DE GRUYTER
MOUTON

Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, Markus Steinbach (Eds.)

SIGNGRAM BLUEPRINT

A Guide to Sign Language Grammar Writing

We gratefully acknowledge the financial support of the Horizon 2020 Framework Programme of the European Union

Current grammatical knowledge about particular sign languages is fragmentary and of varying reliability, and it appears scattered in scientific publications where the description is often intertwined with the analysis. In general, comprehensive grammars are a rarity. The SignGram Blueprint is an innovative tool for the grammar writer: a full-fledged guide to describing all components of the grammars of sign languages in a thorough and systematic way, and with the highest scientific standards.
The work builds on the existing knowledge in Descriptive Linguistics, but also on the insights from Theoretical Linguistics. It consists of two main parts running in parallel: the Checklist with all the grammatical features and phenomena the grammar writer can address, and the accompanying Manual with the relevant background information (definitions, methodological caveats, representative examples, tests, pointers to elicitation materials and bibliographical references). The areas covered are Phonology, Morphology, Lexicon, Syntax and Meaning. The Manual is endowed with hyperlinks that connect information across the work and with a pop-up glossary.
The SignGram Blueprint will be a landmark for the description of sign language grammars in terms of quality and quantity.

J. Quer; **C. Cecchetto**; **C. Donati**; **C. Geraci**; **M. Kelepir**; **R. Pfau**; **M. Steinbach**

De Gruyter Reference

Approx. 650 pages

Hardcover:
RRP *€ [D] 149.95 / *US$ 172.99 / *GBP 122.99
ISBN 978-1-5015-1570-5

eBook:
Open Access
PDF ISBN 978-1-5015-1180-6
EPUB ISBN 978-1-5015-1608-5

Date of Publication: November 2017

Language of Publication: English

Subjects:
Theoretical Frameworks and Disciplines ▸ Linguistic Typology
Theoretical Frameworks and Disciplines ▸ Sign Languages

Of interest to: Researchers in Sign Language Linguistics, Descriptive Linguistics, Theoretical Linguistics, Grammaticography

*Prices in US$ apply to orders placed in the Americas only. Prices in GBP apply to orders placed in Great Britain only. Prices in € represent the retail prices valid in Germany (unless otherwise indicated). Prices are subject to change without notice. Prices do not include postage and handling if applicable. Free shipping for non-business customers when ordering books at De Gruyter Online. RRP: Recommended Retail Price.

SignGram Blueprint: Manual

A Guide to Sign Language Grammar Writing – Manual

Edited by
Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach (scientific directors)
With the collaboration of Brendan Costello and Rannveig Sverrisdóttir

SignGram Blueprint

SignGram Blueprint

A Guide to Sign Language Grammar Writing

Edited by
Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach (Scientific Directors)

With the collaboration of Brendan Costello and Rannveig Sverrisdóttir

cost
EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

Funded by the Horizon 2020 Framework Programme of the European Union

DE GRUYTER
MOUTON

ISBN 978-1-5015-1570-5
e-ISBN (PDF) 978-1-5015-1180-6
e-ISBN (EPUB)

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.
For details go to http://creativecommons.org/licenses/by-nc-nd/3.0/

Library of Congress Cataloging-in-Publication Data
A CIP catalog record for this book has been applied for at the Library of Congress.

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at http://dnb.dnb.de.

© 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by Walter de Gruyter GmbH, Berlin/Boston
The book is published with open access at www.degruyter.com.

Typesetting: Compuscript Ltd., Shannon, Ireland
Printing and binding: CPI books GmbH, Leck
Printed on acid-free paper
Printed in Germany

Introduction: Letter to the grammar writer

The SignGram Blueprint is a tool designed to guide language specialists and linguists as they write a reference grammar of a sign language. This tool consists of two main components: the Checklist and the Manual.

The Checklist contains a list of linguistic constructions and phenomena that a sign language grammar should contain. Thus, it can be considered as a suggestion for the table of contents of the reference grammar to be written.

The Manual, on the other hand, guides the grammar writer in four ways, by providing:

(i) basic, background information on the linguistic constructions and phenomena listed in the Checklist;
(ii) guidelines on how to identify and analyze these grammar points;
(iii) suggestions for data elicitation techniques and materials; and
(iv) relevant bibliographic information that the grammar writer can consult during his/her research.

The Manual also contains a separate sub-component, the Glossary, which provides the definitions of certain linguistic terms used in the Manual.

In the following, we describe in more detail how the grammar writer can use the components of the Blueprint. However, before we move on to that, we would like to explain the context in which the Blueprint has been created, the reasons that lead us to think it is needed, and the choices we have made while writing it. We start by briefly discussing what grammar writing involves and then continue with describing the structure of the Blueprint in more detail.

Grammatical descriptions, why?

Sign language research has advanced rapidly over the past few decades, but it still faces an important stumbling block: the grammatical descriptions available for specific sign languages are incomplete and of varying reliability. Complete, thorough descriptions of sign languages are lacking, and this obviously has negative consequences – not only for the linguist studying a certain phenomenon (lack of knowledge about a certain undescribed aspect of the grammar might lead to a wrong characterization of a different, but related aspect), but also for a whole range of professionals who must rely on a comprehensive description of the language, such as sign language teachers of deaf children, trainers of sign language interpreters, teachers of sign language as a second language, clinicians involved in diagnosing language impairment and language pathologies, and speech therapists assessing language competence.

DOI 10.1515/9781501511806-001, © 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.

Writing a grammar may serve very different goals, but no matter what type of grammar is intended, the content should be as accurate and comprehensive as possible. The SignGram Blueprint is an attempt at helping the grammar writer achieve this goal. However, the form of the final grammar will, of course, depend directly on the goal that the grammar writer has set. A reference grammar of a language, which intends to be exhaustive, is a very different product, both in terms of depth and presentation, from a didactic grammar meant as a support for language learning. Therefore, the Blueprint must be considered as a tool that the grammar writer needs to adapt to his or her needs.

It should be kept in mind that the Blueprint can also be useful to describe partial aspects of grammar, for instance in graduate thesis projects, and thus does not need to be implemented in its entirety. Nevertheless, when a basic grammatical description of a language is lacking, it is sometimes hard to describe phenomena in isolation. Therefore, cooperative work should be encouraged to produce comprehensive grammatical descriptions of sign languages, which are very much needed.

How to use the Blueprint

As mentioned above, the Blueprint has two main components: the Manual and the Checklist. The Manual has seven parts. A part covering the Socio-historical background is followed by six parts corresponding to the major components of grammatical knowledge: Lexicon, Phonology, Morphology, Syntax, Semantics, and Pragmatics. Each part starts with an introductory chapter explaining the function of the linguistic component under investigation (e.g. Morphology), the organization of the part, and suggestions on how to use it.

Subsequent chapters and major sections within each part also contain introductory subsections providing background information including definitions, classifications, and suggestions on how to overcome the methodological and analytical challenges the grammar writer might face. The remaining subsections in each chapter contain guidelines for identification and analysis of the grammar points. These are often followed by a section on Elicitation Materials. This section contains methodology and material suggestions for data elicitation. Each chapter ends with a list of bibliographic references of the literature that addresses these grammar points – be it from a general perspective of for a specific sign language.

The aim of the Manual is to guide the grammar writer in providing the descriptions of the grammar points listed in the Checklist. To make this tool user-friendly, we have striven to maintain a one-to-one correspondence between (sub-)headings in the Checklist and (sub-)headings in the Manual. The grammar writer can read the Manual as if it were an independent book or she/he can click on a heading in the Checklist to access the relevant information in the Manual. To demonstrate how the Manual may provide guidelines for the identification of a specific construction or phenomenon,

AQ: This needs to be checked

let us give an example. The Morphology Part of the Checklist contains the heading '2.1.2.1. Noun-verb pairs'. This corresponds to the heading '2.1.2.1. Noun-verb pairs' in the Morphology Part of the Manual. In this subsection of the Manual, it is explained that a 'noun-verb pairs' heading in a reference grammar might be useful, since a morphological process by which action verbs can be derived from object nouns (say the verb SIT from the noun CHAIR) is attested in many sign languages. Representative examples of this morphological process from actual sign languages are given, and tests that can be used to distinguish the noun from the related verb are suggested. Finally, this subsection of the Manual contains the most relevant bibliographical references that deal with this phenomenon.

The Checklist and the Manual are offered as a suggestion and as a guide, but of course, it is up to the grammar writer to decide whether the relevant subsection makes sense in the grammar of the sign language he or she is describing. For example, if the morphological process by which verbs are derived from nouns is absent in that sign language, this section might be safely skipped. But if the grammar writer aims at putting his or her grammatical description in a typological perspective, he or she might opt to refer to the absence of such a process by contraposition to the languages that are mentioned to have it in the Manual. When developing the actual grammar for a given sign language, the grammar writer might want to depart from the structure proposed in the Checklist for a variety of reasons, both practical and conceptual. In fact, at various points of the Manual explicit suggestions are made for an alternative organization of the grammar.

In general, we expect that while the most general headings should be relevant for all sign languages (say, '1.2. Interrogatives' in the Syntax Part of the Checklist and the Manual), more specific sub-headings might be relevant only for a subset of sign languages. For example, '1.2.3.6. Split between the *wh*-sign and its restriction' is needed only for those sign languages in which an interrogative sign corresponding to 'which' can be separated from its restriction, say a noun like 'book'.

Also, note that the different parts of the Checklist and the Manual such as Syntax and Morphology are internally structured with an independent numeration. We hope that the independence of each part will help the grammar writer who might be interested in describing just a single component, say only the morphology or the syntax of the sign language studied.

Since we hope the Blueprint will be used by a wide range of language specialists, we have made an effort to keep the language as accessible as possible, and have tried to avoid technical, linguistic jargon. We have worked under the assumption that the 'grammar writer', who is the main target user of the Blueprint, does not need to be a professional linguist, although we assume familiarity with basic linguistic notions and grammatical concepts specific to sign languages. We also assume that he or she is acquainted with one or more sign languages.

The Blueprint is a product of several authors. However, we made all possible efforts to harmonize the style. For example, a potential source of confusion can be

generated by the use of the term 'word' or 'sign' for the lexical unit of a sign language. As a rule of thumb, we used the term 'sign' except for linear order facts and some prosodic or morphological descriptions where the terms 'prosodic word', 'word order', and 'word-internal' will be used.

