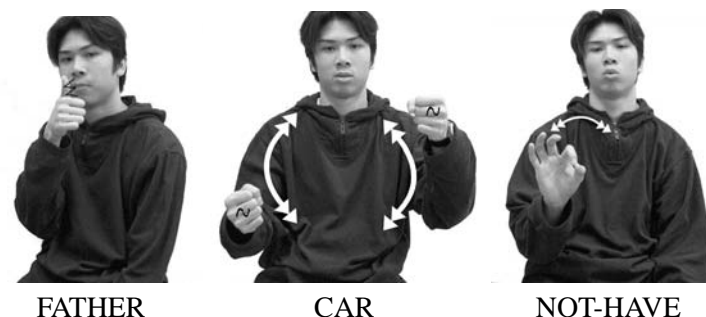


Figure 15: ‘Father does not have a car.’



to the shop yesterday', with a presupposition that father went somewhere, but it was not the shop that he went.

(36) KENNY NOW PARTICIPATE RESEARCH NOT-HAVE.<sup>neg</sup>  
 'Kenny does not participate in the research now.'

(37a) YESTERDAY FATHER GO SHOP NOT-HAVE.<sup>neg</sup>  
 'Father didn't go to the shop yesterday.'

(37b) YESTERDAY FATHER GO SHOP NOT.<sup>neg</sup>  
 'It is not true that father went to shop yesterday  
 (but he went somewhere else).'

NOT-HAVE is also distinguished from NOT-YET (Figure 16), which only implies that the event has not yet taken place. Compare (38) and (39):

(38) (KENNY) PARTICIPATE RESEARCH NOT-HAVE.<sup>neg</sup>  
 'Kenny did not participate in the research.'

(39) (KENNY) PARTICIPATE RESEARCH NOT-YET.<sup>neg</sup>  
 'Kenny has not yet participated in the research (but he will).'

When an event is perceived by the signer to take place in future, WON'T (Figure 17) is used to negate its occurrence:

(40) KENNY FEBRUARY FLY TAIWAN WON'T.<sup>neg</sup>  
 'Kenny won't fly to Taiwan in February.'

(40) shows that the event that Kenny is flying to Taiwan will not take place. To negate such a possibility, a modal negator WON'T is adopted. To negate it by NOT-HAVE would only lead to semantic anomaly. WON'T involves an L-handshape with the index finger and thumb extended. WON'T generally denies the possibility of

occurrence of a certain event or state in the future; the signer poses a proposition and asserts the low probability of its occurrence, as in (40).

Another negative modal is CAN'T. It adopts an I-handshape and involves a twisting motion in the neutral signing space (Figure 18). CAN'T is adopted for a range of semantic functions, particularly deontic modality of ability, permission and obligation. This sign is relatively common for denoting the lack of ability, as in (41), where the signer asserts someone's inability to play the piano. (42) is concerned with the deontic modality of permission, where the signer denies someone's access to a computer. (43) asserts the obligation that children should not commit themselves to gambling on horse racing.

- \_neg
- (41) INDEX<sub>3</sub> PLAY-PIANO CAN'T, SIGN CAN.  
'He can't play the piano, (but) he can sing.'

- \_neg
- (42) INDEX<sub>3</sub> USE INDEX<sub>1</sub> COMPUTER CAN'T  
'He can't use my computer.'



Figure 16: NOT-YET

Figure 17: WON'T

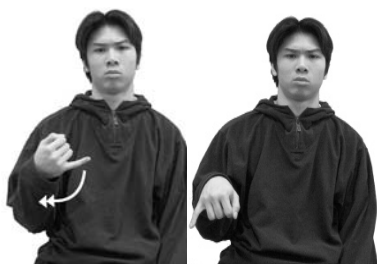


Figure 18: CAN'T

video ex.16-18

- \_neg
- (43) CHILDREN GAMBLE HORSE-RIDING CAN'T  
 'Children should not gamble on horse racing.'

In terms of syntactic distribution, all negators discussed above are clause final; therefore, (44) and (45) are rejected by our informants.

- \_\_\_\_\_neg
- (44) \*(KENNY) NOT-HAVE PARTICIPATE RESEARCH  
 'Kenny did not participate in the research.'

- \_neg
- (45) \*INDEX<sub>3</sub> CAN'T GAMBLE HORSE-RIDING  
 'He should not gamble on horse-racing.'

However, occasionally, NOT is observed to occur preverbally in some high frequency verbs like EAT and, COME, as shown in (46). If NOT is not clause final but occurs to the left of the elements being negated, the scope of non-marking may extend to the end of the clause.

- \_\_\_\_\_neg
- (46) INDEX<sub>3</sub> NOT COME, BUSY  
 'He won't come, he is busy.'

In fact, preverbal NOT is more common among the younger than the older signers of HKSL. One suggestion is that this is due to influence from Cantonese since these sentences do reflect the syntactic pattern of negative sentences in the spoken language. To sum up, except for a few frequently occurring expressions that are modelled on Cantonese, NOT, NEVER, NOT-HAVE, NOT-YET, and the modal negators consistently occupy the clause final position. That the negators occupy a clause final position is also observed in many other sign languages, according to Zeshan (2004a).

## 2.2 Non-manual negation in HKSL

While it has been reported in many sign languages that headshake grammatically marks negation (Baker and Cokely 1980 for ASL, Yang and Fischer 2002 for CSL, Pfau and Quer 2003 for DGS, Coerts 1992 for SLN; Bergman 1994 for SSL), we observe that frowns and spread lips are also associated with negation in HKSL, in addition to headshake. In our data, where the negator is clause final, it is co-extensive with the negator only. However, when NOT is preverbal, as noted in some of the frequency expressions, we observe that while the headshake ends after the negator is signed, the other non-manual markers may be sustained until the end of the clause. In example (47), the dotted line indicates a continuation of the other non-manual markers after the headshake ends.

- \_neg.....
- (47) TONIGHT FATHER NOT COME HOME  
 ‘Father will not come home tonight.’

Whether headshake is an obligatory grammatical marker of negation in HKSL remains an open issue. Lee (2005) based on his data argues that headshake does not bear any lexical or grammatical properties in HKSL because it is not obligatorily co-extensive with the manual negation marker, neither does its extent have any scope properties.

Also, although non-manual marking alone may perform the function of negation in some sign languages such as ASL, BSL or CSL, this is ruled out in HKSL, where negation requires the presence of a manual negator (48 & 49).

- \_\_\_\_\_neg
- (48) \*YESTERDAY NIGHT FATHER FAX FRIEND  
 ‘Father didn’t fax his friend last night.’

- (49)            \_neg  
 \*HOUSE FAR  
 ‘The house isn’t far.’

### 2.3 Negative handshape in HKSL

As in CSL, the I-handshape in many instances carries a negative meaning in HKSL. By itself, this handshape may form a sign BAD/WRONG which is held in the neutral signing space with the palm facing the signer. It is adopted in the lexical formation of some negative signs. One example is the negative modal CAN'T. CAN and CAN'T bear no articulatory similarities in terms of handshape and movement. The negative modal CAN'T adopts the I-handshape, but CAN involves a B-handshape with fingers flexed at the base joint. This negative handshape may also be signed on certain body parts such as the temple for verbs of cognition like KNOW-BAD 'don't know'/UNDERSTAND-BAD 'don't understand' or near the mouth for adjectives like TASTE-BAD 'taste awful'. Other examples are EAR-BAD 'deaf', MOUTH-BAD 'dumb', and EYE-BAD 'blind'.



Figure 19: CLEAR/CLEAN



Figure 20: UNCLEAR/UNCLEAN

video ex. 19-20

Alternatively, BAD/WRONG is grammaticalized into a negative suffix. Examples are CLEAR/CLEAN (Figure 19) and UNCLEAR/UNCLEAN (Figure 20), SKILLFUL and UNSKILLFUL, REASONABLE and UNREASONABLE, APPEALING and UNAPPEALING, LUCKY and UNLUCKY, TIME+GOOD ('got time') and TIME+BAD 'got no time'. These opposite pairs usually require just a switch between the handshapes of GOOD and BAD.



Figure 21: KNOW



Figure 22: KNOW-BAD

video ex. 21-22

In fact, suffixing BAD to some verbs of cognition such as KNOW to form KNOW/UNDERSTAND+BAD as a free variant of KNOW/UNDERSTAND-BAD is also observed. This is formed by keeping the citation form of KNOW (that is, an index sign at the body part), as shown in (Figure 21), and the handshape is subsequently changed to that of BAD (Figure 22).

## Conclusion

This chapter provides a preliminary survey on the word order of interrogative and negative constructions and the related signs in HKSL. Specifically, it is common for the question signs, A+~A Q-signs, and negators to be consistently clause final. However, we also observe influence from Cantonese, as typically manifested in some in-situ wh-questions and A+~A Q-signs. Another issue is scope of negation and interrogation as well as the related non-manual marking. The data, though limited, suggest that they are related, and this is obvious in the case of interrogation while less obvious in negation. In the linguistic literature on interrogation and negation, researchers are also interested in scope issues which are argued to be interacting with the constituents in the sentence. Certainly, negating the entire proposition is different from negating a particular term in the proposition. An interesting issue is how deaf signers express such scope properties in sign languages. At the present stage, research on sign languages points to the significance of non-manual expression for grammatical properties. One may posit that the scope of non-manual expression may also reflect the semantic characteristics of certain grammatical constructions. Further research on the functional and grammatical properties of non-manual markings will add to our understanding of the grammar of interrogation and negation in HKSL.

## Chapter 8

# Interrogatives and Negatives in Flemish Sign Language

Mieke van Herreweghe

Myriam Vermeerbergen<sup>1</sup>

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### FLEMISH SIGN LANGUAGE

Flemish Sign Language (Vlaamse Gebarentaal, VGT) is the language used by signers in Flanders, which is the northern part of Belgium and uses Dutch as the official spoken language. The Flemish Deaf community is estimated to include approximately 5000 sign language users. The first deaf schools in Flanders were directly or indirectly influenced by the method used at the Paris deaf school, and consequently also by French Sign Language. By the beginning of the 20<sup>th</sup> century, every major town in Flanders had at least one Deaf school. Since most of these were residential schools, regional sign language varieties started to develop around every school, so that there are now five regional varieties as well as some (rapidly diminishing) gender-related differences due to the existence of separate schools for boys and girls. At the moment there is no standardised sign language, although there is an on-going process of spontaneous standardisation mostly due to more and more contacts between Deaf people from different regions.

Deaf clubs are among the oldest societies in Belgium, so all major towns and many smaller towns in Flanders have a Deaf club (about 25 to 30 in Flanders). The Belgian (Flemish and Walloon) Deaf clubs decided to join into a national federation in 1936 and founded “NAVEKADOS” (the “National Federation of Catholic Deaf-Mutes”). Due to a federalisation process resulting in Dutch-speaking Flanders and French-speaking Wallonia being culturally independent of each other,

NAVEKADOS split up into a Flemish and a Walloon federation and “Fevlado” (“Federatie van Vlaamse Dovenorganisaties” or the Association of Flemish Deaf Organisations) was founded in 1977. As a result, contacts between Flemish and Walloon Deaf people have become less and less frequent and the sign languages in both communities seem to be deviating from each other as they are going through separate standardisation processes. Therefore, the name for the sign language has changed over time from “Belgian Sign Language” over “Flemish Belgian Sign Language” to the now preferred “Flemish Sign Language (VGT)”. The sign language in Wallonia is officially called “la langue des signes de Belgique francophone (LSFB)” (<http://www.ffsb.be/>).

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## 1. Introduction

In this chapter, the first results of recently started research into interrogatives and negatives in Flemish Sign Language (“Vlaamse Gebarentaal” or VGT) will be presented. VGT is one of the “understudied” sign languages in the world because of the very limited number of sign linguistics researchers.

The research which will be presented here is mainly descriptive and is based on the following data:

- Parts of a corpus which has been collected, transcribed and translated in an earlier stage of research which dealt with the morpho-syntactic structure of VGT. The whole corpus consists of six hours of spontaneous language data – four hours of dialogues and two hours of monologues – produced by 10 adult native or near-native sign language users aged between 30 and 83.
- Nine versions of the same story, told by five adults and four adolescents. The subjects were asked to watch an animated cartoon of about 7 minutes without any spoken interactions, nor subtitling, and to then narrate the story in VGT to a deaf interlocutor.
- “Semi-elicited” conversations between two pairs of (near-)native signers who ask each other questions to which they expect a negative answer (which was usually the case).

We also discussed some of our findings with (near-)native signers. The research results with regard to negation were discussed with three sign language users. For interrogation there was a discussion with five signers in which we had a closer look at some questions from the shorter version of the questionnaire on negatives and interrogatives for linguists (cf. Chapter 2 and Appendix in this volume). All of the informants have been or are connected with sign language research and/or teaching. The results of these discussions were only used as additional information and did not serve as the only or major source.

## 2. (Regional) Variation in Flemish Sign Language (VGT)

The name “Flemish Sign Language” refers to the language which is used by signers from the Flemish part of Belgium. There are enough reasons to assume that the grammar which is used by these signers is relatively identical, but in the lexicon

there certainly is (regional) variation. It is generally accepted that VGT consists of five regional varieties which have developed in and around the different Flemish deaf schools. The regions where these varieties are used are Limburg, Antwerp, Flemish Brabant, East Flanders and West Flanders. Their location can be seen on the map in Figure 1.

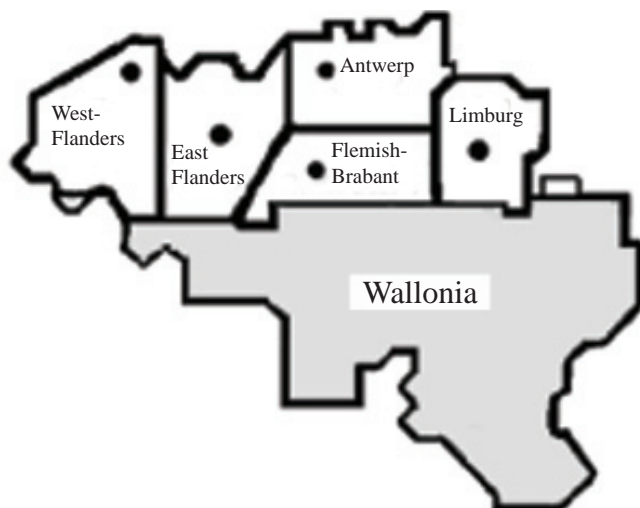


Figure 1: Regions in Flanders (northern part of Belgium)

A recent research project into the lexicon of VGT (October 1999 – October 2001) confirms the existence of these five regional varieties (De Weerd et al., 2003). Although there is more similarity than that there are differences, the degree of regional variation is nevertheless substantial.<sup>2</sup>

In addition to the differences between the regions, there is also variation within one region. Because regional varieties developed and were/are transmitted in the deaf schools, the existence of separate schools for girls and boys – up till the 1970s – has given rise to the development of gender variation: some of the signs which are generally used today were boys' signs or girls' signs in origin.

<sup>2</sup> The aim of this study was to collect currently used VGT-signs so as to be able to get an insight into the degree of regional variation in this language - among other purposes. In the five regions the signs were collected for 1,401 notions in total. For 540 or 38.5 % of the collected notions there is a common sign which is used in all regions, next to one or more other signs (which can be specific for one region). For 33 notions there is no sign in any of the regions. For the remaining 828 notions there are different signs, spread over the different regions, of which on average 55% are related. For more information, see De Weerd et al. (2003). The collected signs were then published in a freely accessible internet dictionary: <http://gebaren.ugent.be>.

From the above-mentioned research project it has also become clear that regions import signs from other regions, which results in the fact that different signs exist – temporarily or not – next to one another within one region. There are probably more causes for the relatively high degree of intraregional variation, but an in-depth discussion of those would be beyond the scope of this chapter.

In the course of the 1980s there has been an attempt to develop a “unified” lexicon. Part of the purpose of the development of the signed system “Signed Dutch” – that is, a system for representing spoken Dutch by means of signs – was the “uniformisation” of the five regional varieties. This led to a Signed Dutch dictionary which contained on the one hand a number of regional signs actually used in the Deaf community and thus part of the Flemish Sign Language lexicon, but without mentioning the region where the signs came from, and on the other hand a number of “invented” signs, but again without mentioning whether the signs had been invented or were actually used in the Deaf community (Buyens, 1995). Today, while Signed Dutch is still used in deaf education, the Deaf community has rejected the use of the signed system and the use of the “unified” signs. However, a number of the “invented” signs from Signed Dutch have been imported into the VGT lexicon and are used by adult signers (Van Herreweghe & Vermeerbergen, 2004a).

What (inter- and intra-)regional variation and the development of “unified” signs mean with respect to interrogation and negation in VGT, will be discussed later on in this chapter.

### **3. Interrogatives in Flemish Sign Language (VGT)**

#### **3.1 Polar questions**

As far as the manual part of the utterance is concerned, a polar question does not differ or differs only slightly from a declarative sentence. The difference concerns the position of personal pronouns. Both in a declarative sentence and in a polar question the index with pronominal function usually appears at the beginning and/or at the end of the clause. However, a polar question clearly prefers end position, with the pronoun appearing only in end position or both in front and in end position. A declarative sentence, by contrast, does not display such a preference (Examples 1 and 2).



- (4) top top pol-q  
 VOLGEND 31 DECEMBER / TURNHOUT FEEST / OOK GAAN-NAAR Wg<sub>2</sub>—  
 NEXT 31 DECEMBER / TURNHOUT PARTY / ALSO GO-TO INDEX<sub>2</sub>—  
 ‘Next new year’s eve, there’s a party in (the Deaf club in) Turnhout,  
 will you also go?’ video ex.4

- (5) cont-q  
 VOLGEND ZONDAG LOKAAL OPEN  
 NEXT SUNDAY CLUB OPEN  
 ‘The club *is* going to be open next Sunday?’ (I think it is.)  
 video ex.5

Polar questions questioning the addressee’s volition can be used as polite requests:

- (6) pol-q  
rapid hn  
 WILLEN DEUR DEUR-SLUITEN  
 WANT-TO DOOR CLOSE-DOOR  
 ‘Could you please close the door?’ video ex.6

The rapid head nods which accompany the signs in a polite request often express the fact that the signer expects an action (closing the door) rather than a reply (‘yes, I will’).

Negative answers to polar questions usually involve a negative sign together with a negative headshake. A manual sign for ‘yes’ is used far less frequently. Instead, the signer simply nods or gives a positive response consisting of the repetition of one sign or part of the question, as in this example:

- (7) top pol-q  
 A: VERGADERING / ALLES GOED VERLOPEN  
 MEETING / ALL WELL GO  
 Did all go well at the meeting?’  
hn  
 B: GOED-----  
 WELL-----  
 ‘Yes (all went well).’ video ex.7

### 3.2 Content questions: Form

In VGT content questions are also marked non-manually, which looks as follows: the eyebrows are lowered and drawn together; often the position of the head is also changed so that the head is tilted to one side or the chin is lowered. This marking is different from polar question marking, but in some rare cases the eyebrows are raised (typical of polar questions) rather than lowered (typical of content questions). The reasons for this require further study, but may have something to do with (very) strong emotions (e.g. surprise, joy,...).

The non-manual marking co-occurs with the whole sentence or the whole sentence minus the topicalised constituents. As opposed to polar questions, the marking normally ends immediately after the production of the last sign of the question.

There are examples of polar questions without a question sign (Example 8) and questions as in Example (9) in which there is no question *sign*, but a question *word*, that is, the signer silently pronounces a Dutch question word<sup>3</sup>.

- (8) 

	cont-q
DRINKEN	Wg <sub>2</sub>
DRINK	INDEX <sub>2</sub>

‘What do you want to drink?’  
(And not: ‘Would you like to drink something?’ because then the polar question marking would have been used.) video ex.8

- (9) 

	cont-q
ZEGGEN	Wg <sub>2</sub>
“wat”/ “wat zeg jij”	
SAY	INDEX <sub>2</sub>
“what”/ “what say you”	

‘What do you say!?’ video ex.9

However, in most cases a question sign is present. It can appear sentence-initially (when there are topicalised constituents, following the topic), sentence-finally or both sentence-initially and sentence-finally (Examples 10-13).

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<sup>3</sup> This is a nice example of code-mixing.



When there are two question signs in the clause, it is possible for the second question sign to be replaced by the question sign WAT (WHAT). In this case, this question sign is not used in its original meaning “what” but rather as a kind of general question marker (cf. also Section 3.4).

### 3.3 Question words

For the following meanings there is at least one sign in VGT: ‘who’, ‘what’, ‘when’, ‘how many/much’, ‘where’, ‘why’, ‘how’ and ‘which’. There are also (at least) two signs meaning ‘how-are-you?’. Other interrogative meanings are expressed by a combination of a non-interrogative sign and a question sign, e.g.

FROM WHO

GO-TO WHERE

or simply by a non-interrogative sign:

TIME meaning ‘at what time/when’

AGE meaning ‘how old’

MONEY meaning ‘how much (money)’

With regard to the question signs, there is a lot of regional variation, as has become clear from the research project on the lexicon of VGT mentioned in Section 2. The situation can be summarised as in Table 1 (the signs can be consulted at <http://gebaren.ugent.be>).

In addition to Table 1, a few comments about individual question signs are in order.

- For ‘what’ at least the older signers from Flemish Brabant use a different sign which is represented in Figure 2 (there is repeated contact between the tip of the thumb and the tip of the index finger). This sign appears to be used by younger signers from all regions as well, but then as a kind of (soft) exclamation ‘what?!’.
- The sign WHICH-1, shown in Figure 3, is mentioned in the Signed Dutch dictionary, so it can be assumed that it has been imported from Signed Dutch into VGT. The assumption is being strengthened by the fact that it is an initialised sign (incorporating a fingerspelled W). This hypothesis



<i>question word</i>	<i>Antwerp</i>	<i>Flemish Brabant</i>	<i>East Flanders</i>	<i>West Flanders</i>	<i>Limburg</i>
‘what’	WHAT-1	WHAT-1 WHAT-2	WHAT-1	WHAT-1	WHAT-1
‘where’	WHERE	WHERE	WHERE	WHERE	WHERE
‘how much’	HOW-MUCH-1	HOW-MUCH-1	HOW-MUCH-1	HOW MUCH-1	HOW MUCH-1 HOW MUCH-2
‘when’	WHEN-1	WHEN-1	WHEN-1	WHEN-1	WHEN-2
‘why’	WHY-1 WHY-2	WHY-1	WHY-1	WHY-3	WHY-4
‘how’	HOW-1	HOW-1	HOW-1 HOW-2	HOW-3	HOW-4 HOW-5
‘who’	WHO-1 WHO-2 (more frequent)	WHO-2 WHO-3(more frequent)	WHO-1	WHO-1	WHO-2 WHO-4(more frequent)
‘which’	WHAT (signers above 30) WHICH-1 (signers under 30)	WHAT (signers above 30) WHICH-1 (signers under 30)	WHAT (signers above 30) WHICH-1 (signers under 30)	WHAT (signers above 30) WHICH-1 (signers under 30)	WHICH-2 WHICH-1 (signers under 30)

Table 1: Question words in VGT: Regional variation

has been acknowledged by most signers who were consulted, that is, by all but two, both male and from the region of Antwerp. They claimed it has always existed in the male sign language variety of Antwerp. Consequently, it can be assumed that the sign existed in the male sign language variety of Antwerp, that it was imported into Signed Dutch and that it has spread via Signed Dutch to the other regional varieties.