The Blueprint helps the reader with linguistic terminology in two ways: one is the Glossary. A number of linguistic terms in each section is automatically linked to the Glossary. The full list of glossary entries can also be found at the end of the Manual.

The other helpful tool is the cross-referencing between sections and parts of the Manual by means of hyperlinking. Typically, if there is a term/concept used in a section where it is mentioned but not described, a hyperlink connects it to the section where it is explained. In other cases, the section where one set of properties (for instance, syntactic properties) of a phenomenon is discussed is linked to another section where another set of properties (for instance, prosodic properties) are addressed. This will equip the grammar writer with a wider background knowledge on the topic and enable him/her to approach it from more than one angle if she/he intends to do so.

We mentioned that, in most cases, there is a one-to-one correspondence between the Checklist and the Manual. However, there are cases in which this correspondence does not hold. These cases are due to the fact that the Checklist contains only the list of linguistic features that should be described in a grammar. Therefore, the sections of the Manual that are more methodological in nature (typically, the introductory sections in chapters and major sections devoted to definitions, methodological and analytical challenges, elicitation materials, and references) do not have a correspondence in the Checklist. However, these methodological sections are numbered in a special way, so that they do not obstruct the parallel structures of the Checklist and the Manual.

The second area in which the one-to-one correspondence does not hold is due to a basic choice we made when we decided on the general design of the Blueprint. We believe that traditional grammars, even the most complete reference grammars available for better-studied spoken languages, tend to neglect the dimension of meaning. It is instructive in this regard to notice that in the average descriptive grammar, no comprehensive section is devoted to semantics and pragmatics; rather, the discussion of meaning aspects is usually distributed across sections describing formal aspects such as lexicon, morphology, or syntax.

We think that these traditional choices do not reflect recent linguistic achievements about the semantics and pragmatics of natural languages (spoken or signed). In addition, the traditional structure typically leads to a blending of formal and functional categories in the grammatical descriptions. One typical example is temporal categories. In many languages, the (formally unmarked) verbal present tense form is not only used to refer to the present but also to refer the future (and sometimes even to the past). Therefore, the grammatical category of tense must not be conflated with the semantic notion of tense. For this reason, we have devoted an entire part of the Blueprint to the elucidation of concepts related to meaning.

We present a couple of illustrative examples of why having fully developed Semantic and Pragmatics parts can be useful. The first still involves the 'tense' category. Some traditional grammars tend to conflate the discussion of tense and aspect, especially in languages in which the same morpheme express both a tense and an aspect specification. Unlike more traditional grammars, the Manual includes two sections in which these concepts are explained from a formal perspective and a meaning perspective. As the sections on tense and aspect are already present in the Morphology part (form) of the Checklist, in order to avoid a duplication, there is no Semantics part (meaning) in the Checklist, but the relevant semantic notions are displayed in the Semantics part of the Manual for the grammar writer as important background information for investigating their potential morphological realizations in the target language.

Similarly, a section called 'conditional clauses' is only present in the Syntax part of the Checklist describing possible formal aspects of such clauses. Nevertheless, the Manual contains a section in the Semantics part about the meaning of conditionals, since we think that a proper description of this construction cannot leave out the meaning dimension. However, other aspects of meaning, especially those related to pragmatic aspects of meaning such as discourse structure, figurative meaning, and communicative interaction, do have a counterpart in the Checklist, because it is justified to have them as free-standing sections in a descriptive grammar. Since all semantic concepts are also addressed from a formal perspective in the Lexicon, Morphology, and Syntax parts, the Checklist does not contain a part on Semantics. By contrast, the part on Pragmatics discusses aspects of meaning beyond the sentence level and is therefore included in the Checklist. With the general move to treat semantic and pragmatic aspects on an equal footing with other grammar components, we mean to boost description and analysis of semantic and pragmatic properties in signed languages, which have lagged behind until quite recently.

Methodological choices

We mentioned previously that we have adopted a plain, non-technical style, and that it is our hope that non-professional linguists will also be able to use the Blueprint. However, we must stress that this choice is not due to an anti-theoretical or anti-formalist attitude. On the contrary, the scientific directors of the Blueprint are all formal linguists who are convinced that no adequate empirical description is possible without the lens provided by modern linguistic theories. An a-theoretical description does not exist. What is considered a-theoretical is often a description that assumes commonsense, naïve conceptions, instead of more sophisticated notions from current linguistic theories that invariably help sharpen the empirical description. Therefore, the organization of the Checklist and the content of the Manual *is implicitly* theory-driven. Although the specific analyses that informed our choices are not at the center

of the stage, they can be retrieved by looking at the references that close each chapter of the Manual. This sometimes has a relative influence on the terminological choices made here (for instance, the term 'agreement verb' is used), but alternative denominations existing in the literature are also mentioned ('directional' or 'indicating verbs' for the example at hand).

A question that naturally arises when one projects a skeleton for sign language grammars is to what extent this should be similar to a grammar for spoken languages. The issue is tricky, even more so because no comprehensive reference grammar for any sign language exists yet. We have started from the assumption that sign languages are the products of the same language faculty that gave rise to spoken languages. So in principle, the main analytical categories that have been elaborated in the linguistic research on spoken language (for example, phonological features, verbal inflection, subordination, or implicature) and that have been fruitfully applied in spoken language research should be useful categories for sign languages as well. Thus, in those cases in which there is no sufficient information on how sign languages express a certain grammatical concept or construction, we referred to the findings on typologically diverse spoken languages, keeping in mind that if a certain linguistic phenomenon or construction has been observed in a group of spoken languages, it has the potential to be observed in the sign language studied.

Such transfer from the generalizations on spoken languages is undoubtedly useful; however, it is not sufficient. It is also very well known that the visuo-spatial modality does shape the way language is expressed, and new, modality-specific categories should at times be employed to describe sign language phenomena (for example, non-manual marking, classifier predicates, and role-shift). It is an open question whether these categories are really unique to the signed modality or correspond to mechanisms that are present in spoken languages, albeit in a less prominent form, thus having led to their exclusion from spoken language grammars. These types of questions are very important, but the Blueprint is not the place to find answers to them, since our goal is to offer adequate descriptive tools rather than to investigate the underlying issues. Thorough descriptive work on many more sign languages will hopefully contribute to (partially) answering those questions at some point by relying on more solid empirical ground. A separate issue concerns iconicity. The fact that some signs incorporate iconic features has consequences for the structure of the grammar at all levels. However, the effects of iconicity are not the same in the lexicon and in syntax, for instance. Thus, rather than having an independent section on iconicity, we decided to discuss its effects whenever they are immediately relevant for a specific aspect of the grammar or a grammatical phenomenon.

At first sight, the Checklist may look superficially similar to the table of contents of a reference grammar of a spoken language. However, we would like to stress that a category identified in spoken language may involve different exponents and linguistic processes in sign language. The Manual contains multiple examples of this where such differences are highlighted and explained in detail. For example, while compound is a

standard grammatical concept in morphology and is found in the Checklist, its application to sign languages raises some non-trivial questions. One is how to analyze compounds with multiple articulators that work in parallel and relatively independently from each other, for example, those in which one hand articulates (part of) one sign while the other one simultaneously articulates (part of) another sign.

As a final note on the Manual, we would like to point out that the current state of the art in sign language research has had some effect on the varying degree of detail across chapters and sections. Where necessary, we have tried to compensate for the existing gaps on the basis of the available linguistic information on spoken languages, as mentioned above. The grammar writer interested in further deepening his or her grammatical knowledge is encouraged to consult the selection of bibliographic pointers included at the ends of sections and chapters.

In some cases, original research has been conducted specifically for the preparation of the Blueprint, since the phenomenon to be described had not been explored at all for sign languages. In these cases, the original findings are the starting point for the relevant section. This is the case, for instance, in the section on imperatives in the Syntax part.

The Blueprint and the SignGram COST Action

The Blueprint is the main product of the SignGram COST Action (Action IS1006 "Unraveling the grammars of European sign languages: pathways to full citizenship of deaf signers and to the protection of their linguistic heritage", website: http://signgram.eu). COST is a European network of nationally funded research activities which aims to promote and finance cooperative scientific projects with a specific goal. The SignGram COST Action started in 2011 and ended in 2015; its main goal was the creation of the Blueprint. Researchers from 13 COST countries (Austria, Denmark, France, Germany, Greece, Iceland, Italy, Netherlands, Norway, Poland, Spain, Turkey, and the United Kingdom) and two COST International Partner Countries (Argentina and Australia) took part in the Action. COST funded the following scientific activities: the meetings in which the design of the Blueprint was discussed and decided, scientific missions between the partners, and summer schools for junior researchers who want to start working in the sign language field, as well as four editions of a conference that has become a major venue for sign language researchers (FEAST, Formal and Experimental Advances in Sign Language Theory). Another activity promoted by the SignGram Action is the creation of a repository of materials that have been used for the elicitation of signs or structures by researchers in Europe and beyond. The repository can be found at the following link:

https://corpus1.mpi.nl/ds/asv/;jsessionid=A0026AAA3C521F75EC5ADF8C93354297?0.

Finally, COST has made it possible for the Blueprint to be freely available to everyone as an open-access publication.

It is important to highlight that the new research project SIGN-HUB (2016–2020) funded by the Horizon2020 program of the European Commission has as one of its goals to implement the Blueprint to write on-line grammars of the following sign languages: DGS, LIS, LSE, LSC, NGT, and TİD. This will make it possible to have the grammatical descriptions directly online and available to everyone once they have been validated.

The social dimension of the Blueprint

When we started the *SignGram* COST Action, we were motivated by scientific questions, since we are linguists. However, as is often the case for linguists working on neglected and ostracized languages (and sign languages still belong to this category!), we also had in mind a social dimension. This is what we wrote in the application we submitted to COST in 2010:

> "Despite significant advances, linguistic knowledge of languages in the visuo-gestural modality is still sketchy and incomplete. This becomes an unsurmountable handicap when inclusive educational policies are proposed, as no reliable grammatical descriptions are available that could constitute the appropriate basis for curriculum development and teaching materials in bilingual-bicultural programmes, sign language (SL) teaching or SL interpreter training. As a result, the responsibility of describing the basic aspects of SLs for educational practices has been frequently left in the hands of teachers of the deaf, language therapists or SL teachers and interpreter trainers, who understandably often lack the required background. Only the best possible education in their SL, though, does guarantee personal development and full exercise of civil, linguistic and ultimately human rights for deaf signing individuals. This action aims to provide scientifically reliable tools in order to meet the broader societal challenge of ensuring equal rights for deaf signers across Europe, as expressed in several international legal initiatives (cf. Resolutions of the European Parliament in 1988 and 1998, Motion of the Council of Europe for the protection of sign languages 2001, UN Convention on the Rights of Persons with Disabilities 2006)."

At the end of the Action, we did create what we think is a scientifically reliable tool for writing grammars of sign languages. It is offered as a contribution to all those interested in setting out to accomplish this task. We hope that even when a grammar writer disagrees with some of our choices, this will be because the approach that we have adopted has advanced the discussion on how to study, describe, and ultimately reinforce the status of sign languages.

Notational conventions

Following common conventions, sign language examples are glossed in English SMALL CAPS. Glosses that appeared in a different language in the source reference have been translated to English. Moreover, the following notational conventions are used:

$_1$SIGN$_3$	Subscript numbers indicate points in the signing space used in verbal agreement and pronominalization. We use subscript '1' for a sign directed towards the body of the signer, '2' for a sign directed towards the addressee, and '3' for all other loci (can be subdivided into '3a', '3b', etc.).
INDEX$_3$ / IX$_3$	A pointing sign towards a locus in space; subscripts are used as explained above.
SIGN++	indicates reduplication of a sign to express grammatical features such as plural or aspect.
SIGN^SIGN	indicates the combination of two signs, be it the combination of two independent signs by compounding or a sign plus affix combination.
SIGN-SIGN	indicates that two words are needed to gloss a single sign.
S-I-G-N	represents a fingerspelled sign.

Lines above the glosses indicate the scope (i.e. onset and offset) of a particular non-manual marker, be it a lexical, a morphological, or a syntactic marker. Some of the abbreviations refer to the form of a non-manual marker while others refer to the function:

/xxx/	lexical marker: a mouth gesture or mouthing (silent articulation of a spoken word) associated with a sign; whenever possible, the phonetic form is given;
top	syntactic topic marker: raised eyebrows, head tilted slightly back;
wh	syntactic wh-question marker, often lowered eyebrows;
y/n	syntactic yes/no-question marker: raised eyebrows, forward head tilt;
neg	syntactic negation marker: side-to-side headshake;
re	raised eyebrows (e.g. topic, yes/no-question);
hs	headshake;
cd	chin down;
wr	wrinkled nose;
r	relative clause;
cond	conditional;
bf	body lean forward.

DOI 10.1515/9781501511806-002, © 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.

Sign language acronyms

Throughout the Manual, the following abbreviations for sign languages are used (some of which are acronyms based on the name of the sign language used in the respective countries):

ABSL	Al Sayyid Bedouin Sign Language
AdaSL	Adamorobe Sign Language (Ghana)
ASL	American Sign Language
Auslan	Australian Sign Language
BSL	British Sign Language
CSL	Chinese Sign Language
DGS	German Sign Language (*Deutsche Gebärdensprache*)
DSGS	Swiss-German Sign Language (*Deutsch-Schweizerische Gebärdensprache*)
DTS	Danish Sign Language (*Dansk Tegnsprog*)
FinSL	Finnish Sign Language
GSL	Greek Sign Language
HKSL	Hong Kong Sign Language
HZJ	Croatian Sign Language (*Hrvatski Znakovni Jezik*)
IPSL	Indopakistani Sign Language
Inuit SL	Inuit Sign Language (Canada)
Irish SL	Irish Sign Language
Israeli SL	Israeli Sign Language
ÍTM	Icelandic Sign Language (*Íslenskt táknmál*)
KK	Sign Language of Desa Kolok, Bali (*Kata Kolok*)
KSL	Korean Sign Language
LIS	Italian Sign Language (*Lingua dei Segni Italiana*)
LIU	Jordanian Sign Language (*Lughat il-Ishaara il-Urdunia*)
LSA	Argentine Sign Language (*Lengua de Señas Argentina*)
Libras	Brazilian Sign Language (*Língua de Sinais Brasileira*)
LSC	Catalan Sign Language (*Llengua de Signes Catalana*)
LSCol	Colombian Sign Language (*Lengua de Señas Colombiana*)
LSE	Spanish Sign Language (*Lengua de Signos Española*)
LSF	French Sign Language (*Langue des Signes Française*)
LSQ	Quebec Sign Language (*Langue des Signes Québécoise*)
NGT	Sign Language of the Netherlands (*Nederlandse Gebarentaal*)
NicSL	Nicaraguan Sign Language
NS	Japanese Sign Language (*Nihon Syuwa*)
NSL	Norwegian Sign Language
NZSL	New Zealand Sign Language

DOI 10.1515/9781501511806-003, © 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.

ÖGS	Austrian Sign Language (*Österreichische Gebärdensprache*)
RSL	Russian Sign Language
SSL	Swedish Sign Language
TİD	Turkish Sign Language (*Türk İşaret Dili*)
TSL	Taiwan Sign Language
USL	Uganda Sign Language
VGT	Flemish Sign Language (*Vlaamse Gebarentaal*)
YSL	Yolngu Sign Language (Northern Australia)

Structure of the SignGram COST Action IS1006

Working Group 1: Socio-historical background, Phonology, Morphology, Lexicon
Coordinator: Roland Pfau

Working Group 2: Syntax
Coordinator: Caterina Donati

Working Group 3: Semantics, Pragmatics
Coordinator: Markus Steinbach

Coordination of Blueprint visuals: Brendan Costello, Rannveig Sverrisdóttir

Steering committee: Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, Josep Quer, and Markus Steinbach

DOI 10.1515/9781501511806-004, © 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.

List of contributors

Klimis Antzakas
Keddy A', Athens
Greece

Valentina Aristodemo
CNRS, Institut Jean-Nicod
Paris
France

Cristina Banfi
Universidad de Buenos Aires
Buenos Aires
Argentina

Gemma Barberà
Universitat Pompeu Fabra
Barcelona
Spain

Chiara Branchini
Università Ca' Foscari
Venice
Italy

Anna Cardinaletti
Università Ca' Foscari
Venice
Italy

Carlo Cecchetto
Università degli Studi di Milano
Bicocca, Milan
Italy and
Unité Mixte de Recherche CNRS
Paris 8
France

Kearsy Cormier
DCAL, University College London
London
United Kingdom

Brendan Costello
BCBL, University of the Basque Country
San Sebastian
Spain

Onno Crasborn
Radboud Universiteit
Nijmegen
The Netherlands

Athanasia-Lida Dimou
ILSP/ATHENA RC
Athens
Greece

Caterina Donati
Université Paris Diderot
Paris 7
Paris
France

Stavroula-Evita Fotinea
ILSP/ATHENA RC
Athens
Greece

Carlo Geraci
CNRS, Institut Jean Nicod
Paris
France

Aslı Göksel
Boğaziçi Üniversitesi
Istanbul
Turkey

Annika Herrmann
Institute for German Sign Language and
Communication of the Deaf
University of Hamburg
Hamburg
Germany

Jóhannes Jónsson
University of Iceland
Reykjavik
Iceland

Meltem Kelepir
Boğaziçi Üniversitesi
Istanbul
Turkey

Vadim Kimmelman
Universiteit van Amsterdam
Amsterdam
The Netherlands

Jette H. Kristoffersen
University College Capital
Denmark

Andrea Lackner
ZGH, Alpen
Adria Universität Klagenfurt
Austria

Lara Mantovan
Università Ca' Foscari
Venice
Italy

A. Sumru Özsoy
Boğaziçi Üniversitesi
Istanbul
Turkey

Francesca Panzeri
Università degli Studi di Milano-Bicocca
Bicocca, Milan
Italy

Roland Pfau
Universiteit van Amsterdam
Amsterdam
The Netherlands

Josep Quer
ICREA – Universitat Pompeu Fabra
Barcelona
Spain

Galini Sapountzaki
University of Thessaly
Volos
Greece

Philippe Schlenker
Institut Jean Nicod
École Normale Supérieure
Paris
France

Odd-Inge Schröder
Oslo University College
Oslo
Norway

Markus Steinbach
Georg-August-Universität-Göttingen
Göttingen
Germany

Rannveig Sverrisdóttir
University of Iceland
Reykjavik
Iceland

Acknowledgments

This publication is based on the work of COST Action IS1006 SignGram, supported by COST (European Cooperation in Science and Technology).

COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

www.cost.edu

Funded by the Horizon 2020 Framework Programme of the European Union

In addition, other funding bodies have also been key to the research carried out in this Action and are acknowledged here as well:

- Alfred Jacobsens Fundation (Denmark). Beneficiary: Jette Hedegaard Kristoffersen.
- Economic and Social Research Council of Great Britain, grant RES-620-28-0002, Deafness, Cognition and Language Research Centre. Beneficiary: Kearsy Cormier.
- ERC Advanced Grant, "New frontiers of formal semantics". PI: Philippe Schlenker, Institut Jean Nicod, Paris.
- Govern de la Generalitat de Catalunya through AGAUR (2014 SGR 698). Beneficiaries: Josep Quer (PI), Gemma Barberà.
- MINECO (Ministerio de Economía y Competitividad, Spain): "Clause combining in sign languages: the grammar of complex sentences in Catalan Sign Language in a crosslinguistic and crossmodal perspective (ClauseCombiSL2)", FFI2012-36238. Beneficiaries: Josep Quer (PI), Gemma Barberà.
- NWO grant 360.70.500 "Form-meaning units". Beneficiary: Onno Crasborn.
- PRIN 2012 "Teoria, sperimentazione, applicazioni: Le dipendenze a distanza nelle forme di diversità lingüística" (prot. 20128YAFKB). Beneficiary: Carlo Cecchetto.

DOI 10.1515/9781501511806-005, BY-NC-ND © 2017 Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci, Meltem Kelepir, Roland Pfau, and Markus Steinbach, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License.