VGT appears to be developing from a situation in which one sign, viz. WHAT-1 (repeated small movements from left to right and vice versa, see Figure 4) can be used with different meanings (a.o. the meaning ‘which’ in Antwerp, Flemish Brabant, East and West Flanders and the meaning ‘who’ in Antwerp and Flemish Brabant) to a situation with a more differentiated question word paradigm.<sup>4</sup>

<sup>4</sup> In the former girls’ school in Antwerp (which merged with the boys’ school in the 1970s) there may have been another type of general interrogative as well. The sign which is now used all over Flanders meaning ‘where’, is claimed to have been used in that school with at least the following meanings: ‘who’, ‘what’, ‘when’, ‘how-much/many’ and ‘where’.



Figure 2: WHAT-2

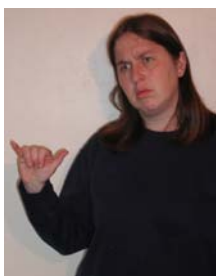


Figure 3: WHICH-1



Figure 4: WHAT-1

A number of question signs also have a non-interrogative meaning. The Antwerp sign WHY, for instance, also means ‘because’. But in most cases question signs appear to have an interrogative meaning and function only.

Question signs are generally not used as relative or indefinite pronouns in VGT. The only exception is the use of WHO in a nominal relative clause:

- |      |            |       |        |            |                    |
|------|------------|-------|--------|------------|--------------------|
|      | <u>top</u> |       |        | <u>aff</u> |                    |
| (15) | WIE        | ERG / | MOETEN | VOLGEN     | Wg <sub>3</sub>    |
|      | WHO        | BAD / | MUST   | FOLLOW     | INDEX <sub>3</sub> |
- ‘Those who are seriously affected (that is, by a certain skin disease),  
need to have it (that is, therapy).’ video ex.15

Since it is a very rare construction in our corpus, it is possible that this use of WHO is caused by influence from Dutch.

### 3.4 (A) Question particle(s) in Flemish Sign Language?

At first sight there are three possible candidates for the label “question particle”. Following Zeshan (2004b), we define question particles as signs whose main function is to indicate that an utterance is a question. This does not mean that question particles are obligatory in all questions. A question particle occurs with the actual question in the same prosodic unit.

Candidate number one is a gesture that consists of drawing a question mark in the air following a polar question. Candidate number two is the “palm(s)-up” gesture and a third possible candidate is the question sign WHAT.



Looking at our spontaneous data, however, we can see that this gesture also occurs at the end of other sentence types. Apparently, in the case of VGT, using this gesture is not connected with the interrogative status of the sentence. We rather believe that it plays a part in turn-yielding (cf. Baker 1977, Van Herreweghe 2002).

The last possible candidate for the status of question particle is the question sign WHAT. As can be seen in the next example, this sign can occur at the end of a content question in which there already is another question sign:

				cont-q
(19)	WANNEER	Wg <sub>2</sub>	GAAN-NAAR	WAT
	WHEN	INDEX <sub>2</sub>	GO-TO	WHAT
	‘When are you going?’			video ex.19

It is possible to consider the sign WHAT in such examples as bleached of its original lexical function and as a sign which mainly functions as an indicator of the fact that the sentence indeed contains a content question. In such a case the term “question particle” would be appropriate. However, as was mentioned in section 3.3, there are also indications that the sign functions or has functioned as a general interrogative, that is, as a question sign which can carry various interrogative meanings. So in the above example, WHAT can simply be considered a repetition of (the interrogative meaning of) the question sign at the beginning of the sentence. We want to stress the fact that the number of examples with WHAT in sentence-final position is not very large. Moreover, the use of the question sign WHAT instead of a more specific question sign appears to be marked: by using WHAT the signer seems to want to indicate that s/he really wants an answer to his/her question. The relative scarcity and markedness both plead against a general interpretation of WHAT as a question particle.

Consequently, we would like to conclude that none of the candidates which seemed to qualify as a question particle at first sight, actually is a question particle. Flemish signers do not appear to use question particles.

### 3.5 Pseudo-cleft sentences

The following sentence consists of a first part ending in a question sign, accompanied by a non-manual marking which looks like that of a polar question, and a second part consisting of a single sign or phrase.

- (20) pol-q  
 LIEVE KAT ETEN GEVEN WAT / HOND ETEN  
 LIEVE CAT FOOD GIVE WHAT / DOG FOOD  
 ‘Do you know what food Lieve gives to her cat? Dog food!!’  
 or: ‘Dog food is what Lieve gives to her cat!’ video ex.20

These constructions are also described by Wilbur (1994a) for American Sign Language (ASL), the difference being that in the ASL examples the non-manual marking co-occurs with all the signs in the first part, whereas in VGT it only co-occurs with the question sign. Wilbur shows that, as far as ASL is concerned, this is not a (true) rhetorical question followed by the answer to that question. Instead, it is a single sentence consisting of two phrases. In Vermeerbergen (1996) it is claimed that the same holds true for VGT, that is, the answer to the question forming the first part is focused. The need to emphasise a certain constituent seems to be the most important reason for using this construction.

### 3.6 Multiple content questions

Questions with more than one question word do not occur very often in VGT<sup>5</sup>. The following example was produced during the discussion with the informants, and not taken from the video data.

- (21) top cont-q  
 VOLGEND VAKANTIE / GAAN-NAAR WAAR SAMEN WIE Wg<sub>2</sub>  
 NEXT HOLIDAYS / GO-TO WHERE TOGETHER WHO INDEX<sub>2</sub>  
 ‘With whom are you going where on your next holidays?’  
 video ex.21

However, since there were no examples in our data, we cannot give any details about this construction or about the acceptability of combinations of question words.

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<sup>5</sup> According to one of the informants who was involved in the discussion about interrogatives (see Section 1), multiple content questions cannot be used in VGT. He claims that some signers find them acceptable because of influence from Dutch, where such questions are perfectly normal. If this informant is right, it is not clear whether we would have to talk about influence on individual signers or on VGT as a language.

### 3.7 Negative questions

In VGT it is possible to combine a question with negation. In the next two examples a negative content question occurs:

- (22) 

	cont-q	
	neg	
WAAROM	KUNNEN-NIET KOMEN	Wg <sub>2</sub>
WHY	CANNOT COME	INDEX <sub>2</sub>

‘Why can’t you come?’ video ex.22

- (23) 

	cont-q	
	neg	
WANNEER	KOMEN	
WHEN	COME	

‘When (or: on what day) are you not coming (in)?’ video ex.23

As becomes clear from these examples, a negative manual sign is possible, but not necessary.

In nearly all of the examples taken from our corpus, the interrogative non-manual marking co-occurs with all of the signs in the sentence (that is, all the signs minus the topic), and the headshake starts just after the production of the question sign. There are no examples of negative content questions with a question sign sentence-finally, but that of course does not mean that this is not possible. More research is needed here.

There are also negative polar questions:

- (24) 

	pol-q	
	neg	
KOMEN	Wg <sub>2</sub> -----	
COME	INDEX <sub>2</sub> -----	

‘You’re not coming?’ video ex.24

This type of negative question also requires further research. At the moment, we are inclined to state that negative polar questions are as neutral as positive polar questions and do not convey any feelings or expectations on the part of the signer.

## 4. Negation in Flemish Sign Language (VGT)

### 4.1 Movements of the Head

In VGT negation can be expressed with a combination of a manual and a non-manual (e.g. a headshake) part, or a non-manual part only. This means that movements of the head are obligatory in negative constructions, whereas the manual part is optional. Thus negation in VGT is a kind of “split negation”, comparable to French *ne ... pas* where *ne* is optional as well (at least in informal spoken French). There are different types of movements of the head, each with their own features.

#### 4.1.1 Headshake without co-occurring manual signs

A headshake can be used in VGT all by itself, without any co-occurring manual part, in three different situations:

- a. As a negative response, meaning ‘no’, without any emphasis.
- b. As a question tag with opposite polarity following a positive statement. The headshake is accompanied by the non-manual yes/no-question marker. The other way around (negative sentence, positive tag) is not possible.

Example:

- (25) KUNNEN OOK ZATERDAG VOORMIDDAG / neg pol-q  
 CAN ALSO SATURDAY MORNING /  
 ‘It is also possible on Saturday morning, isn’t it?’ video ex.25

- c. To negate the preceding constituent so as to express contrast. The headshake has to be followed by the “correct” alternative, as in:

- (26) MOETEN Wg<sub>1</sub> MAANDAG INPAKKEN/ neg / KLAARLEGGEN  
 MUST INDEX<sub>1</sub> MONDAY PACK / LAY-OUT  
 ‘I don’t have to pack (my clothes) on Monday, I have to lay them out.’  
 video ex.26

#### 4.1.2 Headshake accompanying manual signs

A headshake can be produced simultaneously with manual signing. The duration of the headshake determines the scope of the negation, that is, there is sentence negation

or constituent negation. A negative manual sign is possible but not obligatory. Thus, in VGT a sentence like ‘The game starts now’ can be negated in two ways:

(27) 

			neg	
NU	WEDSTRIJD	BEGINNEN		
NOW	GAME	START		video ex.27

(28) 

				neg	
NU	WEDSTRIJD	NIET	BEGINNEN		
NOW	GAME	NOT	START		video ex.28

As far as the scope of the headshake negation is concerned, there are four different possibilities:

a. In a non-contrastive negative clause, the headshake co-occurs with the production of the manual part of the complete clause:

(29) 

				neg	
ALS	HELPEN /	OPEREREN			
IF	HELP /	OPERATE			

‘If it doesn’t help, they’ll operate.’ video ex.29

b. When there is an auxiliary in the clause (possibly with incorporated negation, see Section 4.4), the headshake usually starts at the production of the auxiliary and continues until the end of the clause:

(30) 

					neg	
MISSCHIEN	MOEDER	MOGEN-NIET	OPWINDEN /	DENKEN	Wg <sub>1</sub>	
MAYBE	MOTHER	MAY-NOT	GET-UPSET /	THINK	INDEX <sub>1</sub>	

‘I think that maybe my mother is forbidden to get upset (by the doctor).’ video ex.30

c. A headshake produced simultaneously with manual signing can also be used in topicalised negations. In such constructions, a positive or interrogative topic clause is being followed by a negative comment, with or without a negative manual sign. The headshake co-occurs with the comment only, not with the topic. In VGT this is the most frequently used type of negative clause or sentence.



- (31) 

top	/	neg
WAT	IN	WETEN NIET
WHAT	IN	KNOW NOT
		INDEX <sub>1</sub>

  
 ‘I don’t know what’s in there.’ video ex.31

d. When a constituent is being negated, the headshake only co-occurs with the production of the constituent itself:

- (32) 

neg
PAS
RECENTLY

LANG	PAS	MOEDER NAAR	ANTWERPEN
LONG	RECENTLY	MOTHER TO	ANTWERP

  
 ‘Recently, not long ago, just recently my mother has gone to Antwerp.’ video ex.32

#### 4.1.3 Negative Hold

By “negative hold” we mean that the head is turned and sometimes slightly tilted to one side and is held there. A negative hold cannot be used alone, it must always co-occur with the production of a manual sign and the hold is maintained during the production of the negative sign. It expresses a fairly strong negation, possibly tinged with contrast. It usually marks constituent negation, not clause or sentence negation (although this is possible).

- (33) 

WIJ VOORDIEN	SPREKEN	OVER	Wg <sub>1</sub>	SPORT	Wg <sub>1</sub>
WE	PREVIOUSLY	TALK	ABOUT	INDEX <sub>r</sub>	SPORTS
				neghold	INDEX <sub>r</sub>
SUBSIDIES	STEEDS-MINDER	/	TRAINER	NIET	
SUBSIDIE	LESS-AND-LESS	/	COACH	NOT	

  
 ‘We were previously talking about the fact that the subsidies for that sport diminished, but not those for the coach.’ video ex.33

- (34) 

neghold
VROEGER
PAST

NOOIT
NEVER

  
 ‘In the past (this) never (occurred).’ video ex.34

In our corpus only one example was found of a negative hold without a negative sign clearly marking sentence negation. Consequently, this type of construction is rather exceptional.



there are two extremes as far as variation is concerned (West Flanders on the one hand and Antwerp on the other), with mixtures of both in between (East Flanders, Flemish Brabant, Limburg). Therefore, we have chosen to limit the discussion in this section to the variation that occurs in the two extreme regions, so as not to blur the picture unnecessarily.

#### 4.3.1 NOT

In the corpus we found various signs which have all been translated as ‘not’ by the signers themselves and which do not seem to express any functional differences. This is why we decided to gloss them as NOT (although the result is that it is not clear anymore which sign has been produced).

The following signs are used in all regions:

- index-sweep (see Figure 5): a vertical index hand is moved from left to right (and vice versa for left-handed signers) in a horizontal plane in front of the signer’s body. This is a neutral form of negation. There does not seem to be any difference between a negative sentence in which this sign is used and a negative sentence which is marked non-manually only. However, further research is needed to verify this hypothesis.
- B-hand-sweep (see Figure 6): a vertical B-hand is moved from left to right (and vice versa for left-handed signers) in a horizontal plane in front of the signer’s body. This is also a neutral form of negation and seems to be interchangeable with the previous sign.
- B-hands-sweep (see Figure 7): two vertical B-hands are moved, one from left to right and one from right to left in a horizontal plane in front of the signer’s body. Compared to the previous signs this is a more emphatic form of negation.



Fig. 5: index-sweep Fig. 6: B-hand-sweep Fig. 7: B-hands-sweep Fig. 8: B-hands-clap

- B-hands-clap (see Figure 8): the sign is produced with two flat B-hands (palms up). The tips of the fingers of the right hand tap the tips of the fingers of the left hand, followed by a sweep of the right hand. We only found one example of this sign in our corpus in which a very strong negation is produced (Example 36). It is remarkable that the negative sign follows the subject complement, as the opposite order with the negative sign preceding the complement is the usual one (see Example 40). Since there was only one example, it is too early to say anything definite about this sign.

				neg		
(36)	ZUSTER	BANG	NIET			
	SISTER	AFRAID	NOT			
	‘My sister is not afraid at all!’					video ex.36

The following signs are used in some regions only:

- thumb-to-chin (see Figure 9): the thumb (of a right fist with extended thumb) touches the chin and moves out from under the chin with a short, fast movement. This sign is typically West (and East) Flemish. Nevertheless it seems that it is on the increase in Flanders as more and more (especially young) people from other regions are beginning to use it. Some informants from Antwerp, for instance, claimed that they never used this sign, but when confronted with their own use of it on the video, they realised that they had subconsciously internalised this sign.
- middle fingers-flick (see Figure 10): the tips of the middle fingers of both hands touch the tips of the thumbs and then flick forward (as if shooting a pellet). Meaning ‘not’, this sign is only used in Antwerp, although it can be used with a different semantic content in other regions. This form of negation is more emphatic than the one with index-sweep, as can be seen in the next example in which the first NOT is produced with an index-sweep and the second with a middle fingers-flick.

				neg		neg
(37)	MAAR	RIJDEN	NIET	ZELF (...) RIJDEN	NIET	ZELF
	BUT	DRIVE	NOT	SELF (...) DRIVE	NOT	SELF
	‘But she herself doesn’t drive (...). She herself doesn’t drive at all.’					video ex.37



Figure 9: thumb-to-chin



Figure 10: middle fingers-flick

In the case of sentence negation, NOT usually immediately follows the verb (Example 38), but it sometimes precedes the verb (Example 39), even though this seems to be more the exception than the rule. If there is no verb, e.g. in constructions with a subject and a subject complement<sup>6</sup>, NOT is usually produced just before the subject complement (Example 40).

- (38) 

<u>top</u>	WAT IN /	<u>neg</u>	WETEN NIET	Wg <sub>1</sub>
	WHAT IN /		KNOW NOT	INDEX <sub>1</sub>

  
 'I don't know what's in it.' video ex.38

- (39) 

			<u>neg</u>	
TOT-NU	NOG	NIET	BEGINNEN	
UP-TILL-NOW	STILL	NOT	START	

  
 'Up till now they haven't started yet.' video ex.39

- (40) 

		<u>neg</u>	
EEN BIJ	NIET	VEEL	
ONE MORE	NOT	MANY	

  
 'One person more is not a lot.' video ex.40

#### 4.3.2 NOTHING

In our corpus we found two signs which have been translated by the informants as 'nothing'. The first one is the same as one of the signs for 'not' (see Figure 10). The other one (Figure 11), with two O-hands held in front of the body and shaking, was only used by informants from West (and East) Flanders.

<sup>6</sup> As in all or most sign languages studied so far, VGT does not have copular verbs.



Figure 11: NOTHING



Figure 12: NEVER

A special use of the first NOTHING-sign is that it is used as the second negative sign in constructions with a double, emphatic negation, no matter what the first sign is. This construction is used all over Flanders and is not regionally determined.

- |      |  |             |        |            |  |             |
|------|--|-------------|--------|------------|--|-------------|
|      |  | <u>top</u>  |        | <u>neg</u> |  |             |
| (41) | HOVEEL                                 | MAAL / NIET | ZEGGEN | NIETS      |  |             |
|      | HOW-MANY                               | TIMES / NOT | SAY    | NOTHING    |  |             |
|      | 'They did not tell me how many times!' |             |        |            |  | video ex.41 |

- |      |                        |           |         |                    |  |             |
|------|------------------------|-----------|---------|--------------------|--|-------------|
|      |                        |           |         | <u>neg</u>         |  |             |
| (42) | GEEN AF                | SCHRIJVEN | NIETS   | Wg <sub>1</sub>    |  |             |
|      | NONE FINISHED          | WRITE     | NOTHING | INDEX <sub>1</sub> |  |             |
|      | 'I didn't write that!' |           |         |                    |  | video ex.42 |

#### 4.3.3 NOBODY

The sign for 'nobody' is very similar to the first sign for 'nothing', but it is accompanied by a horizontal sweep, although this is not always clearly visible as the sweep is sometimes omitted in casual conversation.

- |      |   |            |                       |            |  |             |
|------|---|------------|-----------------------|------------|--|-------------|
|      |   | <u>top</u> |                       | <u>neg</u> |  |             |
| (43) | GISTEREN  | NAAR       | VERGADERING / NIEMAND | AANWEZIG   |  |             |
|      | YESTERDAY   | TO         | MEETING / NOBODY      | PRESENT    |  |             |
|      | 'Yesterday I went to a meeting at which there wasn't anyone present.' |            |                       |            |  | video ex.43 |

#### 4.3.4 NEVER

The sign NEVER (see Figure 12) is the same in all regions and is used in the same way. It is usually in clause-initial or in clause-final position. The sign is made with

a horizontal sweep from left to right (and vice versa for left-handed signers) of a closed fist with an extended little finger.

- (44) NOOIT ZIEN VLIEGTUIG / NOOIT NAAR VLIEGTUIG <sup>neg</sup>  $Wg_3$   
 "zaventem"  
 NEVER SEE PLANE / NEVER TO PLANE INDEX<sub>3</sub>  
 "brussels national airport"  
 'She has never seen a plane. She has never been to Brussels National Airport.'  
 video ex.44

- (45) MIJN MOEDER ZENUWACHTIG NOOIT <sup>neg</sup>  
 MY MOTHER NERVOUS NEVER  
 'My mother is never nervous.'  
 video ex.45

#### 4.3.5 NONE

The sign for 'none' (see Figure 13) originally was West (and East) Flemish exclusively, but it seems to be increasingly used by younger people from other regions as well. It is formed by moving a flat B-hand over the chin from left to right (and vice versa for left-handed signers).



Figure 13: NONE

This sign is used in two syntagmas. In one syntagma it is always followed by a noun and used as negative existential. In such constructions it is often used in combination with existential or possessive HAS (which then precedes NONE), but it can also be used without HAS with the same meaning. An example of a sentence with existential HAS is:







- (51) neghold  
 KUNNEN-NIET / OUDERWETS  
 CANNOT / OLD-FASHIONED  
 ‘It’s unbelievable; they are so old-fashioned.’ (talking about a third person’s clothes for instance) video ex.51

According to one of the informants, this is a very informal sign, which is definitely not acceptable in a formal register.

- In the corpus we found another sign for ‘can’ which is used in Antwerp only and which is produced by a short downward twist of a P-hand (according to informants from the French word *permettre*). Negation can be incorporated into this sign by changing the movement. The P-hand (sometimes relaxed to a W-hand<sup>8</sup>) moves in front of the body from top right to middle left and bottom right.

In topicalised negative sentences, the headshake co-occurs with the comment (Example 52). This holds true for all the CANNOT-signs. In a non-topicalised negative sentence, the negative auxiliary CANNOT is placed immediately in front of the main verb and the headshake starts at the production of the auxiliary (Example 53).

- (52) top neg  
 ONTHOUDEN / KUNNEN-NIET Wg<sub>1</sub>  
 REMEMBER / CANNOT INDEX<sub>1</sub>  
 ‘I cannot remember it.’ video ex.52

- (53) neg  
 Wg<sub>1</sub> KUNNEN-NIET RUIKEN WEER Wg<sub>1</sub>  
 INDEX<sub>1</sub> CANNOT SMELL WEATHER INDEX<sub>1</sub>  
 ‘I cannot smell what the weather will be like!’ video ex.53

We also found an idiomatic expression (Example 54) including a special case of CANNOT, produced with two fists and a nearly unnoticeable twist, followed by an upward P-hand (probably from French *plus*), which we could find in all regions.

<sup>8</sup> A Flemish W-hand corresponds to a 3-hand in ASL.

- (54) 

KUNNEN-NIET	MEER
CANNOT	ANYMORE

neg  
 ‘I cannot take it any more. I am fed up with it.’ video ex.54

- (Non-)Volition: “(NOT-)WANT-TO”

- Positive WANT-TO is produced with a 5-hand moving from the left shoulder to the right hip while the tips of the middle finger, the ring finger and the little finger touch the body. If you add a twist of the wrist (next to the right hip) to this sign and shake the hand, but leave out the part where the body is touched, you end up with the negative sign NOT-WANT-TO, which is why we think that these two are related (although our informants had not thought about that possibility). This sign is used all over Flanders.

- (55) 

MIJN	MOEDER	NIET-WILLEN	DOEN
MY	MOTHER	NOT-WANT-TO	DO

neg  
 ‘My mother doesn’t want to do that.’ video ex.55

- A related form of this sign can also be found all over Flanders. The positive WANT-TO sign is produced with two 5-hands moving downward over the upper body (while the tips of the middle fingers touch the body) followed by a slight downward twist of the wrists. Negation can be incorporated into this sign by adding an outward twist of the wrists rather than a downward twist. This negative NOT-WANT-TO sign, however, is used as an idiomatic expression with a very specific meaning, that is, ‘I don’t want to have anything to do with it’, ‘I cannot be bothered’, ‘it’s not my responsibility’.
- In Flemish Brabant another positive sign for WANT-TO is used produced with a 5-hand while the tip of the middle finger touches the chin a couple of times. This is a sign which seems to be increasingly used in Flanders, as most of our informants said that they sometimes used it because they thought it was a beautiful sign, but that in origin it is from Flemish Brabant. Presumably, the sign is originally from the sign language used in Wallonia or even French Sign Language (LSF), as the mouth pattern accompanying this sign is a “v” (from *veux*?). Negation can be incorporated into this sign by adding an outward twist of the wrist to it. This sign did not appear in our corpus, but our informants told us about it.

- Permission / Obligation: “MAY – MUST” and Prohibition: “MAY-NOT”
  - The auxiliary MAY is produced in its positive form by an outward twist of the wrist of two B-hands (or in Antwerp also P-hands – from French *permettre?*), with the fingers pointing at each other in front of the body. Since there is already a twist in the positive sign, it is not possible to add a twist to incorporate negation. Therefore, negation is expressed only by means of shaking the head.