– TÜBİTAK Research Fund, project 111K314: “A model for reference grammars of sign languages: Methods of analysis and description of sign systems in the light of Turkish Sign Language (İşaret dilleri kaynak bilgisi modeli: Türk İşaret Dili ışığında işaret dizgelerini betimleme ve çözümleme yöntemleri)”. Beneficiaries: A. Sumru Özsoy (PI), Aslı Göksel, Meltem Kelepir.
– UCC (Professionshøjskolen University College Capital, Denmark) Research Fund, “Diversity and Social Innovation”. Beneficiary: Jette Hedegaard Kristoffersen.

The Communication Centre for the Deaf and Hard of Hearing, Reykjavík, is thanked for its support to the work of Rannveig Sverrisdóttir and Jóhannes Jónsson. We are also grateful to Chris Beckmann from Göttingen University for his editorial help at the stage of manuscript preparation and to Gemma Barberà, who, next to her scientific contribution to the project, ran its administration exemplarily. Mattia Donati designed for free some drawings that we used as elicitation materials as well as the SignGram Action logo. Thank you Mattia for your generosity!

Monica Dietl, the director of the COST Association, helped the SignGram Action in difficult administrative turns. We thank her for her support.

List of authors by section

Part 1 Socio-historical background (Roland Pfau, Carlo Geraci & Odd-Inge Schröder)

Part 2 Phonology
Chapter 0 Preliminary considerations (Carlo Geraci)
Chapter 1 Sublexical structure (Onno Crasborn)
Chapter 2 Prosody (Carlo Geraci)
Chapter 3 Phonological processes (Carlo Geraci)

Part 3 Lexicon
Chapter 0 Preliminary considerations (Brendan Costello)
Chapter 1 The native lexicon (Brendan Costello, Evita Fotinea, Annika Herrmann, Galini Sapountzaki & Rannveig Sverrisdóttir)
Chapter 2 The non-native lexicon (Aslı Göksel & Roland Pfau)
Chapter 3 Parts of speech
3.0 Definitions and challenges (Brendan Costello)
3.1 Nouns (Brendan Costello, Annika Herrmann & Rannveig Sverrisdóttir)
3.2 Verbs (Brendan Costello, Annika Herrmann, Roland Pfau & Rannveig Sverrisdóttir)
3.3 Lexical expressions of inflectional categories (Roland Pfau & Annika Herrmann)
3.4 Adjectives (Annika Herrmann & Rannveig Sverrisdóttir)
3.5 Adverbials (Brendan Costello, Annika Herrmann, Roland Pfau & Rannveig Sverrisdóttir)
3.6 Determiners (Lara Mantovan)
3.7 Pronouns (Brendan Costello, Annika Herrmann, Roland Pfau & Rannveig Sverrisdóttir)
3.8 Adpositions (Annika Herrmann & Rannveig Sverrisdóttir)
3.9 Conjunctions (Annika Herrmann & Rannveig Sverrisdóttir)
3.10 Numerals and quantifiers (Brendan Costello, Annika Herrmann, Lara Mantovan, Roland Pfau & Rannveig Sverrisdóttir)
3.11 Particles (Brendan Costello)
3.12 Interjections (Annika Herrmann & Rannveig Sverrisdóttir)

Part 4 Morphology
Chapter 0 Preliminary considerations (Aslı Göksel)
Chapter 1 Compounding (Aslı Göksel & Roland Pfau)
Chapter 2 Derivation (Roland Pfau & Aslı Göksel)
Chapter 3 Verbal inflection
3.0 Definitions and challenges (Aslı Göksel & Roland Pfau)
3.1 Agreement (Roland Pfau & Carlo Geraci)
3.2 Tense (Roland Pfau, Athanasia-Lida Dimou, Evita Fotinea & Galini Sapountzaki)

Contents

Introduction: Letter to the grammar writer —— v
Notational conventions —— xiii
Sign language acronyms —— xiv
Structure of the SignGram COST Action IS1006 —— xvi
List of contributors —— xvii
Acknowledgments —— xix

Part 1: **Socio-historical background**

Chapter 0 Preliminary considerations —— 3

Chapter 1 History —— 3

Chapter 2 The sign language community —— 5
2.1 Community characteristics —— 5
2.2 Sign language users —— 6
2.3 Deaf culture —— 6
2.4 Deaf education —— 8

Chapter 3 Status —— 9
3.1 Current legislation —— 10
3.2 Language policy ——10
3.3 Language attitudes —— 11

Chapter 4 Linguistic study —— 12
4.1 Grammatical description —— 12
4.2 Lexicographic work —— 13
4.3 Corpora —— 13
4.4 Sociolinguistic variation —— 14

Complete list of references – Socio-historical background —— 15

Part 2: **Phonology**

Chapter 0 Preliminary considerations —— 21
0.1 What is phonology? —— 21
0.2 Organization of the Phonology Part —— 21
0.3 How to use the Phonology Part —— 21

Chapter 1 Sublexical structure — 22
1.0 Definitions and challenges — 22
1.0.1 What should go into this chapter and what should not? — 22
1.0.2 Methodological challenges — 22
1.1 Active articulators — 23
1.1.1 Phonemic handshapes — 24
1.1.1.1 Selected fingers — 24
1.1.1.2 Finger configuration — 25
1.1.2 Orientation — 27
1.1.3 The manual alphabet and number signs — 28
1.1.4 Other active articulators — 28
1.2 Location — 29
1.3 Movement — 30
1.3.1 Path movements — 30
1.3.2 Secondary movements — 31
1.4 Two-handed signs — 32
1.4.1 Symmetrical signs — 33
1.4.2 Asymmetrical signs — 33
1.5 Non-manuals — 34
1.5.1 Mouth gestures — 34
1.5.2 Mouthings — 35
1.5.3 Other non-manuals — 35
Elicitation materials — 35
References — 36

Chapter 2 Prosody — 37
2.0 Definitions and challenges — 37
2.0.1 What is prosody? — 37
2.0.2 Prosodic markers — 38
2.0.3 Methodological challenges — 40
2.0.4 Outline of the chapter — 41
2.1 The lexical level — 41
2.1.1 Syllable — 41
2.1.2 Foot — 43
2.2 Above the lexical level — 44
2.2.1 Prosodic word — 45
2.2.2 Phonological phrase — 47
2.2.3 Intonational phrase — 47
2.2.4 Phonological utterance — 49
2.3 Intonation — 49
2.4 Interaction — 50

2.4.1 Turn regulation — 50
2.4.2 Back-channeling — 51
Elicitation materials — 51
References — 51

Chapter 3 Phonological processes — 53
3.0 Definitions and challenges — 53
3.0.1 What is a phonological process? — 53
3.0.2 Caveats — 53
3.0.3 Outline of the chapter — 54
3.1 Processes affecting the phonemic level — 54
3.1.1 Assimilation — 54
3.1.2 Coalescence — 55
3.1.3 Movement reduction and extension — 56
3.1.3.1 Without joint shift — 57
3.1.3.2 With joint shift — 57
3.1.4 Weak hand drop — 58
3.1.5 Handshape drop — 58
3.1.6 Nativization — 59
3.1.7 Metathesis — 59
3.2 Processes affecting the syllable — 60
3.2.1 Epenthesis — 60
3.2.2 Syllable reduction — 61
3.2.3 Syllable reanalysis — 61
3.3 Processes affecting the prosodic word — 62
3.3.1 Reduplication — 62
3.3.2 Phonological effects of cliticization and compounding — 63
3.4 Processes affecting higher prosodic units — 63
3.4.1 Organization of the signing space — 63
3.4.2 Differences in “loudness”: Whispering and shouting mode — 64
Elicitation materials — 65
References — 65

Complete list of references – Phonology — 66

Part 3: **Lexicon**

Chapter 0 Preliminary considerations — 73
0.1 What is the lexicon? — 73
0.2 Organization of the Lexicon Part — 75
0.3 How to use the Lexicon Part — 75

Chapter 1 The native lexicon — 76
1.0 Definitions and challenges — 76
1.0.1 What is the native lexicon? — 76
1.0.2 Methodological challenges — 78
1.1 Core lexicon — 79
1.2 Non-core lexicon — 83
1.2.1 Classifier constructions — 84
1.2.2 Pointing — 85
1.2.3 Buoys — 86
1.3 Interaction between core and non-core lexicon — 86
1.3.1 Lexicalization processes — 87
1.3.2 Modification of core lexicon signs — 90
1.3.3 Simultaneous constructions and use of the non-dominant hand — 92
Elicitation materials — 93
References — 93

Chapter 2 The non-native lexicon — 94
2.0 Definitions and challenges — 94
2.0.1 What is the non-native lexicon? — 94
2.0.2 How to decide whether a particular form is borrowed — 94
2.0.3 Morpho-phonological marking of borrowed forms — 95
2.0.4 When should a borrowed form be considered part of the lexicon? — 95
2.0.5 Methodological challenges — 96
2.1 Borrowings from other sign languages — 96
2.2 Borrowings from (neighboring) spoken language — 97
2.2.1 Calques/loan translations — 97
2.2.2 Lexicalization of fingerspelling — 97
2.2.2.1 Initialization — 98
2.2.2.2 Multiple-letter signs — 100
2.2.3 Mouthing — 102
2.2.3.1 Full forms — 102
2.2.3.2 Reduced forms — 103
2.2.3.3 Mouthing and fingerspelling — 103
2.2.4 Other marginal types of borrowing — 103
2.3 Borrowings from conventionalized gestures — 104
2.3.1 Lexical functions — 105
2.3.2 Grammatical functions — 105
Elicitation materials — 106
References — 106

Chapter 3 Parts of speech — 107
3.0 Definitions and challenges — 107
3.0.1 What are parts of speech? — 107
3.0.2 Methodological challenges — 108
3.1 Nouns — 109
3.1.1 Common nouns — 109
3.1.2 Proper nouns and name signs — 112
3.2 Verbs — 114
3.2.1 Plain verbs — 114
3.2.2 Agreement verbs — 115
3.2.3 Spatial verbs — 116
3.3 Lexical expressions of inflectional categories — 116
3.3.1 Tense markers — 117
3.3.2 Aspect markers — 118
3.3.3 Modality markers — 119
3.3.3.1 Deontic modality — 120
3.3.3.2 Epistemic modality — 121
3.3.4 Agreement markers — 122
3.4 Adjectives — 124
3.4.1 Attributive adjectives — 124
3.4.2 Predicative adjectives — 126
3.5 Adverbials — 127
3.5.1 Verb-oriented adverbials — 128
3.5.2 Sentence adverbials — 129
3.6 Determiners — 130
3.6.1 Definite determiners — 132
3.6.2 Indefinite determiners — 132
3.7 Pronouns — 134
3.7.1 Locative and demonstrative pronouns — 134
3.7.2 Personal pronouns — 135
3.7.2.1 Person — 136
3.7.2.2 Number — 137
3.7.2.3 Clusivity — 138
3.7.2.4 Case — 139
3.7.2.5 Gender — 139
3.7.2.6 Honorific pronouns — 140
3.7.2.7 Logophoric pronouns — 140
3.7.3 Possessive pronouns — 141
3.7.4 Reflexive and reciprocal pronouns — 142
3.7.5 Interrogative pronouns — 142
3.7.6 Relative pronouns — 143

3.7.7 Indefinite pronouns — 144
3.8 Adpositions — 144
3.8.1 Manual adpositions — 144
3.8.2 Adpositions and spatial relations — 145
3.9 Conjunctions — 146
3.9.1 Coordinating conjunctions — 146
3.9.2 Subordinating conjunctions — 146
3.9.3 Correlative conjunctions — 148
3.10 Numerals and quantifiers — 148
3.10.1 Numerals — 148
3.10.1.1 Cardinal numerals — 149
3.10.1.2 Ordinal numerals — 150
3.10.1.3 Distributive numerals — 151
3.10.2 Quantifiers — 151
3.11 Particles — 152
3.11.1 Negative particles — 152
3.11.2 Question particles — 153
3.11.3 Discourse particles — 154
3.12 Interjections — 155
Elicitation materials — 155
References — 156

Complete list of references – Lexicon — 157

Part 4: **Morphology**

Chapter 0 Preliminary considerations — 167
0.1 What is morphology? — 167
0.2 Organization of the Morphology Part — 168
0.3 How to use the Morphology Part — 168

Chapter 1 Compounding — 169
1.0 Definitions and challenges — 169
1.0.1 What is a compound? — 169
1.0.2 Types of compounds — 170
1.0.3 Methodological challenges — 171
1.1 Native compounds — 172
1.1.1 Sequential compounds — 172
1.1.1.1 Semantic structure — 172
1.1.1.1.1 Endocentric compounds — 173
1.1.1.1.2 Exocentric compounds — 173

1.1.1.2 Syntactic structure — 174
1.1.1.2.1 Subordinate compounds — 174
1.1.1.2.2 Coordinate compounds — 175
1.1.1.3 Compounds involving SASS — 176
1.1.2 Simultaneous and semi-simultaneous compounds — 177
1.1.2.1 Simultaneous compounds — 178
1.1.2.2 Semi-simultaneous compounds — 180
1.2 Loan compounds — 181
1.2.1 Faithful loans — 181
1.2.2 Modified loans — 182
1.3 Compounds with fingerspelled components — 183
1.3.1 Sequential — 183
1.3.1.1 Native-like — 183
1.3.1.2 Loan-like — 183
1.3.2 Simultaneous — 184
1.4 Phonological and prosodic characteristics — 185
1.4.1 Phonological characteristics — 185
1.4.2 Prosodic characteristics — 186
Elicitation materials — 187
References — 188

Chapter 2 Derivation — 188
2.0 Definitions and challenges — 188
2.0.1 What is derivation? — 188
2.0.2 How is derivation marked? — 189
2.0.3 Methodological challenges — 191
2.1 Manual markers of derivation — 192
2.1.1 Sequential derivation — 192
2.1.1.1 Agentive — 192
2.1.1.2 Negative — 193
2.1.1.3 Attenuative — 194
2.1.2 Simultaneous derivation — 195
2.1.2.1 Noun-verb pairs — 195
2.1.2.2 Attenuative — 196
2.2 Non-manual markers of derivation — 196
2.2.1 Diminutive and augmentative — 197
2.2.2 Intensive — 198
2.2.3 Proximity — 198
2.2.4 Noun-verb pairs: mouthings — 199
Elicitation materials — 199
References — 200

Chapter 3 Verbal inflection — 201
3.0 Definitions and challenges — 201
3.0.1 What is inflection? — 201
3.0.2 How is inflection marked? — 201
3.0.3 Methodological challenges — 202
3.1 Agreement — 204
3.1.0 Definitions and challenges — 204
3.1.0.1 What is agreement? — 204
3.1.0.2 Terminology — 205
3.1.0.3 Marking agreement in sign languages — 205
3.1.0.4 Methodological challenges — 207
3.1.1 Person and locative markers — 207
3.1.1.1 Subject markers — 208
3.1.1.2 Object markers — 210
3.1.1.3 Locative markers — 211
3.1.2 Number markers — 212
3.1.2.1 Dual — 213
3.1.2.2 Multiple — 213
3.1.2.3 Exhaustive — 213
3.1.3 Reciprocal markers — 215
Elicitation materials — 216
References — 217
3.2 Tense — 218
3.2.0 Definitions and challenges — 218
3.2.0.1 What is tense? — 218
3.2.0.2 Methodological challenges — 218
3.2.1 Time lines — 219
3.2.2 Tense inflection — 220
References — 221
3.3 Aspect — 222
3.3.0 Definitions and challenges — 222
3.3.0.1 What is aspect? — 222
3.3.0.2 Methodological challenges — 223
3.3.1 Imperfective — 224
3.3.1.1 Habitual — 224
3.3.1.2 Continuative/durative — 225
3.3.1.3 Conative — 225
3.3.2 Perfective — 226
3.3.2.1 Iterative — 227
3.3.2.2 Inceptive/inchoative — 227
3.3.2.3 Completive — 228
References — 228

3.4 Modality — 229
3.4.0 Definitions and challenges — 229
3.4.0.1 What is modality? — 229
3.4.0.2 Deontic and epistemic modality — 230
3.4.0.3 Methodological challenges — 230
3.4.1 Deontic modality — 231
3.4.2 Epistemic modality — 232
References — 233
3.5 Negation — 234
3.5.0 Definitions and challenges — 234
3.5.0.1 General definitions — 234
3.5.0.2 Methodological challenges — 235
3.5.1 Regular negation — 236
3.5.1.1 Manual markers — 236
3.5.1.2 Non-manual markers — 238
3.5.2 Irregular negation — 239
Elicitation materials — 240
References — 241

Chapter 4 Nominal inflection — 242
4.0 Definitions and challenges — 242
4.0.1 What is nominal inflection? — 242
4.0.2 Methodological challenges — 243
4.1 Number — 243
4.1.1 Manual marking — 244
4.1.2 Non-manual marking — 246
4.2 Localization and distribution — 247
Elicitation materials — 248
References — 249

Chapter 5 Classifiers — 250
5.0 Definitions and challenges — 250
5.0.1 What are classifiers? — 250
5.0.2 Phonological and morpho-syntactic characteristics of classifiers — 250
5.0.3 Terminology and classification — 251
5.0.4 Comparison with classifiers in spoken languages — 252
5.0.5 Methodological challenges — 252
5.1 Predicate classifiers — 253
5.1.1 Entity classifiers — 253
5.1.2 Bodypart classifiers — 255
5.1.3 Handle classifiers — 257

5.2 Size-and-Shape Specifiers — 259
Elicitation materials — 260
References — 260

Complete list of references – Morphology — 262

Part 5: **Syntax**

Chapter 0 Preliminary considerations — 285
0.1 What is syntax? — 285
0.2 Organization of the syntax part — 286
0.3 How to use the syntax part — 286

Chapter 1 Sentence types — 287
1. 0 Introduction — 287
1.1 Declaratives — 288
1.1.0 Definitions and challenges — 288
References — 289
1.2 Interrogatives — 290
1.2.0 Definitions and challenges — 290
1.2.0.1 Defining an interrogative — 290
1.2.0.2 Types of interrogatives — 290
1.2.0.3 Methodological challenges — 291
1.2.0.4 Non-manual marking — 292
1.2.1 Polar interrogatives — 293
1.2.1.1 Non-manual markers in polar interrogatives — 293
1.2.1.2 Word order changes between declaratives and polar interrogatives — 294
1.2.1.3 Interrogative particles — 294
1.2.2 Alternative Interrogatives — 294
1.2.3 Content interrogatives — 295
1.2.3.1 Non-manual markers in content interrogatives — 295
1.2.3.2 List of *wh*-signs — 295
1.2.3.3 Content interrogatives without *wh*-signs — 296
1.2.3.4 Non-interrogative uses of *wh*-signs — 296
1.2.3.5 Position of *wh*-signs — 297
1.2.3.6 Split between the *wh*-sign and its restriction — 299
1.2.3.7 Doubling of the *wh*-sign — 299
1.2.3.8 Multiple *wh*-signs in interrogatives — 300
1.2.3.9 Interrogative particles — 301

Elicitation materials — 301
References — 302
1.3 Imperatives — 304
1.3.0 Definitions and challenges — 304
1.3.0.1 What is an imperative? — 304
1.3.0.2 Functions of the imperative — 305
1.3.0.3 Orders with no imperative — 305
1.3.0.4 Simultaneous or concatenative morphology in imperatives — 305
1.3.1 Subtypes of imperatives — 306
1.3.1.1 Orders — 306
1.3.1.2 Invitations — 306
1.3.1.3 Suggestions/advice — 307
1.3.1.4 Permissions — 307
1.3.1.5 Instructions — 307
1.3.1.6 Recommendations — 307
1.3.2 Imperative markers — 308
1.3.2.1 Manual signs — 308
1.3.2.2 Non-manual markers — 308
1.3.3 Imperatives and verb classes — 309
1.3.4 Word order in imperatives — 309
1.3.5 Attention callers — 310
1.3.6 Negation in imperatives — 310
1.3.6.1 Manual negation — 310
1.3.6.2 Non-manual negation — 311
1.3.7 Subjects in imperatives — 311
1.3.7.1 Null and/or overt subject — 311
1.3.7.2 The person of the subject — 311
1.3.7.3 Anaphoric properties — 312
1.3.8 Embedding imperatives — 312
1.3.9 Special constructions: Imperative and Declarative (IaD) — 312
1.3.10 Exhortative constructions — 313
Elicitation materials — 313
References — 315
1.4 Exclamatives — 315
1.4.0 Definitions and challenges — 315
1.4.0.1 What is an exclamative? — 315
1.4.0.2 Testing exclamatives: factivity — 316
1.4.0.3 Testing exclamatives: scalar implicatures — 316
1.4.0.4 Testing exclamatives: question/answer pairs — 317
1.4.0.5 An unexplored field — 317
1.4.1 Total exclamatives — 317