		_____	neg		
				_____	cont q
(56)	WAAROM	ZEGGEN	BEWEGEN	MOGEN	WAAROM
	WHY	SAY	MOVE	MAY	WHY
	‘Why do you say that you are not allowed to move?’				video ex.56

- A variant of MAY-NOT is related to the auxiliary MUST. Positive MUST is produced with a short, powerful downward movement of an index-handshape. If negation is incorporated, the sign is produced with the same short, powerful movement of the index-handshape (that is, comparable to the index-sweep in Figure 5, but produced a lot more powerfully), but in a different direction, viz. from left to right in front of the body, so morphologically it is related to MUST. Semantically, however, it is closer to ‘may not’ than to ‘must not’ and it is transcribed by our informants as MAY-NOT. It is used for strong prohibition and associated with rules and regulations (that is, prohibition by an external authority).

		_____	neg		
(57)	MISSCHIEN	MOEDER	MOGEN-NIET	OPWINDEN	/ DENKEN Wg <sub>1</sub>
	MAYBE	MOTHER	MAY-NOT	GET-UPSET	/ THINK INDEX <sub>1</sub>
	‘I think that maybe my mother is forbidden to get upset (by the doctor).’				
	(that is, the doctor told her not to)				video ex.57

- There is a third sign which is usually translated as MAY-NOT by signers and which is nearly the same as the previous one, except that it is produced with a B-hand (comparable to the B-hand-sweep as in Figure 6, but produced a lot more powerfully). As far as we can see, this sign is used for internal prohibition, that is, the speaker telling the interlocutor that s/he is not allowed to do something (negative order). It is, for instance, typically used by parents who tell their children that they are not allowed to do something.

When the situation is a very urgent one, the sign is produced with a shaking movement of the B-hand, the arm extended and an accompanying facial expression.

#### 4.4.2 Other signs

In our corpus we also found the following two signs with negative incorporation by means of a twist of the wrist:

- **BELIEVE-NOT:** In Antwerp the positive sign BELIEVE is formed by a V-hand of which the tip of the index-finger touches the right side of the forehead and then moves away from the signer. By incorporating a twist of the wrist into this sign, negative BELIEVE-NOT is arrived at. It is only known in Antwerp (the informants from West Flanders said that they had never seen such a sign) and was only used once in our corpus:

		pol-q	
(58)	MAAR KUNNEN VINDEN	WERK / VRAAGTEKEN	/
	BUT CAN FIND	JOB / QUESTION MARK	/
		neg	
	GELOVEN-NIET Wg <sub>1</sub>		
	BELIEVE-NOT INDEX <sub>1</sub>		
	‘I wonder whether you’d be able to find a job then. I don’t think so.’		
		video ex.58	

- **KNOWN:** In some sign languages TO-KNOW has a negative pendant in which a twist of the wrist is added to the positive sign. In VGT this does not exist. There is, however, a relation between positive KNOWN (BEKEND) (a B-hand with the tips of the fingers touching the side of the forehead) and FOREIGN (VREEMD) (which is the same sign, but with a twist of the wrist). When we pointed this out to signers, they thought this very strange, but had not realised that there was any connection between the two. There is also a sign for UN-KNOWN (ONBEKEND), at least in West Flanders, but this is formed by means of fingerspelling O-N followed by the sign KNOWN (although the fingerspelling is not really regarded as fingerspelling anymore and the N is sometimes produced as a “shower-hand”).

## 5. Conclusions

When studying interrogatives and negatives in VGT, at first sight it seems as if there are many similarities with other sign languages as especially the non-manual component seems to behave in a similar way. However, if you look in more detail, there are not only noticeable differences compared to other sign languages, even within VGT there is a lot of interregional variation. In this chapter we have tried to outline a number of these similarities and differences, but there still is a lot of room for future research. Some of the areas that still need to be explored are:

- Except in nominal relative constructions, question signs seem never to be used as relative or indefinite pronouns in VGT, but maybe they were just never used in our corpus.
- There clearly is lexical regional variation with regard to question signs, but we have only partially looked at variation in the grammar of the different interrogative structures, e.g., word order issues, the use of alternative markings for polar questions, and the use and structure of multiple content questions.
- We have given a brief overview of those modal auxiliaries which can be modified via negative incorporation, but a lot more research needs to be done into the semantics and the grammar of modality in VGT. We have for instance not come across any modal auxiliary with an epistemic meaning in our corpus (e.g. ‘There is someone at the door, it *must* be John’), but again, it may be that they just weren’t used in our corpus, and that such a structure is possible (though maybe very rare) in VGT.

These (and other) questions will be dealt with in future research.

PART III

FLASHES FROM AROUND THE WORLD

## Chapter 9

# The Use of Negative Head Movements in Greek Sign Language.

Klimis Antzakas

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### GREEK SIGN LANGUAGE

The sign language used by the Greek Deaf community is known as Greek Sign Language. GSL is being used in the area of Greece and Cyprus. Greek Deaf people and Cypriot Deaf people communicate easily with each other.

There are no documented data on dialects of GSL, but it is known through observation that Greek Deaf people in the north-west of Greece (Epirous) use a dialect of GSL, as well as the Cypriots. It is assumed that Deaf people in the northern part of Greece (e.g. Thessaloniki) also use a different dialect, but this is an informal observation rather than an established fact. Deaf people do perceive the sign language variety in this area as a dialect.

There is no official information about the size of the Deaf community or the number of Deaf people who use GSL. An estimate by the Greek Federation of the Deaf (OMKE) reports about 3,000 people who use GSL.

There is no research yet about the relationship of GSL with other sign languages. Lampropoulou (1999) notes that sign language has been reported in Greece from ancient times (Plato). However, there seems to be an influence from sign languages in the Balkans and in Turkey, but again this is according to the informal observations by Deaf people.

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## 1. Introduction

This chapter is based on a study of how negation is marked in Greek Sign Language (GSL)<sup>1</sup>. Head movements which have been described as marking negation in other sign languages have been examined to see if they are also used in GSL. In addition to these, and of particular interest, is the backward head tilt which is specific to GSL and which appears to operate in GSL as an analogue to the headshake in other sign languages.

Headshake is one of the most commonly reported negation markers used in sign languages. The use of headshake as a negation marker has been reported in many sign languages. Zeshan (2004a) notes that the headshake has been reported in all sign languages taking part in a typology study. In addition, headshake is used in International Sign (Webb & Supalla 1994). A headshake can be used to negate a sentence or a single sign. It is often accompanied by facial expressions of negation, such as wrinkling the nose, lowering the eyebrows, raising the upper lip, pulling down the corners of the mouth and raising the chin. In addition to the headshake, Sutton-Spence and Woll (1999:73) note that British Sign Language (BSL) uses 'negation head turn'. Zeshan (2004a) reports that besides GSL and British Language, this negative head turn is also used in Irish Sign Language, Langue des Signes Québécoise (Canada) Chinese Sign Language, Vlaamse Gebarentaal (Belgium), and Russian Sign Language. This head movement accompanies a negation sign or a whole sentence.

The use of head movements in GSL was confirmed by a pilot study of three Deaf informants. They were videotaped in three settings: free conversation, a structured interview and storytelling. The use of negation signs, signs with incorporated negation and facial expressions of negation was also confirmed. Two additional recordings were then made of free conversation (in Deaf clubs, at social events at the National Institute for the Protection of the Deaf, in public places, etc.) and of stories in GSL. These recordings were coded for all manual and non-manual negation markers. The total duration of recordings was 4h.46min. The informants

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<sup>1</sup> I would like to thank Bencie Woll, Gary Morgan and Martha Tyron for their support and comments on this chapter. I would also like to thank Venetta Lampropoulou for the assistance and substantial discussions on this topic and for her information about the use and distribution of GSL. Specifically, I would like to thank my Deaf informants Nikos Isaris, Nikos Galanis, Agapi Dimopoulou, Nikos Spanos and Aggelos Skoutaris for their support and help during data collection.

who signed stories in GSL comprised seven Deaf adults, six males and one female. Five informants had hearing parents and two had Deaf parents. All head movements of negation in the data were coded as:

**TILT.** The head tilts backwards. The amplitude and the duration of the movement may vary from signer to signer and in relation to whether the signer wants to indicate a stronger or a weaker negation.

**SHAKE.** The head shakes from side to side repeatedly. As with TILT, the headshake can vary in amplitude, temporal length and duration. There are both individual differences and differences arising from stronger or weaker expression of negation.

**TURN.** The head makes a half turn to one side only and then moves back to the initial position. This head movement can also vary in amplitude and duration.

TURN can also be combined with TILT or SHAKE. In this case the signer may move his head to the TURN position and keep it there while the TILT or SHAKE movement is performed. When TURN is combined with TILT, both movements can occur simultaneously. When TILT is combined with SHAKE, the head first tilts backwards and then makes the SHAKE movement. These combinations are used by signers mostly for emphatic reasons.

Negative head movements can be accompanied by the following facial expressions: a) raised brows, b) lowered brows with a frown and narrowed eyes, c) closed or nearly closed eyes, d) corners of the mouth pulled down, e) raised upper lip and protruding lower lip. Mouthing, word pictures or mouth gestures may also occur. Eyebrow raising often accompanies TILT.

The data also confirmed the use of negation signs and signs with incorporated negation in GSL. Negation signs include signs that can be translated as ‘no’, ‘not’, ‘not yet’, ‘nothing’, ‘nobody’, ‘never’, ‘won’t’, etc. Negative incorporation in American Sign Language is described by Woodward (1974:22) as “verbs that may be negated by a bound outward twisting movement of the moving hand(s) from the place where the sign is made”. This process occurs in many sign languages, and according to Sutton-Spence and Woll (1999:77), “these verbs are often verbs of experience or sensation”. Examples include: ‘have-not’, ‘like-not’, ‘want-not’, ‘know-not’, ‘disagree’, ‘believe-not’, ‘should-not’ (Deuchar, 1984; Baker-Shenk & Cokely, 1996; Woodward, 1974).

## 2. Data analysis

### 2.1 Distribution of negative head movements

The following analysis is based on tokens of negation rather than complete sentences. Signs were analysed as lexical items: as negation signs, signs with incorporated negation and manual signs accompanied by non-manual negation. Figure 1 shows the number of occurrences of different head movements used in different types of negation. Three types of negation are represented as: (N) negation signs, (I) signs of incorporated negation, and (N-M) non-manual negation where negation is expressed by non-manual features only.

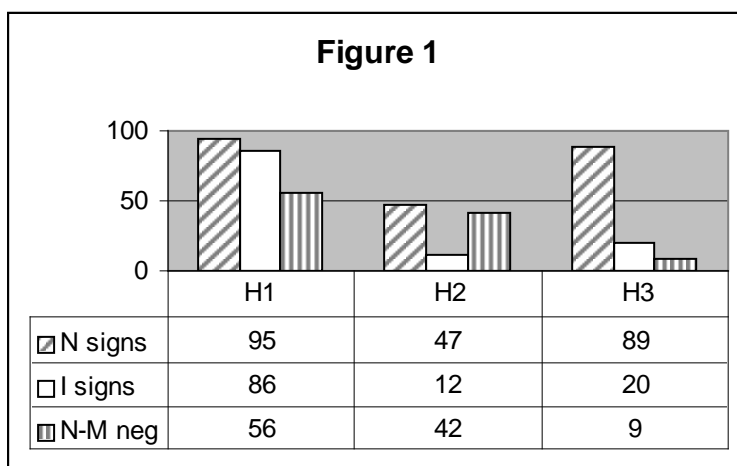


Figure 1: Percentage of occurrences of head movements with tokens of sign

**Number of occurrences of head movements in relation to negation signs (N), signs with incorporated negation (I) and non-manual negation (N-M).**

**H1 = TILT, H2 = SHAKE, H3 = TURN**

**Chi-square =67.81,  $p < 0.001$ .**

A chi square test was conducted in order to examine if the frequency of occurrences of head movements in different types of negation was statistically significant<sup>2</sup>. There was a statistically significant difference between the tokens of occurrences of head

<sup>2</sup> The value of chi square was 67.81, where  $p < 0.001$  at 4 df was 18.46.

movements in different types of negation, indicating that head movements are determined by a linguistic pattern related to the different types of negation and are not distributed randomly. Further examination reveals that negative head movement “agrees” with the movement of the sign. This synchronisation of movement may be a form of phonological harmony in GSL. As in spoken languages where the articulation of a phonological unit is affected by another unit in the same word or phrase (Crystal 1980), the movement of the negation sign determines the choice of the negative head movement, so that both movements are synchronised and facilitate signing.

Evidence for this comes from an examination of the association of specific signs with specific head movements. Head movements tend to correspond to the movement of the sign. There are two different patterns. As for the first one, when the movement of the hand is upwards, the corresponding head movement is a TILT. Signs CANNOT (Figure 2), WANT-NOT (Figure 3) and NOT-B<sup>3</sup> (Figure 4) were more often associated with a backward tilt than with a headshake or a half turn of the head. In the second pattern, when the movement of the sign is side to side, the corresponding head movement is most often a SHAKE or a TURN. This is the case for the signs NOT-G (Figure 5) and NOT-B(shake) (Figure 6).

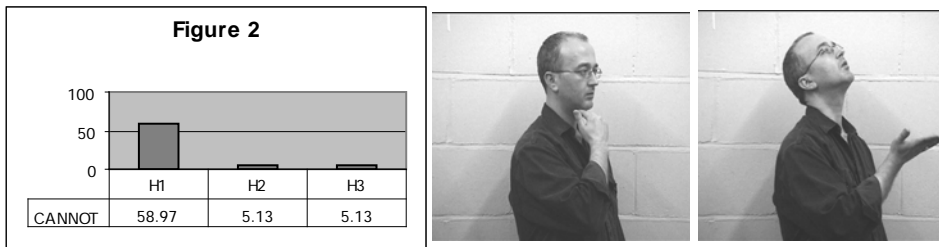


Figure 2: Percentage of occurrences of head movements with tokens of sign CANNOT

<sup>3</sup> GSL makes use of three negation particles translated as ‘not’. These are transcribed as NOT and the capital letter corresponding to the handshape used to articulate the sign. Thus NOT-B uses a B handshape and NOT-G uses a G handshape. NOT-B(shake) differs from NOT-B by virtue of the movement, which is shaking from side to side.

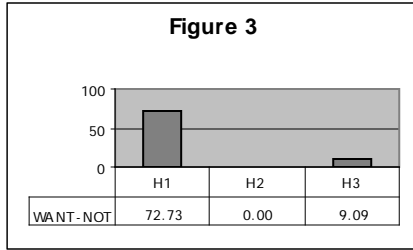


Figure 3: Percentage of occurrences of head movements with tokens of sign WANT-NOT.

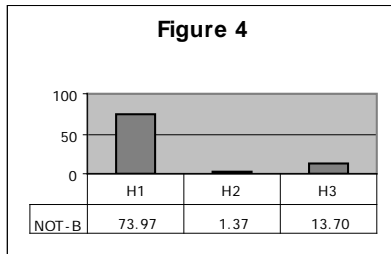


Figure 4: Percentage of occurrences of head movements with tokens of sign NOT-B

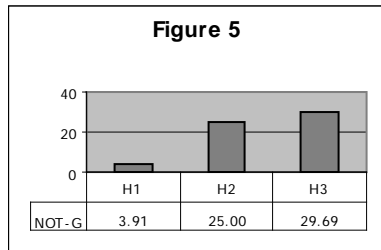


Figure 5: Percentage of occurrences of head movements with tokens of sign NOT-G; sign one-handed or two-handed, movement from side to side once or repeatedly.

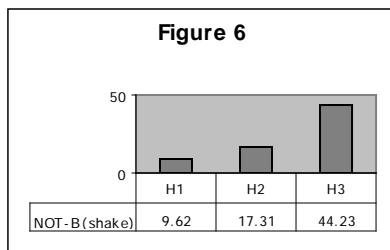


Figure 6: Percentage of occurrences of head movements with tokens of sign NOT-B(shake); sign one-handed or two-handed, movement from side to side once or repeatedly.

**2.2 Scope of head movements of negation.**

Negative head movements can co-occur with the whole sentence, as in these examples:

- (1)  $\frac{\text{TILT}}{\text{INDEX1 AGAIN GO NOT-B}}$  or  $\frac{\text{SHAKE}}{\text{INDEX1 AGAIN GO NOT-G}}$   
 ‘I won’t go (there) again.’

- (2)  $\frac{\text{TILT}}{\text{INDEX1 AGAIN GO WANT-NOT}}$   
 ‘I don’t want to go (there) again.’

It seems strange due to the nature of the movement that TILT can co-occur with the whole sentence. The actual movement of TILT is as follows: TILT begins at the start of the sentence, remains steady throughout the middle part of the sentence, the movement is completed in synchrony with the negation sign (see Figure 7). Co-occurrence with the whole sentence is rare for both TILT and SHAKE in GSL and is mainly used for emphasis.



INDEX<sub>1</sub>                      AGAIN                      GO                      NOT-B  
 Figure 7: ‘I won’t go (there) again.’

Negative head movements usually accompany negation signs or negative incorporation. The head movement can co-occur with just the negation sign, as in these examples:

- (3)  $\frac{\text{TILT}}{\text{PAST}_1 \text{TELL}_3 \text{WORK GO NOT-B}}$  or  $\frac{\text{SHAKE}}{\text{PAST}_1 \text{TELL}_3 \text{WORK GO NOT-B}}$   
 ‘I told him not to go to work.’

TURN

- (4) STORY JUST <sub>1</sub>SPEAK<sub>2</sub> INDEX1 FORGET NEVER  
 ‘I will never forget the story I have just told you.’

TILT

- (5) MORNING EAT INDEX1 CANNOT | ONLY COFFEE.  
 ‘I can’t eat anything in the morning, I only drink a coffee.’

A negative head movement can co-occur with the verb and negation sign of a main clause (Examples 6 and 7) or an embedded clause (Example 8). Topics do not fall under the scope of a negative head movement (Examples 9 and 10).

TILT

- (6) INDEX1 AGAIN GO NOT-B  
 ‘I won’t go (there) again.’

TURN

- (7) STORY JUST <sub>1</sub>SPEAK<sub>2</sub> INDEX1 FORGET NEVER  
 ‘I will never forget the story I have just told you.’

SHAKE

- (8) PAST <sub>1</sub>TELL<sub>3</sub> WORK GO NOT-G  
 ‘I told him not to go to work’

top SHAKE

- (9) CLUB COUNCIL MEETING GO NEVER  
 ‘I never go to the meetings of the council of the (Deaf) club.’

top TURN

- (10) CHOCOLATE CHRISTINE EAT NEVER  
 ‘Chocolate is something that Christine never eats.’

In addition, a negative head movement can occur all by itself after the manual part of the sentence (Example 11).

SHAKE or TILT

- (11) INDEX1 AGAIN HELP INDEX3  
 ‘There is no way for me to help him again.’





- (15) top                      TURN  
MEAT EAT NEVER | AVOID+

‘As far as meat is concerned, I never eat it, I avoid it.’

In this example, TURN does not negate the verb AVOID. There are two alternative translations of the TURN. In the first translation TURN expresses signers ‘dislike’ of meat. In that case it would better to translate the sentences as ‘As far a meat is concerned, (I don’t like it) so I avoid it’. The alternative translation of the sentence could be ‘As far as meat is concerned, I never eat it; no, I avoid it’. If we substitute TILT or SHAKE then the meaning is ambiguous (Example 16).

- (16) top                      TILT or SHAKE  
MEAT EAT NEVER | AVOID+

In this example, the translation would be either ‘As far as meat is concerned, I never eat it, I avoid it’ or ‘As far as meat is concerned, I never eat it, (but) I do not avoid it’. So, it will not be clear if someone does not eat meat and avoids it or if someone does not eat meat but also does not avoid it. An increase in the duration of the pause after the sign NEVER pushes the interpretation towards the translation ‘do not avoid it’. If TILT or SHAKE co-occurs with the sign NEVER, only one interpretation is possible:

- (17) top                      TILT or SHAKE  
MEAT EAT NEVER AVOID+

‘As far as meat is concerned, I never eat it, I avoid it.’

Here the head movement operates in the same way as in the first example, where TURN starts and co-occurs with the verb AVOID.

The data also do not indicate any difference among these head movements of negation at the pragmatic level. None of the movements can be characterised as more or less formal or polite. One possible factor which has not been examined is the role of sociolinguistic variables. The data included only one female and informants’ age range was limited from 25 to 35 years old. Because of these limitations we are not able to determine whether there are any specific preferences relating to head movements of negation which can be attributed to difference in gender or age.

### 3. Relationship with head movements used by the hearing community

The data clearly reveal a degree of gestural exchange between the Greek Deaf and hearing communities. The hearing community in Greece also uses TILT and SHAKE as gestures of negation. The backward head tilt can be accompanied by eyebrow raising and/or a tongue click. Sometimes eyebrow raising by itself suffices for hearing Greeks to signal negation, without any head movement. Raising of the eyebrows is also sufficient to indicate negation in GSL under certain pragmatic and semantic conditions. For example, when a signer does not want to be seen by other signers he may use eyebrow raising to indicate negation. In this case eyebrow raising seems to operate as a substitute for TILT.

The use of the head movement as a hearing gesture of negation indicates that the Greek Deaf community has adopted the backward tilt of the head from the Greek hearing community. Morris (1977:70) has called TILT “the Greek no” and Eibl-Eibesfeldt (1970), Morris (1979) and De Jorio (in Kendon, 2000) have reported that this gesture is used both in Greece and in Naples. This gesture has been transformed by Greek Deaf people into a linguistic function and has become one of the major non-manual negation markers in GSL. Unfortunately, lack of data about the use of this gesture among the hearing community does not allow any further analysis.

Personal communication has confirmed the use of the TILT gesture by hearing communities in the eastern Mediterranean (southern Italy and Israel) but not by the corresponding Deaf communities, whereas the same gesture is used by both hearing and Deaf communities in Turkey (see Zeshan, this volume, about Turkish Sign Language). We hope that future research will explore this gesture and language interaction in more detail to ascertain the evolution of language specific devices.

## Chapter 10

# Questions in Brazilian Sign Language (LSB)

Ronice Müller de Quadros

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### BRAZILIAN SIGN LANGUAGE

Brazilian Sign Language is known as LIBRAS - Língua Brasileira de Sinais - or LSB - Língua de Sinais Brasileira. No information is available as to the size of the LSB-using community. The sign language is used all over Brazil, mainly in the urban areas (towns and cities). Regional variation exists at the level of the lexicon, but with enough uniformity to consider the regional varieties as one language. No in-depth research on regional dialects has been undertaken so far, but dialects do show variation influenced by the regional Deaf community, since Brazil is a multicultural country. Brazilian Sign Language has a historical relationship with French Sign Language. A Deaf teacher from France, Eduard Huet (\*1822) came to Brazil in 1855 to establish a school for the deaf in Rio de Janeiro. Huet had studied in the Saint Jacques Institute in Paris and had been a teacher in the Deaf Institute in Bourges. He emigrated to Brazil in 1855 with the aim of founding a Deaf Institute based on solidarity feelings with the Brazilian Deaf people.

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This chapter describes some interesting facts about interrogative structures in Brazilian Sign Language (Língua de Sinais Brasileira, LSB).<sup>1</sup> Firstly, the paradigm and syntactic positions of question words in Brazilian Sign Language will be presented, as well as ways of marking questions non-manually. I describe the kinds of constructions found in this language and their syntactic distribution. Secondly, two of the interrogatives, the general question word WHAT-GENERAL and the question word Q-e, used in embedded structures, will be investigated in more detail. Finally, I will describe pragmatic factors, such as the possibilities of using questions as polite commands.

In this chapter, I rely on the judgments of native signers with whom I have grown up and/or worked directly, as well as my own judgments, since I am a native signer. The examples from the Brazilian Sign Language variant reported here are from the South of the country, more precisely, from the state of Rio Grande do Sul, where there has been an organised Deaf community since 1945.

### 1. Non-manual marking

In Brazilian Sign Language, there are at least two kinds of interrogative constructions: polar questions and content questions. Each one has a different non-manual marker associated with the construction. They also behave differently in that polar questions are marked by the non-manual signal only, whereas content questions are marked by question words, besides the non-manual marker.