1.4.1.1 Non-manual marking — 318
1.4.1.2 Manual signs — 318
1.4.2 Partial exclamatives — 318
1.4.2.1 Non-manual signs — 319
1.4.2.2 *Wh*-signs — 319
1.4.2.3 Other structures — 320
1.4.3 Negation in exclamatives — 321
References — 321
1.5 Negatives — 321
1.5.0 Definitions and challenges — 321
1.5.0.1 What is negation? — 321
1.5.0.2 Scope of negation and types of negation — 322
1.5.0.3 Sentential negation — 322
1.5.1 Manual marking of negation — 323
1.5.1.1 Manual negative elements — 323
1.5.1.1.1 Negative particles — 323
1.5.1.1.2 Irregular negatives — 324
1.5.1.1.3 Negative determiners and adverbials — 325
1.5.1.2 Syntax of negative clauses — 326
1.5.1.2.1 Position of negative elements — 326
1.5.1.2.2 Doubling — 326
1.5.1.2.3 Negative concord — 326
1.5.2 Non-lexical marking of negation — 327
1.5.2.1 Head movements — 327
1.5.2.2 Facial expressions — 329
1.5.2.3 Body posture — 330
1.5.2.4 Spreading domain — 330
Elicitation materials — 331
References — 331

Chapter 2 Clause structure — 333
2.0 Definitions and challenges — 333
2.0.1 Definition of constituent — 333
2.0.2 Displacement test — 334
2.0.3 Pro-form substitution test — 335
2.0.4 Coordination test — 336
2.0.5 Non-manual marking test — 337
2.0.6 Ellipsis test — 337
2.1 The syntactic realization of argument structure — 338
2.1.0 Definitions and challenges — 338
2.1.0.1 Argument structure and transitivity — 338
2.1.0.2 Methodological challenges — 339

2.1.1 Types of predicates — 341
2.1.1.1 Transitive and ditransitive predicates — 341
2.1.1.2 Intransitive predicates: unergative and unaccusative — 341
2.1.1.3 Psychological predicates — 343
2.1.1.4 Meteorological predicates — 344
2.1.1.5 Argument structure alternations — 344
2.1.2 Argument realization — 345
2.1.2.1 Overt NPs — 345
2.1.2.2 Pronouns — 346
2.1.2.3 Verb agreement — 346
2.1.2.3.1 Manual verb agreement — 347
2.1.2.3.2 Non-manual verb agreement — 348
2.1.2.4 Classifier handshape — 348
2.1.2.5 Argument clauses — 349
2.1.3 Argument structure change — 349
2.1.3.1 Extension of argument structures — 349
2.1.3.2 Passive — 351
2.1.3.2.0 Definitions and challenges — 351
2.1.3.2.0.1 Passive constructions — 351
2.1.3.2.0.2 Characteristic properties of typical passive constructions — 352
2.1.3.2.0.3 Passiveless languages — 354
2.1.3.2.0.4 Methodological challenges — 354
2.1.3.2.0.5 Passive in sign languages — 355
2.1.3.3 Reflexivity — 356
2.1.3.4 Reciprocity — 357
2.1.4 Non-verbal predication — 357
2.1.4.1 Copular constructions — 357
2.1.4.2 Secondary predication — 359
2.1.5 Existentials and possessives — 359
2.1.5.0 Definitions and challenges — 359
2.1.5.1 Possessives — 360
2.1.5.2 Existentials — 361
Elicitation materials — 362
References — 363
2.2 Grammatical functions — 366
2.2.0 Definitions and challenges — 366
2.2.0.1 What is a grammatical function? — 366
2.2.0.2 Methodological challenges — 367
2.2.1 Subject and object identification — 368
2.2.1.1 Specific position(s) for subject and object — 368
2.2.1.2 Special anaphoric properties for subject and object — 369

2.2.1.3 Strategies of pronoun copying for subject and object — 370
2.2.1.4 Null arguments for subject and object — 371
2.2.2 Other grammatical functions: arguments versus adjuncts — 371
2.2.3 Types of adjuncts — 372
References — 375
2.3 Word order — 375
2.3.0 Definitions and challenges — 375
2.3.0.1 Order between subject, object and verb — 375
2.3.0.2 Identifying the basic word order — 376
2.3.0.3 The challenge of simultaneity — 378
2.3.1 Identification of the basic order of constituents in the main declarative clause — 380
2.3.1.1 Order of subject, object, and verb — 380
2.3.1.2 Order of auxiliaries (i.e. agreement, tense, and aspectual markers) with respect to the verb — 381
2.3.1.3 Order of modals with respect to the verb — 381
2.3.1.4 Order of negation with respect to verb, modals, and auxiliaries — 381
2.3.1.5 Order of arguments of ditransitive verbs — 383
2.3.1.6 Position for different types of adverbs and adjuncts — 383
2.3.2 Basic order of constituents in other clauses — 383
2.3.2.1 Basic order in the different types of sentence — 383
2.3.2.2 Basic order in the different types of subordinate clauses — 384
2.3.3 Deviations from the basic order of constituents — 384
2.3.3.1 List of attested and unattested permutations — 384
2.3.3.2 Non-manuals accompanying the deviations from the basic word order — 384
2.3.3.3 Specific order for topicalized elements — 385
2.3.3.4 Specific order for focused elements — 385
2.3.3.5 Word order variations according to the different types of verbs (plain, agreeing) — 386
2.3.3.6 Word order variations according to the different types of predicates (reversible/irreversible) — 386
Elicitation materials — 387
References — 388
2.4 Null arguments — 390
2.4.0 Definitions and challenges — 390
2.4.0.1 What is a null argument? — 390
2.4.0.2 Further explanations/distinctions — 390
2.4.0.3 Methodological challenges — 392
2.4.1 Subject and object null arguments — 392
2.4.1.1 Null subjects — 392

2.4.1.2 Null objects — 393
2.4.2 Types of verbs that can license null subjects — 393
2.4.3 Null subjects in main clauses — 393
2.4.4 Null arguments in embedded clauses — 394
2.4.5 Pragmatic and semantic conditions licensing null arguments — 394
2.4.6 Referential properties of null arguments — 395
Elicitation materials — 395
References — 395
2.5 Clausal ellipsis — 396
References — 398
2.6 Pronoun copying — 398
2.6.0 Definitions and challenges — 398
2.6.1 Personal pronoun copying — 399
2.6.2 Syntactic properties of pronoun copying — 401
2.6.2.1 Possible subject-object asymmetry in pronoun copying — 401
2.6.2.2 Position of the copying pronoun — 401
2.6.3 Prosodic features of pronoun copying — 402
2.6.4 Functions of pronoun copying — 402
Elicitation materials — 403
References — 403

Chapter 3 Coordination and subordination — 404
3.0 Introduction — 404
3.1 Coordination of clauses — 404
3.1.0 Definitions and challenges — 404
3.1.0.1 What is coordination? — 404
3.1.0.2 Methodological challenges — 405
3.1.1 Types of clausal coordination — 405
3.1.2 Coordination by manual markers — 406
3.1.2.1 Manual markers of coordination — 407
3.1.2.1.1 Manual markers in conjoined coordination — 407
3.1.2.1.2 Manual markers in adversative coordination — 407
3.1.2.1.3 Manual markers in disjunctive coordination — 407
3.1.2.2 Position of manual markers of coordination — 407
3.1.2.2.1 Position of manual markers in conjoined coordination — 407
3.1.2.2.2 Position of manual markers in adversative coordination — 408
3.1.2.2.3 Position of manual markers in disjunctive coordination — 408
3.1.2.3 Optionality or obligatoriness of manual markers of coordination — 408
3.1.2.3.1 Optionality or obligatoriness of manual markers in conjoined conjunctions — 408

3.1.2.3.2 Optionality or obligatoriness of manual markers in adversative conjunctions — 408
3.1.2.3.3 Optionality or obligatoriness of manual markers in disjunctive conjunctions — 408
3.1.3 Coordination by non-manual markers — 408
3.1.3.1 List of non-manual markers of coordination — 409
3.1.3.1.1 Non-manual markers in conjunctive coordination — 409
3.1.3.1.2 Non-manual markers in disjunctive coordination — 409
3.1.3.1.3 Non-manual markers in adversative coordination — 409
3.1.3.2 The spreading domain of non-manual markers of coordination — 409
3.1.3.2.1 Spreading domain of non-manual markers in conjunctive coordination — 409
3.1.3.2.2 Spreading domain of non-manual markers in disjunctive coordination — 410
3.1.3.2.3 Spreading domain of non-manual markers in adversative coordination — 410
3.1.4 Properties of coordination — 410
3.1.4.1 Extraction — 410
3.1.4.2 Gapping — 412
3.1.4.3 Scope — 413
3.1.4.3.1 Scope of negation — 413
3.1.4.3.2 Scope of yes/no questions — 414
Elicitation materials — 414
References — 415
3.2 Subordination: distinctive properties — 415
3.2.0 Definitions and challenges — 415
3.2.0.1 A definition of subordination — 415
3.2.0.2 Different types of subordination — 416
3.2.0.3 Methodological challenges in identifying a subordinate clause — 417
3.2.0.4 Methodological challenges in identifying the (non-)finiteness of a clause — 417
3.2.1 Subject pronoun copy as a subordination property — 423
3.2.2 Position of question signs — 424
3.2.3 Spreading of non-manual markers — 425
3.2.4 Interpretation of embedded negation in the matrix clause — 425
Elicitation materials — 426
References — 426
3.3 Argument clauses — 427
3.3.0 Definitions and challenges — 427
3.3.0.1 What is an argument clause? — 427
3.3.0.2 How to recognize an argument clause — 428