In polar questions (yes/no-questions), the non-manual marker consists of raised eyebrows with a slight downward head tilt (see Figure 1).



pol-q

Figure 1: LIKE

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<sup>1</sup> The main ideas expressed in this chapter are from Quadros (1999) Chapter 4, available at [www.ronice.ced.ufsc.br](http://www.ronice.ced.ufsc.br).

The non-manual marker is obligatory and has to co-occur with the whole clause, as shown in the following examples:

- (1) \_\_\_\_\_ pol-q  
IX GIRL WANT APPLE  
'Does the girl want an apple?' video ex.2
- (2) \_\_\_\_\_ pol-q  
\*IX GIRL WANT APPLE

Example (3) shows a case in which the non-manual marker does not spread over the whole clause. This happens in interrogative constructions with a topicalised constituent. In this situation, the whole clause minus any topicalised constituents will be marked by the non-manual interrogative.

- (3) \_\_\_\_\_ top \_\_\_\_\_ pol-q  
APPLE IX GIRL WANT  
'The apple, does the girl want it?' video ex.3

Except for the non-manual marking, polar questions do not differ structurally from statements. No syntactic mechanism is obligatory in forming yes/no-questions in Brazilian Sign Language. There are no word order changes, and it is not obligatory to mention two alternatives.

As far as content questions are concerned, the associated non-manual marker is different from yes/no-questions. It consists of raising the eyebrows, pushing the head slightly forward and raising the chin (see Figure 2).



Figure 2: WHAT/WHO with content question non-manuals video ex.5

The non-manual marking is obligatory, and its scope is the same as for polar questions, i.e., the whole clause (Example 4, Figure 3), or the whole clause minus any topicalised constituents (Example 5).



Figure 3: ‘What did John buy?’

- (4)  $\frac{\text{cont-q}}{\text{J IX BUY WHAT/WHO}}$   
 ‘What did John buy?’ video ex.6
- (5)  $\frac{\text{top}}{\text{BALL}} \frac{\text{cont-q}}{\text{WHAT/WHO-IX GET}}$   
 ‘As for the ball, who gets it?’ video ex.7

It is also possible to have the non-manual marker associated with the question word in final position only. However, this structure, without spreading of the non-manual marker, is more like an echo question rather than a regular question (Example 6). It is impossible to have a non-manual marker only at the beginning or at the end of the clause in a genuine content question in Brazilian Sign Language.

- (6)  $\text{JOHN LIKE} \frac{\text{cont-q}}{\text{WHAT/WHO}}$   
 ‘John likes what?’ video ex.8

## 2. Paradigm and Syntactic Positions of Question Words

Brazilian Sign Language has a specific sign for ‘what’ that can also be used for ‘who’ (see Figure 2 in Section 1). There are also specific signs for WHY, HOW-







I have presented some syntactic facts about interrogative constructions in Brazilian Sign Language. The next step is to look at two of the most intriguing structures, WHAT-GENERAL and Q-e. WHAT-GENERAL is a very productive sign in Brazilian Sign Language, occurring in many kinds of interrogative constructions, but particularly with complex question words. Q-e is a question word occurring in embedded clauses and seems to be unique among sign languages in this function (see other chapters in this volume).

### 3. The general question word WHAT-GENERAL

To express the interrogatives ‘with who’, ‘what kind of’, ‘which (of)’, ‘where’ and ‘when’, the sign in Figure 5 can also be used.



Figure 5: WHAT-GENERAL video ex.20

This sign will be referred to as WHAT-GENERAL. It can be associated with other words to form complex interrogatives, and it can be used simply to emphasise an interrogative sentence. Possible combinations include the following:

PLACE WHAT-GENERAL or WHAT-GENERAL PLACE	‘where’
DAY WHAT-GENERAL or WHAT-GENERAL DAY	‘which day’
TIME WHAT-GENERAL or WHAT-GENERAL TIME	‘what time’
MONEY WHAT-GENERAL or WHAT-GENERAL MONEY	‘how much money’
LONG-TIME WHAT-GENERAL or WHAT-GENERAL LONG-TIME	‘when’

video ex.21-26



that when the question involves ‘where’ or ‘when’, the sign used will be the general question word anyway. There are no other signs for ‘where’ or ‘when’ in Brazilian Sign Language. It seems that when WHAT-GENERAL is used alone, it will refer to either of these two possibilities depending on the context of the utterance, as shown in Example (16). There is a possible difference in interpretation between these two uses for ‘where’ and ‘when’; it seems that the combination of WHAT-GENERAL and PLACE or WHAT-GENERAL and LONG-TIME is more specific than when WHAT-GENERAL is produced alone. The non-manual marker associated with this sign is the same as for the other interrogatives. However, this is not true of Q-e, as discussed in the next section.

#### 4. The general question word Q-e

Q-e is an interrogative that can translate into any question word. It is a particular kind of interrogative that occurs in embedded clauses. Because of this it has been glossed as Q-e (see Figure 7). There is also a non-manual marker for questions with Q-e that differs from question non-manual markers for standard questions. It consists of lowered eyebrows, pursed lips and the head tilted backward.



Figure 7: Q-e

Brazilian Sign Language has both embedded questions with the embedded interrogative Q-e and standard questions in clauses that seem to be embedded, but turn out upon closer inspection not to be genuine cases of embedding. In the latter case, the question word and the non-manual marker are of the type associated with questions in main clauses. This makes it possible in Brazilian Sign Language to distinguish between an embedded interrogative clause and a direct question, which



interrogatives, they should share in the same patterns as the other interrogatives in Brazilian Sign Language. Examples 24-26 show that Brazilian Sign Language constructions with Q-e do indeed behave like interrogative structures with respect to word order possibilities.

	<u>wonder</u>	<u>wh-e</u>	
(24)	IX(1) WANT KNOW	Q-e MEET MARY	video ex.44

	<u>wonder</u>	<u>wh-e</u>	
(25)	IX(1) WANT KNOW	MEET MARY Q-e	video ex.45

	<u>wonder</u>	<u>wh-e</u>	
(26)	IX(1) WANT KNOW	Q-e MEET MARY Q-e	
	‘I want to know who met Mary.’		video ex.47

As the examples illustrate, when there is no ellipsis of the complement clause, we can find the same word order patterns as in simple interrogatives. In elliptic interrogatives, such as in Example 19, the embedded clause may consist of the question word only.

## 5. The pragmatics of interrogatives

### 5.1 Answering questions

Negative answers to polar questions mostly involve a manual sign for ‘no’ (see Figure 8). This sign is also used as clause negator.



Figure 8: Negative sign ‘no, not’ video ex.48

While the negative headshake by itself is also a possible negative response, it is used more commonly to accompany a manual negative sign. There is no manual sign for ‘yes’, but signers use a head nod instead. One word or some part of the sentence is repeated in a positive response, and a head nod must accompany the response.

## 5.2 Tag questions for confirmation

Confirmation questions in Brazilian Sign Language take the form of a tag question, with a head nod or headshake accompanying the interrogative facial expression. In tag questions, the non-manual marker occurs with the tag only. In examples (27) and (28), the interrogative non-manual marker is associated with an affirmative head nod or a negative headshake respectively, and is interpreted as asking for confirmation.

- (27) IX GIRL WANT APPLE, pol-q/nod  
 WANT  
 ‘The girl wants an apple, does she?’ video ex.49
- (28) IX GIRL WANT APPLE, pol-q/neg  
 WANT-NOT  
 ‘The girl wants an apple, doesn’t she?’ video ex.50

## 5.3 Questions as polite commands

In this section, I refer to an interesting study of polite commands in Brazilian Sign Language by Ferreira-Brito (1995:181-194)<sup>3</sup>. The examples given there are almost always questions associated with various non-manual expressions transcribed as ‘polite+q(1, 2, 3...)’. The strategies used by the interlocutors are very rich and varied depending on social distance and cost of the request. The idea in Brown and Levinson’s (1978) analysis of the “cost” of a request is related to how difficult it is to request something depending of the kind of social relationship that the interlocutors have (more or less close, on more or less friendly terms). The following example shows someone asking to borrow money from a close friend:

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<sup>3</sup> All examples in this section are from Ferreira-Brito (1995). I am responsible for the translation from Brazilian Portuguese into English.





- (31) polite      polite+q(3)  
 EXCUSE, FALL IX      GET HAMMER  
 ‘Excuse me, it dropped. Could you get the hammer?’

There are also modal constructions for requests (example 32). In this case, we would have the non-manual marker observed in constructions with ‘polite+q(2)’, plus almost closed eyes.

- (32) polite      polite+q  
 PLEASE, CAN CIGARETTE ONE-ME  
 ‘Please, could you give me a cigarette?’      video ex.62

It seems that the closing of the eyes is related to the cost of the request. The examples (31) and (32) were considered high cost examples, because the signer did not know the interlocutor.

Ferreira-Brito’s work shows that there is evidence from Brazilian Sign Language to confirm Brown and Levinson’s proposal (1978) with respect to the politeness phenomena. The strategies are rational, since they are ways to carry out the speaker’s (or signer’s) intentions relative to his/her competence as a native user of the language.

## Conclusion

Brazilian Sign Language reveals interesting facts related to interrogative constructions, including various manual and non-manual markers associated with these structures. The distribution of the non-manual markers associated with the types of question words is especially interesting, since there are no detailed descriptions of this productivity in other sign languages. Also, it is demonstrated again that the non-manual markers provide a lot of structural information, confirming the importance of prosody in the language. This has theoretical relevance as well, since, like other sign languages, the analysis of Brazilian Sign Language is a way of understanding language and constructing linguistic theory. Future in-depth research is desirable, especially with respect to the distribution of the different kinds of syntactic structures and their relationship with semantic and pragmatics contexts. With this perspective in view, this chapter has described facts related to interrogative constructions as a step towards the linguistic typology of this kind of structure in Brazilian Sign Language.

## Chapter 11

# Interrogatives and Negatives in Finnish Sign Language: An Overview

Leena Savolainen

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### FINNISH SIGN LANGUAGE

Finnish Sign Language (FinSL, in Finnish *suomalainen viittomakieli*) is used in Finland by about 5,000 Deaf and 5,000 hearing people (Deaf people being clearly more fluent signers than the majority of the 5,000 hearing people). There is a small minority of about 150 Deaf people who use Finland-Swedish Sign Language. They live spread out all along coastal Finland. This language variant is becoming extinct, as there are no more schools for its users and it is no longer passed down to the younger generation.

FinSL dialects have arisen in the residential schools for the Deaf in Turku, Oulu, Jyväskylä, Mikkeli and Kuopio. Besides these, Tampere and Greater Helsinki have their own dialects. Dialectal differences have never been great enough for people to have any major difficulties understanding each other. It seems that part of the dialectal differences are slowly disappearing too, as people and especially the younger generation are moving into big southern cities, and because of the standardizing effect of daily news on television and the monthly video bulletins produced by the Finnish Association of the Deaf.

FinSL was brought from Sweden to Finland by a Deaf man, Carl Oscar Malm, in the middle of the 19<sup>th</sup> century. Therefore, FinSL is closely related to the Swedish Sign Language. However, despite the similarities in the lexicons of contemporary Finnish and Swedish Sign Language, knowing the other language does not mean easy and fluent understanding of the other. The two languages have grown apart at least for the following two reasons: they are used in different countries, and the major spoken language of these countries is different (that is, Finnish in Finland and Swedish in Sweden).

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This chapter provides a short descriptive overview of interrogative and negative structures in Finnish Sign Language. Grammatical domains covered include non-manual marking in questions and negatives, the use of a question particle in both polar and content questions, the functions and syntax of question words, and the use of negative signs in sentence negation.

## 1. Interrogatives

### 1.1 Non-manual marking in questions

#### 1.1.1 Polar questions (yes/no-questions)

Finnish Sign Language uses non-manual marking in polar questions. The eyebrows are raised and the head tilts forward. Another possible head posture, but probably used more rarely and only in certain contexts, is to push the head forward. In this latter head posture variant, the chin is not pushed towards the chest but it either remains on the same horizontal level as it normally is or it may be raised a little. Non-manual marking for polar questions is obligatory.

The scope of the non-manual marking is either the whole sentence (Example 1), or the whole sentence minus any topicalised constituents (Example 2), or a questioned constituent (Example 3). If the non-manual marking co-occurs with a questioned constituent only, it seems that this constituent has to be at the end of the sentence. In other words, non-manual marking in non-final position does not seem to be possible in FinSL.

- (extra) head tilt forward
- \_\_\_head tilt forward + raised eyebrows
- (1) POSS2 BICYCLE STEAL?  
‘Has your bicycle been stolen?’ video ex.46

- (extra) head tilt forward + raised eyebrows
- \_\_\_head tilt forward + squinted eyes + raised eyebrows
- (2) POSS2 BICYCLE STEAL?  
‘Your bicycle, has it been stolen?’ video ex.47

- head tilt/brow raise
- (3) POSS2 BICYCLE STEAL?  
‘Has your bicycle been stolen?’

### 1.1.2 Content questions (*wh*-questions)

The most frequent non-manual marking for content question involves furrowed brows and a forward head tilt. As in polar questions, another possible head posture, which is used more rarely and only in certain contexts, is to push the head forward, with the chin remaining on the same horizontal level or slightly raised. Another possible facial expression is to raise the eyebrows, as used in yes/no-questions as well.

Both eyebrow positions can be used with all question words, but if just the eyebrow position is changed, the meaning of the resulting question is different. The change in meaning is not the same with every question word, and even with the same question word, the resulting meaning seems to differ sometimes from sentence to sentence. Thus the differences in eyebrow position may be pragmatic rather than grammatical, or at least it seems difficult to separate these two levels.

For example, the signed sentence WHO WANT GO? with raised eyebrows can either refer to all people present ('Please tell me if you want to go'), or it can refer to people who are not present in the discussion ('I want to know who is the one who said that s/he wants to go'). If the eyebrows are furrowed during the sentence WHO WANT GO?, the sentence can only refer to people who are not present in the discussion, and the question can only have the second interpretation. Such differences between raised and lowered eyebrow position change the "tone of voice" of the sentence.

Non-manual marking with content questions is obligatory in FinSL. Its scope is either the whole sentence (Example 4), or the whole sentence minus any topicalised constituents (Example 5), or the question word (Example 6).

- squinted eyes and eyebrows + head tilt forward  
 (4) POSS2 CHILDREN HOW-MANY?  
 'How many children do you have?' video ex.49
- squinted eyes/brows + body returns to  
normal posture + head tilt fwd horizontally  
 body leaning backwards + head tilt forward  
 \_\_\_\_\_ + squinted eyes + raised eyebrows
- (5) determiner SWEDISH EXAM WHEN during-a-period-in-future  
 'When will that Swedish exam take place?' video ex.50

sqinted eyebrows/eyes + headshake  
head tilt forward

(6) DEAF-CLUB VISIT NOT-AT-ALL WHAT REASON

‘Why don’t you come to the deaf club any more?’ video ex.51

## 1.2 Question particle

There is one question particle in FinSL (see Figure 1), which can be used both in yes/no-questions (Examples 7 and 8) and in content questions (Examples 9 and 10). The question particle resembles a gesture meaning ‘I don’t know’, which is used both in hearing and deaf culture, but there are clear differences in their form. In the gesture ‘I don’t know’, the shoulders may make a strong movement upwards, the hands may move either forward or upward, or may not move at all, the head is often still, but may be pushed forward. In the question particle, the shoulders make a slight upward movement or remain still, the hand/hands make a short movement diagonally forward and down, and the head is pushed forward, with the chin remaining on the same horizontal level or slightly raised. The question particle is optional, as one can also use the non-manual marking alone. Non-manual marking often accompanies the question particle. However, in colloquial signing one can also sign without non-manual marking (Example 8). In this case, the effect is intonational, like playing with one’s “tone of voice”. The question particle is obligatorily clause-final, that is, it can only be used at the end of the clause. It can be combined with a question word, and in the case of a question word in final position, follows the question word (Example 10).

raised eyebrows extra raising of eyebrows + head tilts forward

(7) PIA SHOP GO-TO question-particle?

‘Does/Did Pia go to the shop?’ video ex.53

sqint/furrowed brows (= topic)

(8) PIA SHOP GO-TO question-particle?

‘Was it Pia who went to the shop?’



Figure 1: Question particle (one-handed and two-handed variant)  
video ex. 1



PAPER



WHAT/WHERE



question particle

Figure 2: ‘Where is the paper?’ video ex. 54

head tilt forward

furrowed brows

(9) WHEN BE-ABLE-TO COME question particle?

‘When could you come?’

head tilt

furrowed brows

(10) PAPER WHAT/WHERE question particle?

(Figure 2)

‘Where can I find some paper? / Where is the paper?’

### 1.3 Question words

#### 1.3.1 Paradigm

Most question words in Finnish Sign Language can have more than one function and meaning, both interrogative and non-interrogative (see also Section 1.3.4). The paradigm of monomorphemic, underived question words includes the following signs (see Figures 3-10):

WHO	1. who (both singular and plural) 2. someone, somebody	video ex.3
WHAT/WHERE	1. what 2. where 3. something 4. somewhere	video ex.4
WHERE	1. where 2. somewhere	video ex.6

When the question word WHERE is used at the end of a sentence, the question particle (see Section 1.2) or a polysynthetic sign indicating the approximate area appears directly after the question word. The same is true of the sign WHAT/WHERE when used in its meaning ‘where’ (cf. Example 10 in Section 1.2) .

HOW/WHAT-KIND	1. how, in what way 2. what kind of, what sort of	video ex.9-10
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Some deaf people also seem to use this sign in combinations such as ‘how old’, ‘how cold’, etc., but some do not. The formation of ‘how+adjective’-questions in FinSL requires further study.



Fig. 3: WHO



Fig. 4: WHAT/WHERE

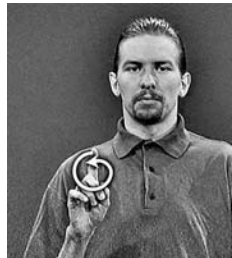


Fig. 5: WHERE



Fig. 6: HOW



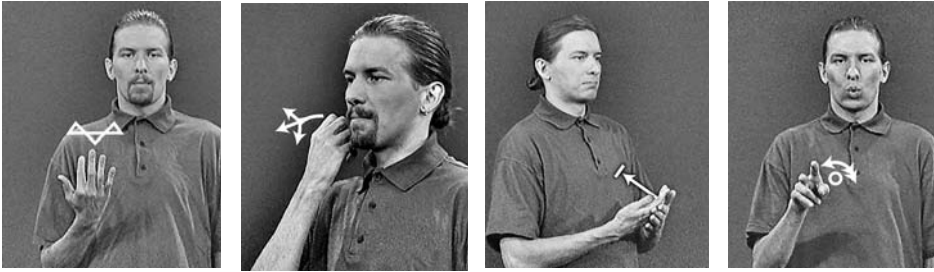


Fig. 7: HOW-MANY Fig. 8: WHEN Fig. 9: WHY Fig. 10: WHICH-OF-TWO

### HOW-MANY/MUCH

video ex.5

1. how many
2. how much

### WHEN

video ex.8

1. when, at what time, what time
2. every day, daily, on a daily basis

### WHY

video ex.7

1. why, for what reason
2. because, as, since, that is why
3. cause, reason, motivation; fault

This sign is very often used with the sign WHAT (WHAT REASON), but it can be used alone as well. When used alone its use is more restricted though.

### WHICH-OF-TWO

video ex.11-13

1. which one (of two possibilities)
2. one or the other
3. both, both of them

Two other signs exist in FinSL with the same meaning ‘which one (of two possibilities)’. One of these is identical in meaning and usage to the sign in Figure 10, while the other sign can only have meaning 1. and 2. but cannot mean ‘both’.

#### 1.3.2 Syntax

FinSL allows a number of different syntactic positions for question words, including clause-initial, clause-final, after a topicalised constituent, before and after the verb or predicate. In situ question words are not used in FinSL.

All question words in FinSL can be used clause-initially (cf. Example 9 in Section 1.2). Clause-final position is possible with all question words (cf. Examples 4 and 6 in Section 1.1.2), except for the two signs meaning ‘where’ (cf. Example 10 in Section 1.2). As stated in Section 1.3.1, these signs require a following question

particle or polysynthetic sign expressing the approximate area if they occur at the end of a sentence. All question signs can also be used after a topicalised constituent.

It seems that the question word WHO is the only question word that cannot be used after the predicate (cf. Example 11 and Example 19 in Section 1.3.3), but this needs to be confirmed with additional evidence. All other question words can be used before and after a verb or predicate. The following examples illustrate question words in pre- and post-position:

- (11) WHO TAKE?
- (12) WHAT DO? / DO WHAT?
- (13) HOW KNOW? / KNOW HOW?
- (14) WHAT-KIND-OF LOOK-LIKE? / LOOK-LIKE WHAT-KIND-OF?
- (15) WHY COME? / COME WHY?
- (16) WHEN COME? / COME WHEN?
- (17) HOW-MUCH WEIGH? / WEIGH HOW-MUCH?
- (18) WHICH-OF-TWO WANT? /WANT WHICH-OF-TWO?

FinSL also allows a construction with doubling of the question word in both clause-initial and clause-final position. This sentence type can be constructed with all question words. Note, however, that the resulting sentence is not a neutral question, but a heavily emphasised one.

### 1.3.3 Combinations with question words

Although this needs further confirmation, it seems that multiple content questions are not possible in FinSL, that is, it does not seem possible to include two question words in one sentence. For example, in a question such as WHO DO WHAT DO? ('Who does what?'), the two question words would seem to belong to separate sentences: WHO DO? WHAT DO? ('Who does it? And what do they do?').

Negative content questions are possible in FinSL. They include a question word and some manual and/or non-manual negation, such as a negative sign and/or a headshake (Example 19).

- \_\_\_\_\_ headshake
- furrowed brows/head tilt forward
- (19) WHO NOT-WANT?
- 'Who doesn't want to?'

<i>indefinite pronoun</i>	<i>question word</i>
something	WHAT/WHERE
someone	WHO
somewhere	WHAT/WHERE or WHERE
one or the other	WHICH-OF-TWO

Table 1: Related question words and indefinites

Question words in FinSL cannot be repeated as a whole (e.g. WHAT WHAT, WHO WHO), but some of them can be emphasised by repeating the movement, thus extending the duration of the sign. Repetition of the movement can be used with the following question signs: WHAT, WHERE, WHO, HOW/WHAT-KIND, WHICH-OF-TWO. These lengthened forms are also used in order to keep or take one's turn in a conversation.

#### *1.3.4 Non-interrogative uses of question words*

Question words are not used as relative pronouns in FinSL, although this does occur in Signed Finnish, modelling the use of spoken Finnish. However, there is a close association between some question words and indefinites, as represented in Table 1. The only difference between such pairs of question words and indefinite pronouns lies in the facial expression and the position of the head (cf. Section 1.1.2), with non-manual interrogative marking resulting in a question word interpretation, while the absence of non-manual interrogative marking leads to an indefinite reading. Other non-interrogative uses of question words, including conjunctions ('because') and adverbials ('daily'), have been listed in Section 1.3.1.

### **1.4 Questions used as polite commands**

Questions can be used as polite commands and requests in FinSL. Expressions used include questioning the addressee's intention ('will you?', Example 20), questioning the addressee's ability ('can you?', Example 21), questioning the addressee's desire ('do you want to?', Example 22), and using question words (Examples 23 and 24). In the absence of a second person pronoun, eye contact signals that the request is addressed to someone who is present, as in Example 21, where the pronoun INDEX<sub>2</sub> is not used.