3.3.0.3 Methodological challenges — 428
3.3.1 Subject clauses — 429
3.3.1.1 Position(s) within the matrix clause — 429
3.3.1.2 Special non-manual markers — 430
3.3.1.3 Tense and aspectual marking — 430
3.3.1.4 Anaphoric relations — 431
3.3.1.5 Null arguments — 431
3.3.2 Object clauses — 432
3.3.2.1 Verbs taking object clauses — 432
3.3.2.2 Position(s) within the matrix clause — 433
3.3.2.3 Factivity — 433
3.3.2.4 Special non-manual markers — 434
3.3.2.5 Tense and aspectual marking — 434
3.3.2.6 Anaphoric relations with the main clause arguments — 434
3.3.2.7 Occurrences of null arguments — 435
3.3.3 Role shift — 436
3.3.3.1 Markers of role shift — 437
3.3.3.2 Integration of the role-shifted clause into the main clause — 438
3.3.3.3 Syntactic contexts introducing attitude role shift — 439
3.3.3.4 Special signs introducing action role shift — 440
3.3.3.5 Syntactic differences between action role shift and attitude role shift — 440
References — 441
3.4 Relative clauses — 442
3.4.0 Definitions and challenges — 442
3.4.0.1 A definition of relative clauses — 442
3.4.0.2 Properties of relativization — 442
3.4.0.2.1 Non-manual markers — 442
3.4.0.2.2 Impossibility of production in isolation — 443
3.4.0.2.3 Position of temporal adverbials — 443
3.4.0.3 Syntactic types of relative clauses: diagnostics — 444
3.4.0.4 Semantic types of relative clauses (restrictive versus non-restrictive): diagnostics — 447
3.4.1 Type of relative clause — 451
3.4.2 Presence or absence of a relativization sign — 451
3.4.2.1 List of relativization signs — 452
3.4.2.1.1 Human/non-human specificity of the relativization sign — 452
3.4.2.1.2 Singular/plural specificity of the relativization sign — 452
3.4.2.2 Position of the relativization sign — 452
3.4.2.3 Optionality or obligatoriness of the relativization sign — 453
3.4.3 Position of the noun phrase with the relative clause within the matrix clause — 453

3.4.4 Subject versus object relativization — 454
3.4.5 Displacement of noun phrases with relative clauses — 454
3.4.6 Special non-manual marking — 455
3.4.6.1 List of non-manual markers — 456
3.4.6.2 The spreading domain of each non-manual marker — 456
3.4.7 Restrictive vs non-restrictive relative clauses — 456
Elicitation materials — 456
References — 458
3.5 Adverbial clauses — 459
3.5.0 Definitions and challenges — 459
3.5.0.1 Adverbial clauses — 459
3.5.0.2 Ways of marking adverbial clauses — 459
3.5.0.3 Types of adverbial clauses — 460
3.5.0.4 Adverbial clauses in sign languages — 461
3.5.0.5 Methodological challenges — 461
3.5.1 Conditional clauses — 462
3.5.1.1 The role of non-manual markers in conditional sentences — 464
3.5.1.2 Factual conditionals — 466
3.5.1.2.1 Non-manual markers and their properties in factual conditionals — 466
3.5.1.2.2 Manual conditional signs in factual conditionals — 466
3.5.1.2.3 Order of the components of the factual conditional clause — 467
3.5.1.3 Counterfactual conditionals — 467
3.5.1.3.1 Non-manual markers and their properties in counterfactual conditionals — 467
3.5.1.3.2 Manual conditional signs in counterfactual conditionals — 467
3.5.1.3.3 Order of the components of the counterfactual conditional clause — 468
3.5.1.4 Concessive conditionals — 468
3.5.1.4.1 Non-manual markers and their properties in concessive conditionals — 468
3.5.1.4.2 Manual conditional signs in concessive conditionals — 468
3.5.1.4.3 Order of the components of the concessive conditional clause — 468
3.5.1.5 Non-predictive/peripheral conditionals — 469
3.5.1.5.1 Non-manual markers and their properties in non-predictive/peripheral conditionals — 469
3.5.1.5.2 Manual conditional signs in non-predictive/peripheral conditionals — 469
3.5.1.5.3 Order of the components of the non-predictive/peripheral conditional clause — 469
3.5.1.6 Other conditional constructions — 470
3.5.2 Temporal clauses — 470

3.5.2.1 Internal structure of temporal clauses — 471
3.5.2.2 Manual signs marking subordination in temporal clauses — 471
3.5.2.3 Other markers of subordination in temporal clauses — 471
3.5.2.4 Non-manual markers in temporal clauses — 471
3.5.2.5 Position of the temporal clause with respect to the main clause — 473
3.5.2.6 Simultaneous expression of the main event and the adverbial clause — 473
3.5.3 Locative clauses — 473
3.5.3.1 Internal structure of locative clauses — 473
3.5.3.2 Manual signs marking subordination in locative clauses — 473
3.5.3.3 Other markers of subordination in locative clauses — 474
3.5.3.4 Non-manual markers in locative clauses — 474
3.5.3.5 Position of the locative clause with respect to the main clause — 474
3.5.3.6 Simultaneous expression of the main event and the adverbial clause — 474
3.5.4 Manner clauses — 474
3.5.4.1 Internal structure of manner clauses — 475
3.5.4.2 Manual signs marking subordination in manner clauses — 475
3.5.4.3 Other markers of subordination in manner clauses — 475
3.5.4.4 Non-manual markers in manner clauses — 475
3.5.4.5 Position of the manner clause with respect to the main clause — 476
3.5.4.6 Simultaneous expression of the main event and the adverbial clause — 476
3.5.5 Reason clauses — 476
3.5.5.1 Internal structure of reason clauses — 477
3.5.5.2 Manual signs marking subordination in reason clauses — 477
3.5.5.3 Other markers of subordination in reason clauses — 477
3.5.5.4 Non-manual markers in reason clauses — 478
3.5.5.5 Position of the reason clause with respect to the main clause — 478
3.5.5.6 Simultaneous expression of the main event and the adverbial clause — 478
3.5.6 Purpose clauses — 478
3.5.6.1 Internal structure of purpose clauses — 479
3.5.6.2 Manual signs marking subordination in purpose clauses — 479
3.5.6.3 Other markers of subordination in purpose clauses — 479
3.5.6.4 Non-manual markers in purpose clauses — 479
3.5.6.5 Position of the purpose clause with respect to the main clause — 479
3.5.6.6 Simultaneous expression of the main event and the adverbial clause — 480
3.5.7 Concessive clauses — 480
3.5.7.1 Internal structure of concessive clauses — 480
3.5.7.2 Manual signs marking subordination in concessive clauses — 480

3.5.7.3 Other markers of subordination in concessive clauses — 480
3.5.7.4 Non-manual markers in concessive clauses — 480
3.5.7.5 Position of the concessive clause with respect to the main clause — 481
3.5.7.6 Simultaneous expression of the main event and the adverbial clause — 481
3.5.8 Substitutive clauses — 481
3.5.8.1 Internal structure of substitutive clauses — 481
3.5.8.2 Manual signs marking subordination in substitutive clauses — 481
3.5.8.3 Other markers of subordination in substitutive clauses — 481
3.5.8.4 Non-manual markers in substitutive clauses — 482
3.5.8.5 Position of the substitutive clause with respect to the main clause — 482
3.5.8.6 Simultaneous expression of the main event and the adverbial clause — 482
3.5.9 Additive clauses — 482
3.5.9.1 Internal structure of additive clauses — 482
3.5.9.2 Manual signs marking subordination in additive clauses — 483
3.5.9.3 Other markers of subordination in additive clauses — 483
3.5.9.4 Non-manual markers in additive clauses — 483
3.5.9.5 Position of the additive clause with respect to the main clause — 483
3.5.9.6 Simultaneous expression of the main event and the adverbial clause — 483
3.5.10 Absolutive clauses — 483
3.5.10.1 Markers of subordination in absolutive clauses — 484
3.5.10.2 Non-manual markers in absolutive clauses — 484
3.5.10.3 Position of the absolutive clause with respect to the main clause — 484
3.5.10.4 Simultaneous expression of the main event and the adverbial clause — 484
Elicitation materials — 484
References — 485
3.6 Comparative clauses — 486
3.6.0 Definitions and challenges — 486
3.6.0.1 What is a comparative clause? — 486
3.6.0.2 Types of comparatives — 486
3.6.0.3 Comparatives in sign languages — 488
3.7 Comparative correlatives — 488
3.7.0 Definitions and challenges — 488
References — 490

Chapter 4 The noun phrase —— 490
4.0 Introduction —— 490
4.0.1 What is a noun phrase? —— 490
4.0.2 Further distinctions —— 491
4.0.3 Methodological challenges —— 491
4.1 Determiners —— 492
4.1.0 Definitions and challenges —— 492
4.1.0.1 What is a determiner? —— 492
4.1.0.2 Methodological challenges —— 492
4.1.1 Articles —— 493
4.1.1.1 The position of the article —— 494
4.1.1.2 Simultaneous manual articulation —— 494
4.1.1.3 Non-manual marking —— 495
4.1.1.4 Articles expressed by non-manual marking only —— 495
4.1.2 Demonstratives —— 496
4.1.2.0 Definitions and challenges —— 496
4.1.2.1 The position of the demonstrative —— 496
4.1.2.2 Demonstrative reinforcer construction —— 497
4.1.2.3 Non-manual marking —— 497
4.1.2.4 Anaphoric usage —— 498
References —— 498
4.2 Possessive phrases —— 499
4.2.0 Definitions and challenges —— 499
4.2.1 Ways of expressing the possessive relation in the noun phrase —— 499
4.2.1.1 Attributive possessive pronouns —— 500
4.2.1.2 Possessive markers —— 500
4.2.1.3 Juxtaposition —— 501
4.2.2 The position of the possessive pronoun —— 501
4.2.3 Agreement with the possessor —— 501
4.2.4 Agreement with the possessed —— 502
4.2.5 Possessive phrases with the possessed elided —— 502
References —— 502
4.3 Numerals —— 503
4.3.0 Definitions and challenges —— 503
4.3.0.1 What is a numeral? —— 503
4.3.0.2 Numerals and number —— 503
4.3.0.3 Methodological challenges —— 504
4.3.1 The position of the numeral —— 505
4.3.2 Floating numerals —— 505
4.3.3 Definite and indefinite reading —— 506
4.3.4 Numeral incorporation —— 507
4.3.5 Measure Phrases —— 508
References —— 508