- (20) BOOK index (=points to the book) THINK INDEX<sub>2</sub> LATER READ index (=points to the book)?  
'Will you read this book?'
- (21) FINNISH TEXT CAN CHECK?  
'Can/Could you revise this Finnish text?'
- (22) WANT INDEX<sub>2</sub>-(pl.) DOG OUTDOORS WALK-A-DOG?  
'Would you like to walk the dog?'
- (23) WHO WANT INDEX<sub>2</sub>-(pl.) DOG OUTDOORS WALK-A-DOG?  
'Who wants to walk the dog?'
- (24) WHY CANNOT WASH-DISHES YOU?  
'Why can't you wash the dishes?'

## 2. Negatives

### 2.1 Non-manual negation

FinSL uses a headshake as a non-manual negative marking. There are also many different facial expressions used in negative expressions, but it is not clear whether any of those are grammaticalised to convey just negation. They seem to always carry some extra information, such as a change in the 'tone of voice' or pragmatic features. Non-manual marking is obligatory in FinSL. The only exception applies to an extremely firm expression of negation. In this case, one may "freeze" the whole body posture to express the firmness of negation, and then it is possible to leave out the headshake.

The headshake co-occurs either with the whole sentence, minus any topicalised constituents (Examples 25 and 26), or with a negated constituent (Example 27). In addition, it seems that in FinSL, a medial headshake is not possible. That is, if a negative sign co-occurring with a headshake is followed by other signs in a sentence, the headshake cannot be stopped after the negative sign but always

continues over the following signs. Thus in these cases the scope of the non-manual marking goes beyond the negative sign.

- (25) headshake + squinted eyes and eyebrows  
 TOMORROW CANNOT (INDEX<sub>2</sub>) VISIT-ME  
 ‘You cannot visit me tomorrow.’ video ex.55
- (26) raised eyebrows headshake + squinted eyes and eyebrows  
 TOMORROW(short pause) CANNOT INDEX<sub>2</sub> VISIT-ME  
 ‘You cannot visit me tomorrow.’ video ex.56
- (27) headshake  
 EUROPE pointing-to-countries ALONE MANAGE  
 ‘European countries cannot manage on their own.’

As shown in Example (27), non-manual negation by itself is sufficient in FinSL to negate a sentence. In fact, there seems to be no other way to convey a plain and simple negation, since all manual clause negators in FinSL have a more specialised function than a simple ‘not’, with some special meaning component in addition to negation.

## 2.2 Manual clause negators

Interestingly, FinSL seems to lack a neutral negative particle meaning just ‘not’. A number of signs can be used for negation in certain contexts, but they all have a more specialised meaning than just ‘not’. The exact function of the various manual clause negators is not always clear, but some basic observations can be made about their use. Some of the signs described here are represented in Figures 11-18.

### *ZERO ‘nothing at all’ (emphatic negation)*

There are two variants of the sign ZERO (O-hands with a straight movement forward or a movement which is like drawing a zero, Figure 11), which can be translated as ‘nothing at all’. This is a colloquial sign and can be used in a wide range of contexts for emphatic negation of nominal or verbal predicates.

(28) INDEX<sub>1</sub> MONEY ZERO

‘I’ve got no money at all.’

*NO* ‘*absolutely not*’ (*emphatic negation*)

The meaning of this sign (Figure 12) is very emphatic (‘definitely not, absolutely not’). It seems that syntactically, the sign can be placed in many different positions in a sentence. In function it comes close to a ‘no/not’ particle, though with a very emphatic meaning (Example 29). This sign can also be used in a negative coordinating structure expressing ‘neither...nor’ (Example 30).

head turns left once and returns + negative mouthing  
raised eyebrows + squinted eyes

(29) INDEX<sub>1</sub> COME NO  
‘I’m definitely not coming!’ video ex.61

head turn left head returns ctr  
squinted eyebrows and eyes  
raised eyebrows and squinted eyes

(30) MINNA ALSO KAISA NO PARTY GO  
‘Neither Minna nor Kaisa are going to the party.’ video ex.62

*NOT-EXIST* ‘*not exist, not have*’ (*negative existential*)

This is a negative existential particle that can be used with both stative predicates (translating into English ‘is not’, Example 31) and dynamic verbs (translating into English ‘have not’, Example 32). It is one of the signs that participate in negative derivation (see Section 2.4 and Figure 19)

raised eyebrows + body leaning forward headshake

(31) KIMMO BE-INTERESTED-IN REALLY index-‘this’ NOT-EXIST  
‘Kimmo isn’t very interested in this.’ video ex.57

headshake  
squinted eyebrows and eyes

(32) KIMMO COME NOT-EXIST  
‘Kimmo hasn’t arrived.’ video ex.58

- raised eyebrows + squinted eyes headshake  
 (33) AUSTRALIA index MOUNTAINS NOT-EXIST  
 ‘There are no mountains in Australia.’ video ex.60

The negative existential can also be used in a negative coordinating structure expressing ‘not only...but also’ (Example 34).

- raised eyebrows headshake head nod  
 (34) INDEX<sub>2</sub> ALONE NOT-EXIST ALSO INDEX<sub>3</sub>  
 ‘It isn’t only you, but only also s/he.’ video ex.63

*EMPTY ‘nothing; not have; empty; be without’ (negative existential)*

This sign (Figure 13) can be used after a nominal predicate, for example MONEY EMPTY = ‘have no money’, INTEREST EMPTY = ‘is not interested in’.

*DO-NOT ‘do not, please do not’ (negative imperative)*

This sign is used for negative commands. Differences in politeness and urgency of the command can be expressed by changing the mouthing and facial expression co-occurring with DO-NOT (Examples 35 and 36).



Fig. 11: ZERO



Fig. 12: NO



Fig. 13: EMPTY



Fig. 14: DO-NOT

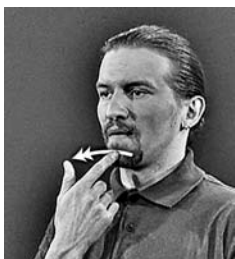


Fig. 15: NOT-YET



Fig. 16: CANNOT



Fig. 17: BE-FORBIDDEN



Fig. 18: IS-NOT-WORTHWHILE

- negative mouthing
- raised eyebrows    squinted eyebrows
- (35) ROOM            GO-IN-THERE DO-NOT  
‘Please do not go into that room over there.’            video ex.59

- strong negative mouthing + facial expression
- furrowed eyebrows
- (36) ROOM GO-IN-THERE DO-NOT  
‘Don’t go into that room over there!’

*NOT-YET ‘not yet, have not done’ (negative completive)*

The handshape of this sign (Figure 15) has three variants: G, 3, or B. The sign signals negative completive aspect, indicating that something has not yet happened or is not yet complete.

- headshake
- (37) NOT-YET AIRPLANE-LANDS  
‘Airplane has not yet landed.’

*CANNOT, BE-FORBIDDEN, IS-NOT-WORTHWHILE (negative modal)*

These signs convey negative modal meanings, translating into ‘cannot’, ‘may not’ and ‘should not’ (Figures 16-18). Examples (38)-(42) also show word order possibilities.

- headshake
- squinted eyebrows
- (38) INDEX<sub>2</sub> CANNOT GO-THERE  
‘You can’t go there.’            video ex.64

- headshake
- raised eyebrows  
head tilt forward
- (39) INDEX<sub>2</sub> GO-THERE CANNOT  
‘You can’t go there.’            video ex.65



\_\_\_\_\_ brow raise \_\_\_\_\_ headshake  
 (40) CAR index BUY IS-NOT-WORTHWHILE  
 ‘You should not buy that car.’

\_\_\_\_\_ headshake  
 (41) LEAVE BE-FORBIDDEN  
 ‘You may not leave!’

\_\_\_\_\_ headshake  
 (42) BE-FORBIDDEN LEAVE  
 ‘You may not leave!’

### 2.3 Negative derivation

A set of six FinSL signs can be made negative by adding a morpheme “change in palm orientation” (see Figures 19-21). The signs affected by this process are listed in Table 2. The handshape of the negative morpheme is a 5-handshape, but in some signs the morpheme can optionally assimilate to the handshape of the verb. In this case, two handshapes are possible (marked by \* in Table 2). The negative forms of KNOW1 and KNOW2 can have a G handshape or B handshape respectively as in the positive forms, or the 5 handshape of the negative morpheme. In SEE-neg the negative morpheme can have its usual 5 handshape or the V handshape of the positive form (Figure 21). The negative morpheme is not used productively. Of particular interest is the fact that the negative form sometimes results in a change of meaning (marked by # in Table 2). Thus one of the meanings of the signs HEAR-neg and SEE-neg shows a semantic change with a perfective/resultative meaning component, translatable as ‘have not heard / do not know’ and ‘have not seen / did not see’ respectively.

<i>gloss</i>	<i>positive meaning</i>	<i>negative meaning</i>
EXIST / EXIST-neg	to be, to exist; to have	is not, does not exist, do not have
KNOW1 / * KNOW1-neg	to be able to, to know how to, to understand, to realise	not be able to, cannot, do not know how to, do not understand, do not realise
KNOW2 / * KNOW2-neg	to know, knowledge, be familiar with	do not know
HEAR / HEAR-neg	to hear, (sense of) hearing, hearing (person)	do not hear, #have not heard, do not know
NEED / NEED-neg	to need, to require	do not need, do not require
SEE / * SEE-neg	to see; to look	do not see, #have not seen, did not see
* optional handshape assimilation      # change in meaning in the negative form		

Table 2: Negative derivation



positive existential  
(to be, to exist; to have)

negative existential  
(is not, does not exist, do not have)

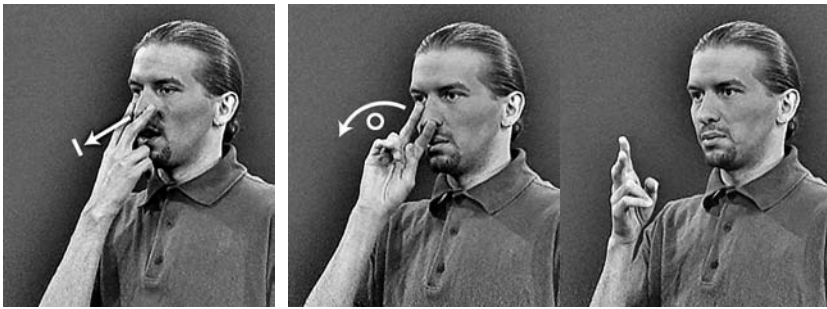
Figure 19



to hear, (sense of) hearing,  
hearing (person)

have not heard, do not know

Figure 20



to see; to look                      have not seen, did not see  
 Figure 21

**2.4 Negative quantifiers, adverbs and pronouns**

FinSL has inherently negative adverbs and pronouns. Figure 22 shows the sign NOTHING, which can also mean ‘never’. Several signs that have been described as clause negators in Section 2.2 also include a meaning ‘nothing’ in addition to other functions. A negative temporal adverbial NEVER (see Example 43) is shown in Figure 23. Another sign (Figure 24) is peculiar in that it can only be used with reference to human beings and their activities. The sign has two basic meanings. In the sense ‘never’, it is accompanied by a mouthing /kh/ or /khos/, but in the second sense ‘not for a long time, not in ages’ the mouthing is /hyy/.

- \_\_\_\_\_ headshake  
 \_\_\_\_\_ squinted eyebrows + eyes
- (43) COME NEVER INDEX<sub>2</sub>  
 (Accusingly:) ‘You never come.’ video ex. 68



Fig. 22: NOTHING

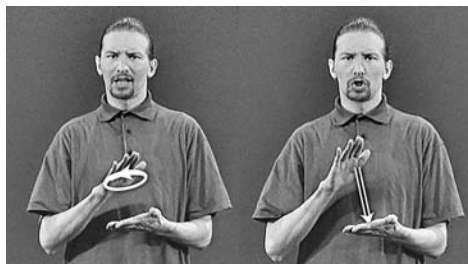


Fig. 23: NEVER



Fig. 24: NEVER (human), NOT-IN-AGES

A negative pronoun ‘nobody’ can be expressed by a combination of a positive and a negative item. The combination in Examples 44 and 45 involves the sign WHO (which can also mean ‘somebody’) and the negatives NOT-EXIST and NOTHING respectively.

raised eyebrows \_\_\_\_\_ headshake  
(44) COURSE ALONG WHO NOT-EXIST  
‘Nobody is attending the course.’ video ex.66

squinted eyebrows + headshake  
(45) WHO NOTHING INDEX<sub>3</sub>  
‘There’s no-one here.’ video ex.67

## Chapter 12

# Regional variation in Indo-Pakistani Sign Language — Evidence from content questions and negatives

Ulrike Zeshan

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### INDO-PAKISTANI SIGN LANGUAGE

Indo-Pakistani Sign Language (IPSL) is the language used by deaf communities in urban centres of the Indian Subcontinent. Documented regional dialects of IPSL share a common grammar which varies little from region to region over a very large area, ranging from Pakistan in the North-West to Assam in the North-East, from Mumbai in the West to Orissa in the East, and up to the Dravidian-speaking areas with Hyderabad and Bangalore in the South. On the other hand, lexical variation may be considerable. On average, IPSL dialects have about 75% of shared vocabulary, with about 25% of the vocabulary differing across dialects.

IPSL is indigenous to the Indian Subcontinent and has not been strongly influenced by any other sign language. The language is not currently in close contact with other sign languages and has not been shown to belong to a larger family of sign languages. In the deaf community, the sign language is simply called *SIGN*, sometimes in combination with the sign for the country, as in *INDIA SIGN*. Official usage also refers to “Pakistan Sign Language (PSL)” and “Indian Sign Language (ISL)” respectively, although this usage runs contrary to the linguistic facts.

The size of the language community has not been documented reliably, but IPSL users definitely number in the hundreds of thousands, thus representing one of the largest sign language communities in the world. Focal points of the community are the deaf schools and the deaf associations, of which there are many in all urban centres. The origins of the deaf educational system date back to the late 19th century,

when the first schools for the deaf were established in India. The origin of the sign language itself is not necessarily dependent on the development of the educational system, but there is currently no reliable information about the origins and history of Indo-Pakistani Sign Language.

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## 1. Background

The Indian subcontinent covers a vast area and includes hundreds of spoken languages from different language families (Grimes 1996). We thus find, for example, Indo-Aryan languages such as Hindi, Marathi, and Bengali in northern and central parts of the subcontinent, Dravidian languages such as Tamil, Telugu and Malayalam in the south, Tibeto-Burman languages such as the Naga languages in the north-east, as well as smaller groupings such as the Austro-Asiatic Munda languages. In view of this tremendous linguistic variety among spoken languages in the region, it would not be unreasonable to expect a variety of sign languages as well. However, previous research from the 1970's onwards (Vasishta, Woodward & Wilson 1978, Zeshan 2000a) has indicated that in fact, there is one only sign language used in various regions of India and across the border in regions of Pakistan. Other regions of the Indian subcontinent, such as Sri Lanka and Bangladesh, have not been investigated yet. In previous publications, I have referred to this sign language as Indo-Pakistani Sign Language (IPSL).

Previous studies of regional variation in IPSL have mainly relied on lexical comparisons. The most extensive study (Zeshan 2000b) involved a word list of 315 items investigated for 13 locations across India and Pakistan. Confirming earlier findings based on fewer locations and a smaller word list (Vasishta, Woodward & Wilson 1978, Woodward 1993), the results of the lexical comparison indicated that on average, sign language varieties shared about 75% of their vocabulary. This is comparable to the rate of lexical overlap that has been found for dialects of other sign languages, for example, in Switzerland (Boyes Braem 1985). Moreover, deaf people across India and Pakistan generally do report being able to communicate with deaf people from other regions of the subcontinent quite easily, although explicit statements as to how similar regional sign varieties are tend to be inconsistent (Zeshan 2000b:41). On the other hand, communication with signers from other regions of the world, for example from Europe, is generally described as being difficult. Mutual intelligibility is an important argument for classifying two language varieties as dialects of the same language.

Although the results of lexical comparisons as well as the apparent mutual intelligibility of sign language varieties in India and Pakistan does suggest that they should be regarded as dialects of one and the same language rather than separate languages, the argument is not really compelling without looking at grammatical structures as well, and this for several reasons. Mutual intelligibility is difficult to measure, and there have not been any systematic studies in this domain.

Therefore, the possibility cannot be excluded that there might be other reasons for the mutual intelligibility of sign varieties in the Indian subcontinent. As far as lexical comparisons are concerned, the amount of lexical overlap that we find across these sign language dialects seems to be much smaller than the percentage of vocabulary that spoken language dialects typically share. We do not know at this stage why this should be the case, but the mere fact makes an additional evaluation of grammatical structures desirable. Secondly, there is always a possibility of heavy lexical borrowing where one language borrows extensively from the vocabulary of another language. For example, several sign languages around the world, from Jamaica, Thailand and the Philippines to Zambia, Kenya, Ghana and other African countries have been heavily influenced by American Sign Language (ASL), to the extent where it is sometimes difficult to tell whether the sign language varieties in these countries should be regarded as separate national sign languages that have borrowed extensively from ASL vocabulary, or as dialects of ASL that have incorporated some regional signs into their lexicon. In these cases, evidence from a comparison of grammatical structures can provide important clues as to the status of these sign language varieties. Finally, the established historical-comparative method used to determine family relationships between spoken languages (e.g. Trask 1996, Ross 2005) relies heavily on the comparison of morphological paradigms, such as pronominals, number systems, and verbal inflections, for example. Although the historical-comparative method might not be applicable to sign languages in the same way, it remains true that such grammatical paradigms can provide crucial insight into the relationship between two linguistic varieties. This chapter presents initial evidence from the comparison of grammatical structures in regional dialects of Indo-Pakistani Sign Language. Within this framework, evidence from interrogatives and negatives plays an important role because these linguistic functions are a central part of the grammar of any language. Moreover, there are a number of typologically interesting grammatical particularities in these structures, in particular in the domain of content questions.

## **2. Methodology**

Results reported in this chapter are based on data collected in New Delhi in January 2001 and in Mumbai and Bangalore in March 2002. The aim of this line of ongoing research is to examine central domains of the grammar of Indo-Pakistani Sign



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Language across regional varieties in order to determine the relationship between those varieties. The parameters chosen for this study include the following:

- a) kinship terms
- b) content questions
- c) negatives
- d) numbers and numeral incorporation
- e) agreement verbs

These grammatical parameters were chosen because they constitute central domains of the grammatical organization of any language. That is, for speakers of any language it is communicatively important to talk about family relationships, ask questions, negate statements, express numerical values and express the subject and object of an action. Numeral incorporation and agreement verbs are important grammatical domains in sign languages that have received a lot of attention in the literature (e.g. Padden 1990, Brentari 1988, Liddell 1996). Moreover, several of the parameters are particularly interesting because their realization in IPSL differs significantly from what is known in other sign languages. This particularly applies to kinship terms, content questions, and some structural features of negation. For the question of whether the sign varieties in question constitute dialects of one and the same language, such features are particularly important. That is, if two sign varieties share grammatical features that are also the same in a large number of other, unrelated sign languages, it is difficult to draw a strong conclusion from this overlap. On the other hand, if the structural features in question are rare or unique across sign languages, their existence in sign varieties in our data constitutes stronger evidence for saying that these varieties do indeed belong to one and the same language.

The data for this study consist of videotaped utterances produced by deaf informants from the following regions of India (the list gives the name of the town or city, with the name of the state following in brackets):

- Bangalore (Karnataka)
- Bhopal (Madhya Pradesh)
- Bhubaneshwar (Orissa)
- Guwahati (Assam)
- Hyderabad (Andhra Pradesh)
- Lucknow (Uttar Pradesh)
- Mumbai (Maharashtra)
- Surat (Gujarat)

These data are supplemented by my own extensive fieldwork data from Karachi (Sindh, Pakistan) and New Delhi. All informants had been to a school for the deaf, were using sign language as their primary means of communication since childhood, were active members of the local deaf communities in their region and thus fluent and competent signers. They had all been exposed to the Delhi variety of signing, either because they were studying at a training centre for the deaf in Delhi or because they had been trained as sign language teachers on the basis of teaching materials developed in Delhi. The sign language variety from Delhi thus served as a standard of comparison, that is, the informants were shown signed utterances from the Delhi sign variety and were asked to provide their own way of signing the same words or sentences in their regional variety. These were then videotaped and later transcribed for analysis. The informants initially went through a phase of training and instruction in order to prepare them for the elicitation of data and make sure they understood the task and the purpose of the research. When eliciting individual words and sentences in a sign language, it is preferable not to work on the basis of a written language because of possible interference from the written language. Therefore, it was preferable to work on the basis of a mutually shared sign language variety rather than on the basis of a written language.

The map in Figure 1 shows the location of all regions that are covered by the data. Given the size of the region in question, it has not been possible to gather data from all major cities, let alone all geographic regions. However, the data do cover more or less the whole extension of the subcontinent from north to south and west to east. This data collection constitutes the first survey of grammatical structures in sign language varieties in the region that is available to date.

So far, the data clearly demonstrate that all regional varieties can be considered dialects of one and the same language, which confirms and reinforces the earlier assessment based on lexical comparisons and on mutual intelligibility. All parameters under investigation show no or only minor variation across regional IPSL dialects. In sections 3 and 4, we take a closer look at content questions and negatives in IPSL. These grammatical structures have been described extensively in Zeshan (2000a, 2000b, 2002a, 2003a). Therefore, I just give a brief summary of earlier descriptions and then focus on individual points of interest and on comparative data from regional varieties.



Figure 1: The Indian Subcontinent

### 3. Content questions

Content questions in Indo-Pakistani Sign Language involve the use of a particular non-manual configuration which is different from the non-manual marking used for polar questions. A pragmatically neutral information-seeking content question is marked by raised eyebrows and a backward head position with the chin raised (see the figures in this section). This non-manual configuration is the same in all IPSL dialects and is used consistently even in cases where signers happen to use a question word that has been borrowed from another sign language. Hearing people

in the region use the same non-manual gesture to signal a question. In addition to this main pattern, there is a secondary pattern of non-manual marking in content question which involves the same head position, but furrowed eyebrows and a frown (see Figure 4). The exact functional difference between these two non-manual signals has not been studied.

IPSL has a minimal question word paradigm. With few exceptions, content questions make use of a general interrogative sign INTERROG. This sign, which is identical to a conventional gesture used in the region, carries a general interrogative meaning and may thus translate into any question word, depending on the context of the utterance. INTERROG is obligatorily clause-final in all IPSL dialects. In Examples (1) - (3), INTERROG is used by itself to mean ‘where’, ‘who’ and ‘why’ respectively.

- |     |   |  |
|-----|---|--|
| (1) | <u>          </u> cont-q<br>SHOP INTERROG<br>‘Where is the shop?’                 | (Bangalore, Karnataka)<br>video ex.1   |
| (2) | <u>          </u> cont-q<br>INDEX <sub>3</sub> COME INTERROG<br>‘Who is coming?’  | (Hyderabad, Andhra Pradesh)            |
| (3) | <u>          </u> cont-q<br>INDEX <sub>2</sub> SAD INTERROG<br>‘Why are you sad?’ | (Lucknow, Uttar Pradesh)<br>video ex.2 |

To express specific question words, IPSL signers use composite expressions which consist of a non-interrogative sign in combination with INTERROG. Common combinations include FACE INTERROG for ‘who’, PLACE INTERROG for ‘where’ (Figure 2), TIME INTERROG for ‘when, what time’ (Figure 3), NUMBER INTERROG for ‘how many’, and an index finger point at a number of different locations in space (INDEX-dist) followed by INTERROG for ‘which’. ‘What’, ‘why’ and ‘how’ are covered by the basic meaning of INTERROG without any additional sign added. There are no composite expressions for these meanings in any IPSL dialect.

The use of composite interrogative expressions is the same across all regional dialects, occurring with the same range of meanings and the same range



Figure 2: PLACE INTERROG 'where'



Figure 3: TIME INTERROG 'when, what time'

of non-interrogative signs in combination with INTERROG, always in the same order. What does vary is the form of the non-interrogative signs. In the data, we thus find examples as in (4), where the utterances are identical except for the sign PLACE, which occurs in three different regional variants (regional variants of a sign are marked by numbers in brackets; non-manuals omitted in the examples). Sometimes more than one variant is used in one and the same region, and the spread of regional variants also differs, with some variants used in one region only and others being more widespread across the subcontinent.

- |   |  |
|---|--|
| (4a) INDEX <sub>2</sub> HOUSE PLACE(1) INTERROG<br>video ex.3 | (Hyderabad, Andhra Pradesh)<br>(Delhi)<br>(Karachi, Sindh PAK)<br>(Bhopal, Madhya Pradesh)<br>(Bhubaneshwar, Orissa) |
| (4b) INDEX <sub>2</sub> HOUSE PLACE(2) INTERROG<br>video ex.4 | (Lucknow, Uttar Pradesh)<br>(Surat, Gujarat)<br>(Bhubaneshwar, Orissa)   |
| (4c) INDEX <sub>2</sub> HOUSE PLACE(3) INTERROG               | (Guwahati, Assam)  |





Most Indian dialects of IPSL in the data use a monomorphemic interrogative WHAT-DAY as in Example (7a) from Delhi. However, some geographically adjacent dialects in the West of the Subcontinent, that is, in Karachi (Sindh, Pakistan), in Surat (Gujarat, Western India) and in Mumbai (Maharashtra, Western India) use a composite expression DAY/DATE INTERROG, each with a different sign for DAY/DATE, which has the same characteristics as other composite interrogative expressions.

The existence of WHAT-DAY in the interrogative paradigm of other IPSL dialects is anomalous in an otherwise completely regular system. A possible explanation for this anomaly would be to assume a diachronic relationship between the composite interrogative DAY INTERROG as used in Karachi and the synchronically monomorphemic WHAT-DAY. Zeshan (2000b:156f) noted that of all composite interrogative expressions used in the Karachi dialect, DAY INTERROG is the only one where we find assimilation of the two signs, which results in a compound sign DAY+INTERROG constituting one rhythmic-phonological unit. Figure 5a shows the regular two-sign combination DAY INTERROG, which is analogous to the composite interrogatives in Figures 2 and 3. Both signs are clearly separate and have their own movement patterns. The first sign in the figure is also used in Indian dialects to mean ‘day’, especially in a paradigm with numeral incorporation to express ‘one day’, ‘two days’, ‘three days’, etc. In Figure 5b, the handshape of INTERROG is already present at the beginning of the sign and the hand twists away in a single movement, while the two-and-fro tremolo movement of INTERROG is lost. This compound sign DAY+INTERROG looks quite similar to the present-day sign WHAT-DAY as used in other IPSL dialects. WHAT-DAY can have the same movement pattern as DAY+INTERROG (Figure 5c), but the hand can also twist in the opposite direction or the twisting movement can be completely lost, with the hand only contacting the face briefly. As suggested by the sequence of signs in Figure 5, a

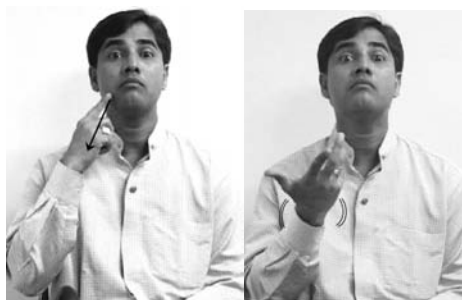


Figure 5a: DAY INTERROG

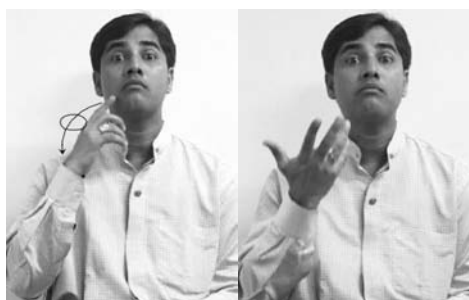


Figure 5b: DAY+INTERROG



progressive shortening and assimilation of the original two-sign combination could well have led to a synchronically monomorphemic sign in some Indian dialects of IPSL, with the Karachi dialect being more conservative and preserving the original two-sign combination in addition to the compound formation.

It seems that the anomalous WHAT-DAY is beginning to be reanalyzed to fit into the common IPSL pattern. In the data, there are a number of instances of WHAT-DAY being followed by INTERROG (Example 9) or INTERROG(VAR), as if WHAT-DAY were a non-interrogative sign forming a composite interrogative expression with INTERROG according to the general pattern of IPSL composite question words. There are 9 examples of WHAT-DAY being followed by INTERROG in the data as compared to 19 examples where WHAT-DAY occurs on its own.

- \_\_\_\_\_ cont-q
- (9) HOLIDAY WHAT-DAY INTERROG (Bhubaneswar, Orissa)  
 ‘When (what day) is the holiday?’ video ex.9

Apart from DAY+INTERROG, no other composite interrogative in any IPSL dialect shows any sign of evolving into a compound sign at present. The two parts of the composite interrogative are always clearly separate signs. In fact, the two parts do not even necessarily occur right next to each other in every case. IPSL has a very interesting construction involving split interrogative constituents, a construction that was first described for ASL in Boster (1996). In IPSL, split interrogatives occur with several compositional interrogatives, and there are examples of the construction from most regional dialects in the data, as Examples (10) and (11) demonstrate (split interrogatives in bold face; non-manuals omitted).



Figure 5c: WHAT-DAY

- (10) INDEX<sub>2</sub> FRIEND **PLACE SLEEP INTERROG**  
'Where is your friend (going to) sleep?' (Delhi)  
video ex.10
- (11) INDEX<sub>3</sub> TRAIN **TIME GO INTERROG**  
'When (at what time) is the train leaving?' (Bhopal, Madhya Pradesh)  
video ex.22

While these split interrogatives are rather rare with most composite interrogative expressions, the IPSL equivalent of 'which' is most frequently expressed as a split interrogative. The examples in (12) are from different IPSL dialects, all using regionally different signs for 'like', but the same grammatical structure with a split interrogative (non-manuals omitted). For a more detailed analysis of split interrogatives in IPSL, see Aboh, Pfau & Zeshan (2005).

- (12a) INDEX-dist LIKE(1) INTERROG  
'Which of them do you like?' (Hyderabad, Andhra Pradesh)  
video ex.11
- (12b) INDEX-dist INDEX<sub>2</sub> LIKE(2) INTERROG  
'Which of them do you like?' (Lucknow, Uttar Pradesh)
- (12c) INDEX-dist LIKE(ASL) INTERROG  
'Which of them do you like?' (Bangalore, Karnataka)<sup>1</sup>
- (12d) INDEX-dist BOOK LIKE(2) INTERROG  
'Which of the books do you like?' (Surat, Gujarat)  
video ex.12

The similarity found across IPSL dialects in the domain of content questions is highly significant because the structure of content questions in this language is so different from what has been described for other sign languages. Typically, European and North American sign languages and their derivatives have a full paradigm of monomorphemic question words (WHAT, WHERE, WHEN, WHY

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<sup>1</sup> This signer used the American Sign Language (ASL) sign for 'like'. ASL influence is comparatively strong in Bangalore, with a minority of deaf people using ASL/Signed English rather than IPSL as a first language. Most IPSL-using areas have had no or very little influence from any foreign sign language.

etc.). Compositional interrogatives are much rarer across sign languages, and no other sign language is known to have a nearly exhaustive paradigm of compositional interrogatives like IPSL. Across sign languages, common syntactic positions for question words are clause-initial, clause-final and both of these, that is, a content question with doubling of the question word in both of these positions. To allow only clause-final placement of question words as IPSL does is exceptional. The fact that all regional sign varieties covered in our data share these particularities with respect to the structure of content questions makes a very strong case for an analysis of these varieties as dialects of one and the same language.

#### 4. Negatives

Clause negation in IPSL is expressed by a set of clause-final negative particles. The basic paradigm, shown in Figures 6 - 9, consists of a negative existential (NEG-EXIST), a particle for contrastive negation (NEG-CONTR), a negative imperative (NEG-IMP), and a basic clause negator (NEG).

The basic clause negator (Figure 6) expresses negative polarity only, without any additional semantic content. It is usually accompanied by a side-to-side headshake (Example 13). The negative existential (Figure 7) is used to express possession in addition to existence, that is, for instance, ‘I don’t have a car’ is expressed as ‘I, a car does not exist’ (Example 14). The close association of existential and possessive functions is attested for many signed and spoken languages other than IPSL. The negative imperative (Figure 8) and contrastive negative (Figure 9) are accompanied by particular non-manual configurations, with direct eye contact for the former, and a backward body position for the latter sign. The contrastive negative is a rather rare category across sign languages (cf. Chapter 2, Section 4.1,



Figure 6: NEG

Figure 7: NEG-EXIST

Figure 8: NEG-IMP

Figure 9: NEG-CONTR



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(17c)	INDEX <sub>3</sub> J-O-B WORK NEG	(Bhubaneshwar, Orissa)
	'He doesn't have a job.'	video ex.20

All IPSL dialects, including the Karachi dialect, have a positive existential particle, which has the same form in all dialects. The negative existential in Indian dialects of IPSL is the only instance of irregular negation in IPSL. There are no other suppletive negatives and there is no morphological negation at all in any IPSL dialect. Again, this is quite exceptional across sign languages, most of which have at least a few cases of negative suppletion and/or derivation (cf. Chapter 2, Section 4.2, this volume).

Most regional IPSL dialects use an additional variant of the basic clause negator (NEG(VAR), Figure 11), with an extended thumb instead of an open hand. Except for the handshape, NEG(VAR) is identical to NEG, is used in the same contexts and in the same syntactic slot. NEG(VAR) is used as a basic clause negator in central, western and southern parts of the Indian subcontinent, but not in the east (Assam, Orissa). In Orissa, there is a formationally identical conventional gesture that is often used in contexts of negation by hearing people, but the sign is used more rarely by deaf people and then means 'impossible' rather than being a regular clause negator. In the other regions, the use of NEG(VAR) sometimes carries an additional modal connotation, translatable as 'cannot'.

Another negative that is however used rarely in most IPSL dialects is a sign that has recently been borrowed from American Sign Language (ASL). The sign NO-NO can be one-handed or two-handed, the palm faces downward and the index and middle fingers make contact with the thumb repeatedly. Among the regions represented in the data, the only dialect where NO-NO is used frequently is the Bangalore variety, where the sign is also used as a verb ('say no to'), with a single movement and spatial verb agreement. This corresponds to the use of this sign in ASL. In other IPSL dialects, this sign is used infrequently as a negative particle in the clause-final slot, and it is not clear what the functional difference is between NO-NO and other clause negators.

Table 2 gives an overview of clause negators in IPSL dialects, showing the distribution of clause-final negative particles in regional varieties.<sup>2</sup> IPSL also has a negative quantifier NONE (two flat hands, palms touching each other, with repeated circular movements), which is not included in Table 2 because its function is different from the clause negators.

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<sup>2</sup> Information from Gujarat was not available for negatives.

	NEG	NEG(VAR)	NEG-EXIST	NEG-CONTR	NEG-IMP	NO-NO
Bangalore (Karnataka)	+	+	+	+	+	+**
Bhopal (Madhya Pradesh)	+	+	+	+	+	rare
Bhubaneswar (Orissa)	+	-*	+	+	+	rare
Guwahati (Assam)	+	-	+	+	+	rare
Hyderabad (Andhra Pradesh)	+	+	+	+	+	rare
Karachi (Sindh, Pakistan)	+	+	-	+	+	rare
Lucknow (Uttar Pradesh)	+	+	+	+	+	rare
Mumbai (Maharashtra)	+	+	+	+	+	+***
Delhi	+	+	+	+	+	+***
* used as a negating gesture by hearing people and with the meaning 'impossible' by signers ** also used as a verb 'say no to' with spatial agreement, as in ASL *** used by younger people						

Table 2: Use of clause negators across regions

Similarly to what we have seen in content questions, a common pattern of variation in negative clauses is for the structures to be parallel, but with different lexical items in the syntactic slots. In example (18), the signers from Bhopal and Lucknow used the same sign for 'exam', while signers from Guwahati and Hyderabad each used a different sign. The use of pronominals is optional in IPSL. If no explicit pronominal referent is mentioned and the context does not suggest a particular interpretation, statements are interpreted as having first person singular reference by default, as in (18a) and (18d).

- (18a) EXAM(1) PASS NEG, FAIL  
 ‘I didn’t pass the exam, I failed.’ (Bhopal, Madhya Pradesh)  
 video ex.21
- (18b) INDEX<sub>3</sub> EXAM(2) PASS NEG, FAIL  
 ‘He/she didn’t pass the exam, he/she failed.’ (Guwahati, Assam)
- (18c) INDEX<sub>1</sub> EXAM(1) PASS NEG, FAIL  
 ‘I didn’t pass the exam, I failed.’ (Lucknow, Uttar Pradesh)
- (18d) EXAM(3) PASS NEG, FAIL  
 ‘I didn’t pass the exam, I failed.’ (Hyderabad, Andhra Pradesh)

Example (18) also illustrates a pragmatic strategy that is commonly used in all IPSL dialects. After a negative, signers will usually add a corresponding positive statement. That is, the signers in example (18) did not only say what did not happen (‘didn’t pass’), but also added what did happen (‘failed’). Similarly, IPSL users would not just say, for instance, ‘The computer is not new’, ‘Don’t leave now!’, and the like, but add a positive equivalent afterwards: ‘The computer is not new, it is old.’, ‘Don’t leave now, stay!’

Again, the data demonstrate that IPSL regional dialects have very similar grammatical structures. This becomes even more evident when we consider how different paradigms of negatives can be across sign languages. For instance, some negative categories that exist in other sign languages but are absent from IPSL include, negative completive (e.g. NOT-YET), negative interjections (e.g. NO!), emphatic negators (e.g. NOT-AT-ALL) and negative pronouns (e.g. NOBODY). Conversely, other sign languages may lack separate signs for a negative imperative or a contrastive negative. In addition to the paradigm of negators, syntactic structures and the pragmatic use of negatives are also identical across IPSL regional dialects.

## 5. Conclusion

Together with what is known about lexical similarities and mutual intelligibility of regional sign varieties in the Indian subcontinent, comparative data on selected grammatical structures present additional strong evidence for considering these varieties as dialects of one and the same sign language.

This truly surprising finding has numerous implications. For instance, it is compelling proof of the fact that sign languages develop independently of spoken languages, that sign languages are not manual representations of spoken languages co-existing in the same region, and that the linguistic boundaries of sign languages and spoken languages do not necessarily coincide at all. In the Indian multilingual context, this also means that sign language is the only indigenous pan-Indian language, which gives it a unique status among the many languages of India.

One possible unifying factor in the genesis of IPSL that would be worthwhile to investigate more closely is the role of conventional gestures. Although I am not aware of any systematic studies to this effect, it would seem that there are many gestures that are used throughout the whole region. The Indian subcontinent has a particularly long and rich history of gestural communication (Miles 2001). Moreover, it is natural for sign languages to assimilate conventional gestures used in the surrounding hearing communities, and this has happened in many sign languages around the world. Typically, gestures change their properties as they become part of a linguistic system of signs in a sign language (Zeshan 2003b), but their relationship with the gestures they are based on may still be quite apparent. As far as negation and questions in IPSL are concerned, the general interrogative sign INTERROG as well as the negators NEG, NEG-CONTR and NEG-IMP all have corresponding gestures that do seem to be pan-Indian. It would also be worthwhile to investigate in how far regional signs such as INTERROG(VAR) and NEG(VAR) could be based on regional gestures used in parts of the Indian subcontinent only.

A second consideration for understanding the unifying forces behind the genesis of IPSL involves the deaf community itself. It is evident to anyone familiar with the situation of deaf people in India, and this is borne out by linguistic facts such as the ones laid out in this chapter, that they do in fact constitute one deaf community. Many deaf people across the country have regular contact and regularly interact with each other at various local, regional and national levels. Until recently in history, this was also true of the territories that now constitute Pakistan, and it is no surprise that a relatively recent political border has not resulted in a linguistic borderline, although it is possible that Pakistani varieties of IPSL might diverge from their Indian counterparts if regular contact between deaf people on both sides of the border continues to be difficult. At any rate, a better understanding of the deaf community and its history in the region would go a long way towards explaining the striking linguistic patterns that we find at the present time, and research in this area would be highly desirable in the future.



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# APPENDIX

## 1. Transcription conventions

Although certain conventions have developed in the sign language research community, there is still no satisfactory way of representing sign language data on paper. The most widespread practice is to write labels for the signs in capital letters, with an additional line on top to mark non-manual signals. Such a transcription allows us to reconstruct the order and internal morphology of signs, as well as their co-occurrence with non-manual signals. However, it is not possible to know what a signed utterance looks like on the basis of the transcription. In the transcribed examples in this volume, glosses of signs are written in capital letters. Where one sign requires more than one English word, the words of the gloss are separated by hyphens. To indicate spatial locations, numerical subscripts are used with pronouns and for spatial verb agreement. Non-manual markings are indicated by a labelled line over the gloss, with the line indicating the scope of the non-manual. When an item is in parentheses, it is intended to show that the item is optional. A comma or forward slash in a transcription indicates an intonation break. Example:

$$\begin{array}{c} \text{_____ neg} \\ \text{_____ top} \quad \text{_____ pol-q} \\ \text{(INDEX}_2\text{) HOMEWORK / FINISH NOT-YET} \\ \text{'As for your homework, have you not finished it yet?'} \end{array}$$

In this signed sentence, the initial pronoun, consisting of index finger pointing directed towards the addressee (second person), is optional. The first part of the sentence is accompanied by non-manual marking for topic (top), after which there is an intonation break. The entire second part of the sentence has a co-occurring non-manual marking for polar question, but only the final sign NOT-YET is additionally accompanied by a negative headshake.

The following abbreviations and symbols have been used in this volume in the examples:

IX	index finger pointing / pronoun
INDEX <sub>1</sub>	personal pronoun, spatially directed
POSS <sub>2</sub>	possessive pronoun, spatially directed
SIGN <sub>1</sub>	sign made at or directed towards a spatial location
<sub>2</sub> SIGN <sub>1</sub>	spatial verb agreement with beginning and end locations
SIGN+SIGN	complex sign with formational assimilation (e.g. compound)

SIGN^SIGN	compound or clitic
SIGN++	repetition of a sign
SIGN-----	extra duration (hold) of a sign
XXX/XXX	one sign with two alternative meanings
-pl	plural
-neg	negative morpheme
-dist	distributive aspect
-altern	alternating aspect
“word” or /word/	mouthings
[fs]	fingerspelled word (for longer words)
A-B-C	fingerspelled word (for shorter words)
#SIGN	loan sign derived from a fingerspelled word
CL	classifier handshake
2h	normally one-handed sign made with two hands
LOC	locative
EP	epenthetic vowel
PROG	progressive
PRES.PROG	present progressive
3Sg	third person singular
*	ungrammatical example
<u>  </u> top or <u>  </u> t	topic
<u>  </u> pol-q	polar (yes-no) question
<u>  </u> cont-q or <u>  </u> wh	content (wh-) question
<u>  </u> neg or <u>  </u> neg-shake	headshake negation
<u>  </u> cond	conditional
<u>  </u> rh-q or <u>  </u> rhet-q	rhetorical question
<u>  </u> rel	relative clause
<u>  </u> indef	indefinite
<u>  </u> wh-e	embedded wh-question
<u>  </u> hn or <u>  </u> nod	head nod
<u>  </u> aff	affirmative
<u>  </u> face-neg	negative facial expression
<u>  </u> neg-tilt	backward head tilt for negation
<u>  </u> br	brow raise
<u>  </u> excl	exclamation

Further abbreviations and symbols used by individual authors are explained in the respective chapters.

## 2. Research materials

### 2.1 Background questionnaire for co-researchers

This questionnaire was sent to prospective collaborators in the typology project before including them in the project. The purpose of this questionnaire was to obtain some preliminary background data on both the target sign language and the background of the participants. This was helpful in selecting the appropriate project questionnaire, evaluating the responses given by the participants, and following up on the responses appropriately. It was also important to determine the level of commitment that participants would be able to make to the project, and the level of flexibility that could reasonably be expected from them.

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Questionnaire for participants in the sign language typology project on interrogatives and negatives

#### I. Background: Sign language

I.1. How many sign languages and/or sign language dialects exist in your country?

- a. one sign language without major dialectal variation
- b. one sign language with considerable dialectal variation
- c. several sign languages (indicate number)
- d. not known

I.2. What name is used in your country to refer to the local sign language(s)?

I.3. If there are several sign languages or sign language dialects in your country, please indicate which variety you are familiar with, i.e. about which variety or varieties you are going to provide information:

#### II. Background: Personal

II.1. How many persons are going to participate in the project?

- a. participating alone
- b. participating as a team of .... persons (please complete sections II.2. and II.3. for each person)

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II.2. Briefly describe your sign language background (e.g. native signer, second language acquisition, non-signing researcher, how many years of contact with sign language).

II.3. What is your background in linguistics?

- a. no knowledge of linguistics
- b. basic familiarity with linguistics
- c. university level studies in linguistics
- d. professional linguist

III. Project details

III.1. Would you prefer to use a language other than English for the project? (We will try to meet language requirements as far as possible; please ask for a questionnaire in another language only if you think you wouldn't understand the English version)

- a. I can follow an English questionnaire and reply in English
- b. I can follow an English questionnaire but would like to reply in ..... (other language)
- c. I would like to receive a questionnaire in ..... (other language)

III.2. How much time will you approximately be able to spend for the project?

- a. a few hours
- b. a few days
- c. no particular limit

III.3. Please indicate particular time constraints within the coming months:

- a. I will not be available between ..... and .....
- b. I would like to receive the questionnaire before/between/after .....
- c. no time constraints

## 2.2 Typological questionnaire on interrogatives and negatives

The questionnaire below is one of several versions originally used for the typological project. It is the extended version for participants with a background in linguistics. Two other versions were available: A shorter questionnaire for linguists, meant for participants with tight time constraints and consisting of a sub-set of the questions from the complete version, and a more limited questionnaire for participants without any technical background in linguistics. Part I, sections 4-7, Part 2, sections 5-6, Part 3, Part IV, sections 4-6, and Part VI are included in the extended questionnaire only. The shorter questionnaire for linguists does not have these sections and is essentially aimed at eliciting the *inventory* of structures only, omitting some details on the *use* of the structures. In the questionnaire for non-linguists, the questions only cover a limited number of very basic structures, which are explained in non-technical language and without the complexities and detailed options available in the other two questionnaires. Only a few participants chose to use this questionnaire. The questionnaires for linguists aim at clearly defining all terminology at the beginning of each question, providing examples of all target structures. They also aim at providing definite choices wherever possible rather than asking open-ended questions. Most participants chose to use either the extended or the short questionnaire for linguists. At particular points of interest, the questionnaire suggests several options for providing information on the form of signs. Most participants chose to submit either pictures or videos of examples from their sign language.

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### Part I: Polar questions

Polar questions, also called yes/no-questions, are questions that do not involve a question word (wh-word in English), such as ‘Are you at home?’, ‘Is it raining?’, ‘Will he come tomorrow?’. Three main strategies are used to form polar questions: intonation (i.e. non-manual marking in sign languages), question particles and syntactic mechanisms. These may also be combined among each other.

#### 1. Non-manual marking

Is there any non-manual marking used in your sign language to mark yes/no-questions (e.g. eyebrow raise, eye contact, head/body posture, change in rhythm e.g. last sign held longer)? Provide some graphic representation or written description.

If there is some non-manual marking, also answer the following questions:

1.1. Is the non-manual marking obligatory or optional?

1.2. What is the scope of the non-manual marking, i.e. what part of the sentence does it co-occur with?

- the whole sentence
- the whole sentence minus any topicalised constituents
- a questioned constituent
- the beginning of the sentence
- the end of the sentence
- other

Give an example of each scope.

## 2. Question particles

Is there any sign signalling that the sentence is a yes/no-question? This could be something like ‘*question-particle* raining’ for ‘Is it raining?’ or ‘Swimming *question-particle*’ for ‘What about swimming?’, or a so-called tag question: ‘It’s raining, *indeed?/is it?/or?/not?/do you think?*’.

If there is a question particle, also answer the following questions:

2.1. Is there more than one question particle, e.g. different markers for direct questions (‘*is it the case that...*’) and indirect questions (‘(I ask) *whether*’).

2.2. What do(es) the yes/no-question sign(s) look like? (provide some graphic representation or written description)

2.3. Is/Are the question particle(s) obligatory or optional?

2.4. What is/are the possible position(s) of the question particle(s) in the sentence?

- sentence-initial
- sentence-final
- attached to the questioned constituent
- before/after the verb/predicate
- other

Give an example of each position.

2.5. Can or must question particles be combined with non-manual marking?

## 3. Syntactic mechanisms

Please indicate if any of the following structures are *obligatory* for forming questions in your sign language. Some of these structures are probably possible in all languages, but in some languages this is the *only way* of forming questions. It is the latter situation we are interested in.

- Any change in word order, e.g. subject-verb inversion (‘He is coming’ vs. ‘*Is he coming?*’), topicalisation (‘*The man, is coming?*’) or clefting (‘*Is it to the station you are going?*’). Is a change in word order obligatory for forming questions in your sign language? Provide an example sentence.

- Doubling of constituents, such as the so-called A-not-A construction: ‘You *smoke-not-smoke*’ for ‘Do you smoke?’ or, more generally, alternative questions (‘*You smoke or you don’t smoke?/You smoke or not?*’). Is it obligatory in your sign

language to mention both alternatives in a yes/no-question? Provide an example sentence.

If a syntactic mechanism is used, also answer the following question:

3.1. Can or must any of these syntactic mechanisms be combined with non-manual marking or with question particles?

#### 4. Answers to questions

4.1. Which of the following options is used most commonly to answer polar questions in your sign language:

- one-word answer
  - yes/no: Are there manual signs for 'yes' and 'no'? Provide some graphic representation or written description. If there are no manual signs, what is the equivalent response (e.g. headshake/headnod, expanded answer)?
  - exists/exists-not (existential)
  - no-way/don't-suppose (contrastive, negative imperative)
- expanded answer (a whole sentence: 'Are you going home?' - 'I am (not) going home'). Is it obligatory to always respond with a whole sentence?
- indirect response from which the answer is to be inferred, e.g. 'Are you off to lunch?' - 'I am not hungry.' or 'I'll join you in ten minutes.'
- non-manual answer (e.g. headshake/headnod)

4.2. How are negative polar questions answered?

- 'Aren't you going?' - 'No' means 'I'm not going'
- 'Aren't you going?' - 'Yes' means 'I'm going'

#### 5. Questions used as polite commands

5.1. In many languages questions are used as polite commands/requests. If this is the case in your sign language, which of the following possibilities is used:

- questioning the addressee's intention: 'will you/won't you?'
- questioning the addressee's ability: 'can you/can't you?'
- questioning the addressee's desire: 'do you want to.../don't you want to...'
- conditional: 'if you give me...'
- question words: 'why don't you...?', 'who could do...?'

Provide an example sentence for each possibility.

5.2. Are positive or negative forms used? If both negative and positive are possible, is there a pragmatic difference, i.e. a difference in use (e.g. politeness levels)

#### 6. Negative questions

6.1. Are negative polar questions possible in your sign language?

6.2. If so, which of the following is the usual way of eliciting information, i.e. a neutral request for information that does not convey any feelings or expectations on the part of the speaker?

- positive question, e.g. 'Are you angry?', 'Is Turkey in Europe?'. 'Is the bank far away?'



- negative question, e.g. ‘Aren’t you angry?’, ‘Isn’t Turkey in Europe?’, ‘Isn’t the bank far away?’
- How is the non-neutral question used? For example, in English the positive question is neutral, the negative conveys that the speaker expects a positive answer. In Russian, the negative question indicates politeness.

## 7. Alternative questions

7.1. Alternative questions ask the addressee to make a choice between two (or sometimes more) alternatives: ‘X or Y?’. Languages differ as to how much ellipsis they allow in such constructions (i.e. what can be left out). Which of the following possibilities apply to alternative questions in your sign language?

- both X and Y have to be stated in full, nothing can be left out: ‘Will you attend the school meeting or will your parents attend the school meeting?’
- parts of the first alternative (X) can be left out: ‘Will you (...) or will your parents attend the school meeting?’
- parts of the second alternative (Y) can be left out: ‘Will you attend the school meeting or will your parents (...)?’
- there is an ‘X or’ construction, with the second alternative completely deleted: ‘Will you attend the school meeting or?’

7.2. In the case of one positive and one negative alternative, which comes first?

- positive first: ‘Do you smoke or don’t you?’
- negative first: ‘Don’t you smoke or do you?’
- if both are possible, what’s the difference?

## Part II: Content questions

Content questions use question words to ask about specific constituents in a sentence, e.g. ‘Who is coming?’, ‘What are you doing?’, ‘Why are you angry?’. Languages differ with respect to question words and their position in the sentence.

### 1. Non-manual marking

Is there any non-manual marking for content questions in your sign language? Is it the same as or different from yes/no-question marking? Provide some graphic representation or written description of the non-manual marking.

If there is some non-manual marking, also answer the following questions:

- 1.1. Is the non-manual marking obligatory or optional?
- 1.2. What is the scope of the non-manual marking, i.e. what part of the sentence does it co-occur with?
  - the whole sentence
  - the whole sentence minus any topicalised constituents
  - the question word
  - the beginning of the sentence
  - the end of the sentence

- other

Give an example of each scope.

## 2. Question words

Which of the following question words exist in your sign language? Provide some graphic representation or written description for each of them. Please only indicate those items that can be expressed by *one* (simple or complex) sign, i.e. do not include translations consisting of several signs, such as WITH WHO, WHAT DAY etc. Also note that one sign may combine the meanings of several of these question words, e.g. a single sign for ‘what’, ‘which’ and ‘what kind of’. Indicate the range of meaning for each question sign.

who (sg and pl)	whom (sg and pl)	whose (sg and pl)	to-whom
from-whom	with-whom	what	which (sg and pl)
what-kind-of	with-what (instrument)	how-many	how-much
on-which-day	when	when (in the future)	when (in the past)
from-when-on	until-when	where	where-from
where-to	do-what	why	
how (method: how to do)		how (degree: how old)	

## 3. Position of question words

Indicate the possible positions for question words in your sign language. Also indicate whether all question signs can appear in these positions or some cannot.

- sentence-initial
- sentence-final
- after a topicalised constituent: To the station, *when* are you going?
- before/after the verb/predicate
- in situ, i.e. the question word always appears in the same place as the corresponding constituent in a statement:  
John went home at one o'clock.  
*Who* went home at one o'clock?  
John went *where* at one o'clock?  
John went home *when*?
- double question word in two positions: *Why* are you angry *why*?

Provide an example sentence for each position.

## 4. Question particle

In some languages question particles are used in content questions. The question particle indicates that the sentence is a question/content question, whereas the question word specifies what kind of content question it is. If a question particle is used in content questions in your sign language, please specify the position(s) in which it can appear. Also provide some graphic representation or written description of the sign and provide an example sentence.

## 5. Combinations with question words

5.1. Please indicate whether the following combinations are possible and provide example sentences for each possible construction.

- multiple content questions, i.e. questions with more than one question word (e.g. ‘who did what?’)
- negative content questions, i.e. a question word and some negation (negative sign, headshake etc.)
- question word and question particle (e.g. ‘who came *question-particle*’, ‘I don’t know *whether who* came’)
- repetition of the same question word (‘what what’, ‘who who’), for example for emphasis or to express plurality (‘what what = ‘what kinds of things’)

5.2. If there are such combinations, comment on the following restrictions:

- Can question words be combined freely in multiple content questions or are there restrictions? In what order do the question words appear?
- In which positions in the sentence do question word and negation appear in negative content questions? Provide an example sentence.
- Can all question words appear in combination with a negative or are there restrictions?

## 6. Other uses of question words

- Are any of the question words used as relative pronouns (a man *who* works in the bank...) or indefinite pronouns (*who/someone*, *what/something*, *where/somewhere*) in your sign language?
- Are there any formal similarities between interrogative and indefinite signs?

## Part III: Pragmatic factors for questions

### 1. Introducing questions

1.1. Which of the following possibilities is the most common or neutral way of introducing questions in your sign language:

- direct question: ‘Do you have...?’
- performative expression, i.e. actually saying that you are asking a question: ‘I ask you: Do you have...?’
- command/request: ‘Tell me whether you have...’
- indirect question: ‘I would like to know whether you have...?’

1.2. If there are non-neutral ways of introducing a question, how are they used (e.g. politeness levels, specific situations, specific addressees)

### 2. Direct and indirect questions

When reporting the question of some other person, which construction is used:

- only direct questions are possible, e.g. ‘I asked him: ‘Where are you going?’
- indirect questions are possible: ‘I asked him where he was going.’

### 3. Rhetorical questions

Rhetorical questions are questions for which the speaker does not expect any answer because he provides the answer himself or the answer is supposed to be obvious.

3.1. Are there any of the following differences between rhetorical questions and other questions:

- different non-manual marking
- rhetorical questions marker (special question particle for rhetorical questions)
- different sentence structure

Provide an example sentence of a rhetorical question.

3.2. How are rhetorical questions used?

- not used at all
- used often
- used rarely
- used often only in certain discourse types; which?

### 4. Elliptic questions

Which of the following elliptic questions (i.e. incomplete questions where part of the sentence has been left out) are possible in your sign language? Give an example.

- only a question word by itself (e.g. 'Who?', 'Why?')
- only a topic (e.g. 'My passport?', 'And your car?', 'What about John?')

### 5. Question interaction patterns

What is the basic interaction pattern for questions?

- question-answer (e.g. What's the time?-One o'clock. / Is Turkey in Europe?-Yes.)
- question-answer-acknowledgement (e.g. What's the time?-One o'clock.-Thank you. / Is Turkey in Europe?-Yes.-All right.)

## Part VI: Sentence negation

Sentence negation is the negation of an entire statement. It can be paraphrased as 'it is not the case that...', e.g. 'I don't smoke' ('It is not the case that I smoke'). All languages have some kind of sentence negation.

### 1. Non-manual negation

Is there any non-manual negative marking in your sign language (e.g. negative headshake, negative facial expression)? Provide some graphic representation or written description.

If there is non-manual negative marking, please also answer the following questions:

1.1. Is the non-manual marking obligatory or optional?

1.2. What is the scope of the non-manual marking, i.e. what part of the sentence does it co-occur with?

- the whole sentence
- the whole sentence minus any topicalised constituents
- a negated constituent
- a negative sign
- the beginning of the sentence
- the end of the sentence
- other

Give an example of each scope.

1.3. Is the non-manual negation by itself sufficient to negate a sentence or is it only used in combination with a manual negative sign?

## 2. Basic negator

Which of the following element(s) is/are used in your sign language to negate statements? What is/are the possible position(s) of the negator in the sentence? Provide an example sentence.

- negative particle (*'not'*), i.e. an independent negative sign that always stays in the same form
- negative copula (*'isn't coming'*), i.e. if the sign language has a copula ('to be'), its negative form ('not to be') would be used to negate statements
- negative auxiliary (*'hasn't come'*), i.e. if the sign language has auxiliaries, a negative form would be used; auxiliaries are 'helping verbs' carrying inflections that would otherwise be carried by the main verb; in such a construction the main verb is typically uninflected
- negative verb (*'it isn't the case that he came'*), i.e. there is a complex sentence with a negative verb in the main clause and the lexical verb in a subordinate relation
- negative noun (*'non-existence of his coming, he is a non-comer'*); this is a rare construction occurring in only a few languages
- negative affix/inflection (*-n't*); a negative affix added to all verbs (different from 'negative derivation', see 4.)

## 3. Other negators

3.1. Are there particular signs for any of the following:

- contrastive negation: this means that something is negated in contrast with something else. Rather than simply meaning 'not X', contrastive negation means 'not X, but Y' (Y may or may not be mentioned explicitly). Example: 'I don't like large cities' (without any particular context: neutral negation) vs. 'I like villages, (but) I *don't like* large cities' (indicating a contrast: contrastive negation)
- negative imperative: any particular sign used in negative commands ('don't do...'). There may be more than one negative imperative form depending on politeness level, time frame ('don't do now' vs. 'don't do in general/never do'), person (1st person: 'let's do', 2nd person: 'do!', 3rd person: 'he should do') and number (singular and plural).
- negative existential: a negative sign meaning 'there isn't', 'doesn't exist' (in sentences such as 'There aren't any mountains in Australia', 'That word doesn't

exist’)

- emphatic negation: any particular sign used to mean ‘really not’, ‘certainly not’, ‘very un...’
- negative completive aspect, indicating that something has not yet happened or is not yet complete
- negative coordination/conjunctions: ‘neither...nor’, ‘not only...but also’, ‘so that not...’,
- negative modals: ‘cannot’, ‘should not’, ‘may not’ etc.
- negative stative, expressing the concept ‘not being in a state of...’, e.g. ‘is not ill’, ‘is not red’, ‘is not dead’

Provide some graphic representation or written description and an example sentence for each negative sign.

3.2. If there is no particular sign for any of these, how is the equivalent expressed? For example, the basic negator may cover some of these functions, or a positive (existential, imperative, modal etc.) sign may be used together with the basic negator. Emphatic negation may be expressed by non-manual features or by a separate sign (‘really’, ‘very’). Contrastive negation may also be expressed by non-manual features, or by word order.

#### 4. Negative transport/raising

Negative transport/raising means that a negative is extracted out of a subordinate clause and becomes part of the main clause. It typically occur with specific verbs, e.g. ‘think’, ‘see’, ‘want’. Not all languages permit negative transport/raising.

- I *think* that John is *not* a teacher. no negative transport/raising
  - I *don't think* that John is a teacher: negative transport/raising
- Is negative transport/raising possible in your sign language?

#### 5. Negative and other categories

The choice of positive or negative may have an influence on the realisation of other categories. Typically, positive sentences will allow more choices than negatives, with some contrasts neutralised in negative sentences. For example, a language may distinguish past and perfect in positive sentences, but not in the negative, or there may be number distinctions for an existential in the positive (‘there is’-‘there are’) but not in the negative. Please state whether any category distinctions are neutralised in the negative in your sign language. These are some possibilities:

- person and number
- tense
- aspect and aspectual modification (e.g. distributive, completive)
- politeness levels
- classifiers

#### 6. Special negative constructions

##### 6.1. Negative and existential

- Is there an existential sign (or several existential signs) in your sign language?

- If so, can it/they be combined with a negative? Provide an example sentence.
- If there is a negative existential, is it used to express possession ('there isn't' = 'not have') or negative commands ('there is no smoking' = 'don't smoke')?

### 6.2. Negative and completive

- Is there a completive sign (or several completive signs) in your sign language?
- If so, can it/they be combined with a negative? Provide an example sentence.

### 6.3. Negative marking in non-negative sentences

Is negative marking ever used in non-negative contexts? For example, the negative may express that something is undesirable without actually negating the state of affairs (equivalent to saying 'something happened *unfortunately*'). Or it may be used to express the extreme quality of something (e.g. English 'priceless' means 'of extreme value', not 'free of cost'). Provide an example sentence for any nonnegative use of negatives. How is it distinguished from 'true' negation?

## Part V: Constituent negation

Constituent negation is the negation of a particular part of the sentence (see examples under 2.). Languages differ as to the extent of constituent negation they allow.

### 1. Negative derivation

In some sign languages some signs can be made negative by changing a formational aspect of the sign, e.g. adding a particular movement or changing the handshape. The result is a set of new signs with a negative morpheme incorporated into the original positive sign. Some typical sign pairs include, for example, HAVE and NOT-HAVE, WANT and NOT-WANT, CAN and CANNOT, LIKE and DISLIKE, RIGHT and NOT-RIGHT. If there are any such negative signs in your sign language, please provide a list of items and some graphic representation or written description of the negative derivational process involved. Also indicate how productive the process is (is it a closed set of items or can new signs be added easily?).

### 2. Negating constituents

Not all languages can negate constituents such as subject, object, adverb, adjective etc. in sentences such as these:

(positive:	The cat caught the mouse today.)
(sentence negation:	The cat didn't catch the mouse today.)
negated subject:	<i>No cat</i> caught the mouse today.
negated object:	The cat caught <i>no mouse</i> today.
negated temporal adverb:	The cat caught the mouse <i>not today</i> (but yesterday).

If constituent negation is possible in your sign language, which of the following possible strategies is used:

- placing a negative particle next to the negated constituent (as in the examples above)
- accompanying only the negated constituent by non-manual negation, e.g. headshake

- ‘intonation’: using the same structure as in sentence negation but stressing the negated constituent (e.g. by faster movement, tense articulation, repeated movement, facial expression)

Provide an example sentence for constituent negation.

Also indicate whether there are restrictions on which constituents can be negated and which cannot (for example, it may be possible to negate a subject, but not an object).

### **3. Negation of quantifiers/adverbs/pronouns**

Some languages have inherently negative quantifiers/adverbs/pronouns (such as nobody, nowhere, nothing, never), in others a positive item has to be combined with a negative (e.g. ‘not everybody’, ‘not ever’). Please indicate which of the following possibilities best describes your sign language and provide an example sentence. Also provide a list of any negative items.

- There are no inherently negative items. Positive quantifiers, adverbs and pronouns are combined with negation (‘Everybody not came’).

- There are inherently negative quantifiers/adverbs/pronouns. They are used in positive sentences (‘Nobody came’).

- There are inherently negative quantifiers/adverbs/pronouns. They are used in negative sentences, so that there are two negations and the sentence has negative meaning (‘Nobody not came’).

- Such negative concepts are not expressed at all and are covered by simple sentence negation, i.e. ‘I never lie’ is the same as ‘I don’t lie’, ‘Nobody came’ the same as ‘Didn’t come’, ‘We saw nothing’ the same as ‘We didn’t see’.

## **Part VI: General**

1. Please comment on any formal similarities between the following:

- Non-manual marking of questions/negatives and questioning/negative facial expressions (including head movements) as used in the surrounding hearing culture.

- Interrogative/negative signs and questioning/negating gestures as used in the surrounding hearing culture.

2. Please comment on any gender differences you are aware of in the domain of questions and negations.

3. List any conventionalised interrogative and negative phrases, i.e. phrases that are routinely used in exactly the same form in certain situations. These may include greetings (‘How are you?’), expressing suggestions (‘How about...?’), asking for someone’s opinion (‘What do you think about...?’), admonishing children (‘Don’t do that!’) etc. Please only list examples that really involve interrogative or negative sentence structures, not semantic equivalents that belong to other sentence types.



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## 2.3 Sample answers from Indo-Pakistani Sign Language

In the sample answers, all questions from the extended questionnaire are answered for Indo-Pakistani Sign Language. These sample answers were forwarded to all participants together with the respective questionnaires. The document exemplifies both content and form of answers that may be expected in response to the questionnaire. Since there are many possible ways of answering the questions, ranging in potential extent from a single sentence to a whole research article, it is useful to provide a sample of this kind to participants. In addition to the extent of detail that may be expected, the form of answers is also important to demonstrate. The sample answers use the standard transcription conventions of sign language linguistics, and different kinds of graphic representations of signs are included in the document. For technical reasons, video could not be provided together with the sample answers, although that would have been desirable.

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Sample answers to the longer questionnaire for linguists  
country/region/name of sign language: Indo-Pakistani Sign Language (IPSL),  
Karachi dialect

### Part I

1. There is non-manual marking for yes/no-questions in IPSL. It consists of wide open eyes, eye contact with the addressee and a forward head position. Eyebrow raise is optional and is mainly used in echo questions (adding emphasis to the question). The last sign in a polar question is held longer.



1.1. The non-manual marking is obligatory.

1.2. The scope is the whole sentence minus any topicalised constituents. In fact, topicalisation is achieved by moving constituents outside the scope of non-manual signals. The sentence-final predicate usually falls under the scope of non-manual marking, but all other constituents can be topicalised. If nothing is topicalised, the scope is the whole sentence.

Examples:

\_\_\_\_\_q  
HEAR YOU FIRE?  
Have you heard about the fire?

MAN WOMAN SIGN TALK HAND LITTLE DIFFERENT? \_\_\_\_\_q  
When men and woman talk in signs with their hands, is that somewhat different?

2. There are no question particles for yes/no-questions in IPSL.

3. No syntactic mechanisms are obligatory in forming yes/no-questions in IPSL. There are no word order changes and it is not obligatory to mention two alternatives.

4. 1. Negative answers to polar questions mostly involve a sign for 'no'. There are three manual signs for 'no', which are the same as the ones used in negating sentences. Neutral negative is used most often, contrastive negative and negative imperative only occur in the appropriate contexts. While negative headshake by itself is also a possible negative response, it is used more commonly to accompany a manual negative sign. Most signers do not use a manual sign for 'yes', but produce a head nod instead. However, more commonly one word or some part of the sentence is repeated in a positive response and a head nod may accompany the response.

Examples:

\_\_\_\_\_q    \_\_\_\_\_hn  
YOU HOUSE TV EXIST? - EXIST  
Do you have television at home? - Yes.

\_\_\_\_\_q    \_\_\_\_\_hn  
DEAF TEACHER GOOD? - GOOD.  
Are deaf teachers good? - Yes.

4.2. Negative polar questions are answered as in English, e.g.

YOU GO NEG? - NEG.  
Aren't you going? - No, (I'm not going).

5. Questions are never used as polite commands/requests in IPSL.

6. 1. Negative polar questions are possible in IPSL.

6.2. The neutral request for information is a positive question. I have no information on the use of negative questions.

7.1. There are few examples of alternative questions in my data. If anything, it seems that the second part can be subject to ellipsis, as in:

\_\_\_\_\_q

WOMAN INDEX HABIT GOOD BAD?

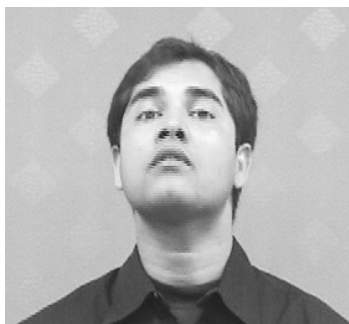
Does that woman have a good or a bad character?

Sometimes the second part appears as an elliptic sentence of its own (e.g. ‘Would you like to get married to a hearing person? Or a deaf person?’). Also note that there is no lexical sign ‘or’ in IPSL.

7.2. There are no examples of alternative questions in my data that involve a combination of a positive and a negative. This construction does not seem to be used.

## Part II

1. There is non-manual marking for content questions, and it is different from yes/no-questions. It consists of raising the eyebrows and tilting the head backwards.



1.1. The non-manual marking is obligatory.

1.2. The scope is the same as for polar questions, i.e. the whole sentence minus any topicalised constituents. The minimum scope is the sentence-final question sign, the maximum scope is the whole sentence.

Examples:

\_\_\_\_\_ wh  
MALAYSIA GO INTERROG  
Why (did they) go to Malaysia?

\_\_\_\_\_ wh  
YOU AGE INTERROG  
How old are you?

\_\_\_\_\_ wh  
YOU SIGN NAME INTERROG  
Your sign name, what (is it)?

2. There is only one question sign in IPSL (glossed INTERROG). It covers the meanings of all possible question words. The most basic meaning (when there are no other clues) is 'what'. For disambiguation INTERROG is combined with other signs, e.g. with FACE or MAN to mean 'who', with DAY or TIME to mean 'when', with PLACE to mean 'where'. Other clues for disambiguation include context and



mouth patterns.

3. INTERROG is strictly sentence final. Examples see above.

4. There are no question particles for content questions in IPSL.

5. Multiple content questions are not possible. Instead, two sentences must be used, e.g. 'Who was the man? What did he do?'

Negative content questions are not possible. Two sentences must be used, e.g. 'You didn't go home. Why?'

Repetition of the question sign INTERROG is not possible.

6. The question sign is not used as a relative or an indefinite pronoun. It is, however, similar in form to the general indefinite sign (meaning 'some, someone, sometime' etc.):



The handshape used for the interrogative sign is only used in two other signs in IPSL: the indefinite sign and a discourse particle.

### Part III

1. The neutral way of asking questions is to formulate direct questions. Sometimes a command/request expression is added at the end, e.g. 'Tell me', 'Tell me in detail'.
2. Only direct questions are used in IPSL. Indirect speech is not used for any sentence type.
3. Rhetorical questions are not formally different from other questions in IPSL.

### Part IV

1. There is a negative headshake in IPSL (repeated side-to-side headshake). There is also a facial expression that appears in some negative sentences, consisting of



the corners of the mouth pulled down and the eyes half closed:  
The meaning of this negative facial expression is not quite clear yet.

1.1. Headshake negation is optional. A manual negative sign alone can negate a sentence.

1.2. The scope of headshake negation is again the whole sentence minus any topicalised constituent.

Examples:

\_\_\_\_\_ neg  
PROBLEM NEG  
That's no problem.

\_\_\_\_\_ neg  
I FRIEND GO(distributive) NEG(contrastive)  
As for me going around everywhere visiting friends, that's not the case.

\_\_\_\_\_ neg  
I WORK NEG  
As for me, (I) don't work.

1.3. Non-manual negation can negate a sentence by itself.

1.4. Combining manual and non-manual negation is the most common way to negate a sentence.

2. The basic sentence negator is a sentence final particle NEG. It follows the predicate



(in sentences without particles the predicate is in final position).

Example:

INDEX PROGRESS NEG.

They are not making any progress.



contrastive negation



negative imperative

3.1. There are two other negators: one for contrastive negation and one for the negative imperative. These two signs are also sentence final particles.

Examples:

VILLAGE GOOD. CITY NEG(contrastive)

Villages are good. (But) cities are not.

ARGUE NEG(imperative)

Don't argue (with each other).

There are no particular signs for negative existential, emphatic negation, negative completive, negative stative, negative conjunctions and modals (though Indian dialects of IPSL do have a negative existential particle).

3.2. For negation of existential, completive and stative sentences the basic negator (NEG) is used. Emphasis may be conveyed by 'intonation': making larger movements with the head for the headshake, adding a second hand to NEG, repeating the movement in the NEG sign more often.

4. Negative transport/raising is not possible in IPSL.

5. Completive and existential sentence types are expressed in positive sentences only. In negative sentences the basic negator is used in all cases. In the imperative there are three forms for the positive depending on the politeness level and on whether the command is to be executed at the moment or later. The negative imperative only has a single form and does not make any of these distinctions.

6.1. There is an existential sign in IPSL. It cannot be combined with a negative. The basic negator NEG is used in the negative.

Example:

I OFFICE TELEPHONE EXIST. ‘There is a telephone in my office.’

\*I OFFICE TELEPHONE EXIST NEG

I OFFICE TELEPHONE NEG. ‘There is no telephone in my office.’

The positive existential can express possession, so negative possession can be expressed by NEG (The sentence above can also mean ‘I don’t have a telephone in my office’). Positive and negative commands can only be expressed by imperatives, not by existentials.

6.2. There is a completive sign in IPSL. It cannot be combined with a negative. The basic negator NEG is used in the negative.

Example:

WORK FINISH COMPL ‘The work has been completed.’

\*WORK FINISH COMPL NEG

WORK FINISH NEG ‘The work hasn’t been completed.’



existential



completive

6.3. A negative headshake can be used in a non-negative context to indicate that something is problematic or undesirable. It roughly corresponds to the English adverb ‘unfortunately’ in this context.

Example:

           neg  
I WORK REST

Unfortunately, I am unemployed.



Negative manual signs are not used in non-negative functions. The headshake in non-negative function is distinguished from a truly negative headshake by scope (it usually accompanies the whole sentence and often starts before the first manual sign), by an appropriate facial expression, or by context. It is also executed more slowly than a truly negative headshake and extends over a comparatively longer period of time.

## Part V

1. Constituents cannot be negated in IPSL. Only predicates can be negated. However, all signs from open lexical classes can function as predicates, so the equivalent to negating constituents is to just put the appropriate sign into predicate position.

Examples:

MAN STEAL THREE NEG, (FOUR).

The robbers were not three, (they were four).

THREE MAN STEAL NEG, (BORROW).

The three men didn't steal, (they borrowed).

STEAL MAN NEG, (WOMAN).

The robbers weren't men, (they were women).

2. There is no negative derivation in IPSL.

3. There are no inherently negative signs in IPSL. Negative quantifiers/adverbs/pronouns are mostly not expressed at all and are covered by basic sentence negation. The quantifiers ALL and MANY can combine with negation.

Examples:

I SEE NEG.

I didn't see (anything). I saw nothing.

COME NEG.

(He/someone/they) didn't come. Nobody came.

MAN ALL GOOD NEG.

The men are all unfriendly (not-good).

## Part VI

1. Negative headshake is used for negation by hearing people in India/Pakistan. Eyebrow raise and backward head tilt is used as a questioning facial expression by hearing people.

The question sign INTERROG has a cognate questioning gesture used by hearing people. The negative signs NEG, NEG(contrastive) and NEG(imperative) are also used as corresponding gestures by hearing people, but not necessarily with exactly the same meaning as in IPSL.

2. I am not aware of any gender differences.

3. Conventionalised questions:

\_\_\_\_\_ wh

PROFIT INTERROG?

What use is that?/That's no use. (rhetorical question)

\_\_\_\_\_ q

HEALTH EXIST?

How are you?

\_\_\_\_\_ wh

YOU NAME INTERROG?

What's your name?

\_\_\_\_\_ wh

YOU AGE INTERROG?

How old are you?

\_\_\_\_\_ wh

YOU WORK INTERROG

What do you do?

\_\_\_\_\_ q

YOU DEAF?

Are you deaf?

\_\_\_\_\_ q

UNDERSTAND EXIST?

Do/did you understand (what I say/said)?

\_\_\_\_\_ wh

TALK INTERROG?

What is/are you/they/he etc. saying/talking about?

---

Conventionalised negatives:

\_\_\_\_\_ neg  
PROBLEM NEG  
No problem!

\_\_\_\_\_ neg  
PROBLEM NEG(contrastive)  
No problem!

\_\_\_\_\_ neg  
UNDERSTAND NEG  
(I/you/he/they) don't understand.

\_\_\_\_\_ neg  
NEG(imperative)  
Don't do that!

\_\_\_\_\_ neg  
MUCH NEG, FEW  
Not much/many, only a little/few.

## Subject index

- A-not-A construction 20, 25, 184, 208
- adjunct questions 213, 215
- affirmative responses to questions 87, 123, 125f, 170, 202-204, 207
- affix (*see also* prefix; suffix) 38, 50f, 56, 68, 216
- alternative questions 98f, 102, 133, 183, 185
- ambiguity 73, 89f, 95, 140, 192, 203-205, 206, 268
- American Sign Language 14, 18, 20, 23, 39, 42, 70, 81, 86, 91, 94, 145f, 165ff, 239, 261, 279, 306, 316, 319
- areal typology and areal features 15, 19, 25, 43, 44, 45, 148, 319, 322
- aspect (*see* completive aspect)
- Auslan (Australia) 19, 70, 72, 73, 77, 79-81, 90
- Australasian Signed English 19, 70, 72, 77, 90
- Bali (*see* Kata Kolok)
- basic clause negator (*see also* negative particles) 20, 24, 47ff
- Belgium, sign language (*see* Vlaamse Gebarentaal)
- Brazil, sign language (*see* Língua de Sinais Brasileira, LSB)
- British Sign Language 18, 34, 70, 72, 77f, 81-83, 165, 230, 260
- Cantonese 20, 202, 204, 206-209, 213, 215, 217, 221, 224
- Chinese 19, 93, 204
- Chinese Sign Language 81, 195, 198, 260
- clause negators (*see also* lexical negators)
- paradigms of 19, 30, 47ff, 115, 148ff, 188ff, 217ff, 245ff, 295ff, 317ff, 321
- syntactic positions of 65f, 86f, 148, 152, 157, 186, 202, 216, 221, 296, 319
- clitic(isation) 20, 38, 45, 51, 148f, 160, 162, 164, 176
- enclitic 68
- negative clitic 53, 68
- proclitic 68
- command, polite (*see also* pragmatics in interrogatives) 29, 60, 182, 281, 293, 297
- complex interrogatives (*see also* question words) 23, 276, 277, 310, 312, 314ff
- compound(ing) 93, 104, 105, 107, 182, 190, 193, 205f, 210
- completive aspect (*see also* negative completive) 60, 64, 87, 120, 189, 298
- content questions (*see also* negative questions) 29, 41f, 75, 77f, 102ff, 136ff, 159, 162, 171ff, 184, 210ff, 224, 232ff, 287, 290ff
- non-manual marking of (*see* non-manual marking in polar/content questions)
- content question words (*see* question words)
- contrastive negative (*see also* negative particles) 49, 155f, 317, 320
- conventionalised interrogative expressions 79, 142, 196
- covert (elided) wh-markers 179

- 
- cross-linguistic studies 14, 26, 28, 29  
     large-scale studies 13, 28  
     methodology 13, 14, 16, 36  
     sampling 14f, 25, 34
- deaf communities 15, 33, 269, 303, 308  
 “deaf villages” 27, 33  
 denial/disavowal, expression of 19, 82  
 Denmark, sign language 209  
 derivation of interrogative signs (*see also* question words) 19, 20, 139, 142, 174-176  
 descriptive data (*see also* cross-linguistic studies, methodology) 127, 227, 286  
 Deutsche Gebärdensprache (Germany) 42, 49  
 diachronic change (*see* historical change)  
 dialect 18, 23, 34, 63, 70, 72, 91, 93, 95, 119, 128, 157, 165, 258, 270, 284, 303ff  
 double particle construction 67  
 doubling of constituents 20, 78, 86, 145, 146, 274, 292, 317  
 Dravidian 303, 305  
 Dutch 225, 229, 232, 233, 236
- East Asia 25, 51, 61  
 Eastern Mediterranean region, negative head movements 21, 42, 45, 148, 164, 269  
 elicitation of data (*see also* cross-linguistic studies, methodology) 33, 35-37, 131, 163, 167, 174, 227, 308  
 ellipsis 279, 280  
 embedded question 22, 98, 172, 176, 266, 278ff  
 emphatic negation 49, 61, 82, 85, 153, 248, 295, 296, 321  
 enclitic (*see* clitic)  
 English 36, 74, 77, 79, 84, 86, 88, 93, 96, 104, 111, 121, 152, 159, 170, 176, 180, 183, 185, 190, 191, 195, 196, 206, 218, 279  
 existence/existential (*see also* possession) 19, 56, 88, 115, 121f, 149-152, 170, 188, 206f, 209, 218, 249, 300, 317-319  
 eyebrow position 40, 41, 100-103, 125, 132f, 137f, 168, 195, 230, 232, 260, 261, 269, 271f, 278, 282, 286f, 309f
- facial expressions (*see also* non-manual marking in negatives; non-manual marking in polar/content questions) 24, 29, 39, 110, 133, 138, 140, 167, 201, 244, 255, 261, 275, 281, 293, 294, 297  
 Finnish 285, 293  
 Finnish Sign Language 22, 56, 209, 286  
 Flemish Sign Language (*see* Vlaamse Gebarentaal)  
 Focus 204, 239, 274  
 France, Langue des Signes Française (LSF) 165, 270

- general/generic interrogative (*see also* question words, paradigm of) 22, 77-79, 80f, 85, 90, 133, 141, 276-278, 310-313, 322
- gesture (*see also* hearing community, use of gestures) 19, 26, 29, 90, 195f, 269, 322
- gestural origins of negative/interrogative signs 77, 85, 112, 135, 140, 195, 236, 288, 310, 319, 320, 322
  - non-manual gestures 19, 216, 269, 310
  - “palm(s)-up” gesture/sign 135, 159f, 178f, 195, 230, 237f
  - regional gestures 322
- Germany (*see* Deutsche Gebärdensprache)
- Greek Sign Language 21, 23, 82, 148
- head nod 83, 88, 100, 123f, 170f, 202, 231, 281, 282
- head movements
- side-to-side headshake (*see* headshake)
  - backward head tilt (*see* non-manual marking in negatives)
  - head turn (*see* non-manual marking in negatives)
  - in answers to polar questions 123f, 125f, 281
  - in interrogatives (*see* non-manual marking in content/polar questions)
- headshake 20, 21, 25, 38, 42ff, 72, 75f, 81, 83ff, 110f, 123f, 126, 136-138, 153, 155ff, 161-163, 170, 186f, 191, 193, 195f, 216, 221f, 231, 240, 241-244, 252, 260f, 263, 269, 281, 288, 292, 294, 317, 319, 322
- hearing communities and cultures (*see also* gesture) 19, 26, 72, 85, 86, 95, 123, 140, 148, 195f, 244, 269,
- Hindi 305
- historical change 15, 18, 26, 53, 70, 90, 97, 184, 193, 306
- and dialects, in interrogatives (Indo-Pakistan) 314f
  - ‘old’ and ‘new’ paradigms (New Zealand) 19, 77ff, 84f, 90
- historical relationships between sign languages 15, 26, 70, 165, 270
- Hong Kong Sign Language 20f, 44, 45, 198
- Icelandic Sign Language 58
- incomplete aspect (*see* negative completive)
- indefinite
- indefinite facial expression 275
  - indefinite signs 181, 236, 256, 275
  - relationship between indefinite and interrogatives signs 19, 80f, 181, 293
- indefinite interrogative (*see* general/generic interrogative)
- index (*see also* pronoun) 97, 100f, 102f, 110, 121, 134, 136, 148, 162, 191, 229f, 233, 310
- Indian Subcontinent 17, 21, 303, 305f, 309, 319, 321f
- Indo-Pakistani Sign Language 22f, 36, 39, 40f, 61, 63, 67, 145, 146, 155, 303ff
- inherently negative signs 81, 120, 191, 194, 301
- initialisation 94, 184, 234

- 
- in-situ 109f, 146, 172, 176-178, 180, 213, 215, 224, 291  
 interrogative signs (*see* question words)  
 interference 36, 37, 131, 308  
 irregular negative (*see also* morphological negation; negative suppletion) 30, 51, 60, 62  
 Israeli Sign Language 60
- Japanese 19, 110, 121, 126, 170, 181, 196  
 Japanese Sign Language, JSL 19, 25, 26, 41, 42, 44, 91ff, 176, 195, 209
- Kata Kolok (Bali) 27, 33, 44f, 49f, 55  
 Korea (*see* South Korean Sign Language)
- language family 14f, 19, 26, 70, 72, 91, 128, 305  
 Langue des Signes Québécoise, LSQ 48, 161, 260  
 lexical negators (*see also* clause negators; negative particles) 80, 84, 111  
 Língua de Sinais Brasileira, LSB (Brazil) 22, 270ff
- manual dominant system of negation 25, 26, 43-46, 161-163, 164  
 modality (*see* signed vs. spoken languages)  
 modals 59, 182, 190, 203, 216, 220, 274, 283, 319  
     modal auxiliaries and negation 21, 44, 251ff, 256  
     negative modals 21, 58, 60, 61, 154, 190, 203, 216, 219f, 222f, 251-254, 298  
 morphological negation (*see also* irregular negative) 117, 319  
     in signed vs. spoken language 26, 65f  
     typology of 49-54  
 mouthing 73, 78, 80, 90, 95, 107, 112, 116, 136, 140, 202, 206, 233, 261, 297  
     in negation and question signs 90, 110, 136, 141, 142f, 145, 217, 301  
 mouth gesture 82, 244, 261  
 movement synchronisation of head and hand 263, 265, 267  
 multiple clause negation 66, 157  
 multiple content (wh-) questions 21, 73, 180, 239, 256, 274, 292
- negative adverb 55, 194, 301  
 negative completive (*see also* completive aspect) 60, 87, 188, 298, 321  
 negative existential 24, 38, 56, 59, 61, 65, 88f, 121, 149-152, 160, 188, 249, 296f  
 negative handshake 21, 222f  
 negative imperative 48, 84, 114, 189, 297, 317, 321  
 negative incorporation 21, 251, 255, 256, 261, 265  
 negative modal (*see* modals)  
 negative particles 25, 26, 46-49, 295, 317, 319  
 negative possession 88, 89  
 negative pronoun (*see also* pronoun) 47, 84, 85, 88, 302, 321

- negative quantifier 18, 157, 194, 216, 301, 319
- negative questions 75, 89, 171, 240
- negative content questions 76, 147, 171, 240, 292
  - negative polar questions 75, 125, 240
  - negative questions, answers to 111, 124, 125f, 152, 170f, 202, 231, 241, 281
- negative responses to questions 122f, 202, 203, 207, 231, 280
- negative signs (*see* lexical negators)
- negative suppletion (*see* suppletion)
- New Zealand Sign Language 18f, 34, 70ff
- Nihon Shuwa, Japan (*see* Japanese Sign Language, JSL)
- non-concatenative morphology (*see* simultaneous morphology)
- non-interrogative signs used as question words 20, 79, 107, 139, 143f, 147, 174, 234, 236, 290, 293
- non-manual dominant system of negation 26, 43-46, 52
- non-manual marking
- grammatical constraints on 39ff, 51, 56, 90, 94, 98, 126, 195
  - in polar/content questions 20, 40-42, 83, 74f, 95, 98, 100, 102f, 107, 125, 132-134, 136-138, 143, 145-147, 168, 171f, 185, 204, 212, 215, 222, 230, 232, 238, 239, 240, 271-273, 286-288, 309f
  - in negatives (*see also* headshake, head movement) 42-46, 61, 81, 111, 147, 148ff, 158, 160ff, 164, 216, 221f, 260ff, 275, 294f
  - scope of 39, 41f, 45f, 74, 83, 90, 101, 104, 111, 133, 137, 146f, 149, 158f, 160-163, 167f, 172, 186, 204f, 206-208, 212f, 221f, 224, 241f, 265f, 272f, 275, 286f, 295
- number, inflection for 150
- Old French Sign Language 184
- older vs. younger signers (*see also* diachronic change) 19, 73, 77f, 84, 90, 173, 184, 190, 196, 221, 234
- Ottoman signing 128, 163, 164
- pairs of signs, opposite and positive-negative 21, 117, 119, 193, 223
- “palm(s)-up” gesture/sign (*see* gesture)
- person, inflection for 19, 78, 85, 150
- phonological harmony (*see* movement synchronisation of head and hand)
- polar question (*see also* negative questions) 29, 40, 73, 74, 100-102, 132-136, 168-171, 195, 200-209, 229, 271f, 281, 286, 309
- manual marking of (*see* question particle)
  - non-manual marking of (*see* non-manual marking in polar questions)
- politeness (*see also* pragmatics in interrogatives) 22, 29, 78, 97, 152, 182, 231, 268, 281-283, 293, 297
- possession (*see also* existence/existential, negative possession) 56, 78, 86, 88f, 121, 151, 174, 207, 218, 249, 317



- 
- pragmatics in interrogatives (*see also* command, polite; politeness) 22, 29, 60, 78, 93, 97f, 100, 122, 152, 182, 268, 271, 280, 283, 309, 318, 321  
     answering questions (*see* negative responses to questions; affirmative responses to questions; responses to negative questions)  
     introducing questions 29, 122f, 182  
     question particle (*see* question particle, pragmatics of)  
     and non-manual marking 74, 103, 168, 269, 287, 294  
 prefix 68  
 proclitic (*see* clitic)  
 pronoun (*see also* index, negative pronoun) 19, 80, 83, 85f, 101, 110, 121, 229, 251, 256, 293, 301  
     position in interrogatives 73, 90, 101, 134  
 prosody 236, 237, 283  
 pseudo-cleft sentences 238  
  
 Q-signs, Hong Kong Sign Language (*see also* question particles) 205, 207f, 209, 224  
 “question mark” sign/gesture 236, 237  
 question particles 19, 20, 25, 29, 97-100, 107, 126, 236, 238, 286, 288f, 290f  
     definition for sign languages 236  
     in East Asia 25, 61  
     and non-manual marking 98, 169, 288  
     pragmatics of 126, 135, 168, 209  
 question words (*see also* general/generic interrogative; complex interrogatives; derivation of interrogative signs) 29, 54-58, 77ff, 104ff, 139ff, 164, 172ff, 210ff, 234ff, 273ff, 290ff, 310ff  
     paradigm of 19ff, 29, 77, 80, 90, 93, 139, 143f, 164, 235, 271, 273, 290, 310, 314, 316  
     syntactic position of 20, 65, 144-147, 213, 271, 273, 291, 312, 317  
  
 regional variation 21, 22, 228f, 234, 244, 256, 270, 303ff, 312  
 relative pronoun 275, 293  
 rhetorical questions 40, 83, 120, 124f, 130f, 181, 183, 239  
 Russian 36, 180  
 Russian Sign Language 42, 66, 260  
  
 sampling (*see* cross-linguistic studies)  
 scope/spread of non-manual marking (*see* non-manual marking, scope of)  
 semantics 19, 56, 77-79, 84, 86, 87, 90, 112, 114, 117, 126, 153, 154, 164, 185, 209, 246, 254, 256, 269, 283, 299, 317  
 sign language typology 14, 16, 25ff, 28, 30, 35, 37, 38, 54  
 signed codes for spoken languages  
     Australasian Signed English 19, 70, 72, 77, 90  
     Signed Dutch 229, 234

- Signed Cantonese 205, 207
- Signed English 77, 85, 88, 89, 184
- Signed Finnish 172, 184
- Signed Japanese 19, 94, 95, 98
- Signed Mandarin 36
- signed vs. spoken languages 27, 29, 151, 317
- Sinitic 19, 20, 25
- sociolinguistics 19, 20, 72, 90, 98-100, 127, 268
- South Korean Sign Language 50, 68, 91, 93, 209
- Spain, Lengua de Señas Española 65, 209
- speech acts 182
- split interrogative 23, 315, 316
- suffix 68, 164, 223
- suppletion 26, 30, 48, 49-53, 117, 119, 122, 150f, 319
- Swedish Sign Language 44, 163, 216
  
- tag questions 74, 206, 208f, 241, 281
- Taiwanese Sign Language 91, 93, 209
- Thai 36
- Thai Sign Language 57, 81
- topicalisation 41, 46, 83, 101, 104, 111, 146, 161, 168, 172, 176, 186, 196, 204, 232, 242, 252, 272, 273, 274, 291, 292, 294
- Turkish 147, 150, 151, 152, 157, 160, 164, 269
- Turkish Sign Language (Türk İşaret Dili, TİD) 19f, 21, 40, 41, 44, 45, 68, 128ff, 209
- tremolo movement 97, 102, 103, 107
- typological linguistics 29, 35, 38
  
- Ugandan Sign Language 41, 57
  
- Vlaamse Gebarentaal (Flanders, Belgium) 21, 25, 225ff, 260
  
- wh-phrases vs. wh-words 172, 176f
- wh-questions (*see* content questions)
- word order 36, 79, 86, 144f, 196, 200, 201, 204f, 209, 213, 224, 256, 272, 280
  
- yes/no-questions (*see* polar questions)

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