4.4 Quantifiers — 509
4.4.0 Definitions and challenges — 509
4.4.0.1 What is a quantifier? — 509
4.4.0.2 Methodological challenges — 509
4.4.1 The position of the quantifier — 509
4.4.2 Floating quantifiers — 511
References — 512
4.5 Adjectives — 513
4.5.0 Definitions and challenges — 513
4.5.0.1 Adjectival modification — 513
4.5.0.2 Methodological challenges — 514
4.5.1 Prenominal versus postnominal adjectives — 515
4.5.2 Symmetric adjectives — 516
4.5.3 Reduplicated adjectives — 517
4.5.4 Ordering restrictions among adjectives — 517
References — 518
4.6 Multiple NP constituents — 519
4.6.0 Definitions and challenges — 519
4.6.1 Prenominal modifiers — 520
4.6.2 Postnominal modifiers — 522
References — 522

Chapter 5 The structure of adjectival phrases — 523
5.0 Definitions and challenges — 523
5.0.1 What is an adjectival phrase? — 523
5.0.2 Internal structure and position with respect to the noun — 523
5.1 Intensifiers and other modifiers — 524
5.1.1 Manual modifiers — 524
5.1.2 Modifications of manual signs and non-manual modifiers — 524
5.1.3 Iteration and stacking — 525
5.1.4 Degree comparatives — 525
5.1.5 Superlatives — 526
5.2 Arguments — 526
5.3 Adjuncts — 526
References — 527

Chapter 6 The structure of adverbial phrases — 527
6.0 Definitions and challenges — 527
6.0.1 What is an adverbial phrase? — 527
6.0.2 Classes of adverbs — 528
6.0.3 Analytical challenges — 528

6.1 Independent manual adverbs — 529
6.2 Modification of manual signs — 529
6.3 Non-manual adverbs — 530
6.4 Classes of adverbs — 530
6.4.1 Sentential adverbs — 530
6.4.2 VP-adverbs — 531
6.4.2.1 Temporal adverbs — 531
6.4.2.2 Manner adverbs — 531
6.4.2.3 Locative adverbs — 532
6.4.2.4 Adverbs conveying aspectual information — 532
6.4.2.5 Adverbs conveying deontic modality — 532
6.4.2.6 Adverbs conveying epistemic modality — 533
6.4.2.7 Adverbs of degree — 533
6.4.2.8 Adverbs of frequency — 533
6.5 Adverbial phrase modifiers — 534
6.5.1 Adverbs modified by degree words expressing intensity — 534
6.5.2 Adverbs modified by degree words expressing comparison — 534
Elicitation materials — 534
References — 535

Complete list of references – Syntax — 536

Part 6: **Semantics**

Chapter 0 Preliminary considerations – The meaning of words and sentences — 557
References — 560

Chapter 1 Tense — 560
1.0 Definitions and challenges — 560
1.1 Absolute tense — 562
1.2 Relative tense — 563
1.3 Degree of remoteness — 564
References — 564

Chapter 2 Aspect — 565
2.0 Definitions and challenges — 565
2.1 Imperfective — 566
2.1.1 Habitual — 567
2.1.2 Continuative/durative — 567

2.1.3 Progressive — 567
2.1.4 Conative — 568
2.2 Perfective — 568
2.2.1 Iterative — 568
2.2.2 Inceptive/Inchoative — 568
2.2.3 Completive — 569
References — 569

Chapter 3 Event structure — 570
3.0 Definitions and challenges — 570
3.1 Event types — 571
3.2 Testing event types — 571
References — 572

Chapter 4 Modality — 572
4.0 Definitions and challenges — 572
4.1 Epistemic and deontic modality — 573
4.2 Modality coded by modals — 573
4.3 Modality coded by modality expressions — 575
4.4 Modality coded by non-manuals — 576
References — 577

Chapter 5 Evidentiality — 578
5.0 Definitions and challenges — 578
5.1 Grammatical evidentiality markers — 580
5.2 Other markers of information source — 581
References — 582

Chapter 6 Argument structure — 583
6.0 Definitions and challenges — 583
6.1 Thematic roles — 587
6.2 Semantic decomposition of thematic roles — 589
References — 590

Chapter 7 Classifier predicates — 592
7.0 Definitions and challenges — 592
7.1 Reference — 594
7.2 Anaphora — 594
References — 595

Chapter 8 Comparison — 596
8.0 Definitions and challenges — 596
8.1 What can be compared? — 597
8.2 Gradable predicates — 598
8.3 Visible comparisons — 600
8.4 Iconicity and comparative constructions — 601
References — 601

Chapter 9 Plurality and number — 602
9.0 Definitions and challenges — 602
9.0.1 Singularis and pluralis — 602
9.0.2 General number — 602
9.0.3 Paucal number — 603
9.0.4 Dual, trial and quadral — 603
9.0.5 Count nouns and mass nouns — 603
9.1 Nominal plural — 603
9.2 Verbal plural — 604
9.3 Lexical plural — 604
References — 605

Chapter 10 Quantification — 606
10.0 Definitions and challenges — 606
10.1 Types of quantifiers — 607
10.2 Strong and weak quantifiers — 612
10.3 Quantifier interaction — 613
References — 614

Chapter 11 Possession — 615
11.0 Definitions and challenges — 615
11.0.1 Useful distinctions — 616
11.0.2 Possessor: Animate or inanimate — 617
11.0.3 Possessum: Alienable or inalienable — 617
11.0.4 Existence, location or possession? — 618
11.1 Strategies in coding possessives — 618
11.2 Kinship — 620
11.3 Whole-part relations — 621
11.3.1 Body parts — 621
11.3.2 Whole-part relations with an inanimate possessor — 621
11.4 Ownership association — 622
11.4.1 Ownership — 622
11.4.2 Association — 622
References — 623

Chapter 12 Negation — 624
12.0 Definitions and challenges — 624
12.1 Lexical negation — 625
12.2 Sentential and constituent negation — 625
12.3 Metalinguistic negation — 627
References — 627

Chapter 13 Illocutionary force — 628
13.0 Definitions and challenges — 628
13.1 Declarative force — 629
13.2 Interrogative force — 630
13.3 Imperative force — 631
13.4 Exclamative force — 633
13.4.1 Testing exclamatives: Factivity — 634
13.4.2 Testing exclamatives: Scalar implicatures — 634
13.4.3 Testing exclamatives: Question/answer pairs — 634
References — 635

Chapter 14 The meaning of embedded clauses — 636
14.0 Definitions and challenges — 636
14.1 Argument clauses — 638
14.2 Adverbial clauses — 638
14.2.1 Conditional clauses — 639
14.2.2 Temporal clauses — 640
14.2.3 Locative clauses — 641
14.2.4 Manner clauses — 641
14.2.5 Reason clauses — 641
14.2.6 Purpose clauses — 642
14.2.7 Concessive clauses — 643
14.2.8 Substitutive clauses — 644
14.2.9 Additive clauses — 644
14.2.10 Absolutive clauses — 645
14.3 Relative clauses — 645
14.3.1 The semantics of restrictive relative clauses — 645
14.3.2 The semantics of non-restrictive relative clauses — 646
14.3.3 Semantics differences between restrictive and non-restrictive relative clauses — 646
14.3.4 Amount relative clauses — 647
References — 647

Complete list of references – Semantics — 650

Part 7: **Pragmatics**

Chapter 0 Preliminary considerations – Meaning in discourse —— 667
0.1 What is pragmatics? —— 667
0.2 Organization of the Pragmatics Part —— 668
0.3 How to use the Pragmatics Part —— 669
References —— 669

Chapter 1 Reference —— 670
1.0 Definitions and challenges —— 670
1.0.1 What is reference? —— 670
1.0.2 Methodological challenges —— 671
1.1 Deixis —— 671
1.1.1 Pointing —— 672
1.1.2 Social deixis —— 672
1.1.3 Lack of deixis —— 673
1.2 Definiteness —— 673
1.2.1 Manual marking —— 674
1.2.2 Non-manual marking —— 674
1.3 Indefiniteness —— 675
1.3.1 Manual marking —— 676
1.3.2 Non-manual marking —— 676
1.4 Specificity —— 677
1.4.1 Manual marking —— 677
1.4.2 Non-manual marking —— 678
1.5 Impersonal reference —— 679
Elicitation materials —— 680
References —— 680

Chapter 2 Reference tracking —— 683
2.0 Definitions and challenges —— 683
2.1 Pronouns —— 683
2.2 Other means —— 688
2.2.1 Agreement —— 689
2.2.2 Classifier handshapes —— 689
2.2.3 Buoys —— 690
Elicitation materials —— 691
References —— 691

Chapter 3 Speech acts —— 692
3.0 Definitions and challenges —— 692
3.0.1 What is a speech act? —— 692

3.0.2 Speech acts, illocutions, and felicity conditions — 693
3.0.3 Analytical challenges — 694
3.1 Assertions — 695
3.2 Questions — 696
3.3 Commands and requests — 697
3.4 Exclamatives — 698
Elicitation materials — 699
References — 699

Chapter 4 Information structure — 700
4.0 Definitions and challenges — 700
4.0.1 Categorizing information structure units — 701
4.0.2 The sentential status of information structure — 703
4.0.3 The marking of information structure units — 704
4.0.4 Association of focus/topic with content/yes-no questions — 705
4.0.5 The separation of information structural concepts from prosodic concepts — 705
4.0.6 Association of topic and subject — 705
4.0.7 Hanging topic, topicalization, and left dislocation — 706
4.0.8 Methodological challenges — 706
4.1 Focus — 707
4.1.1 All-new focus — 707
4.1.2 New information focus — 708
4.1.3 Contrastive focus — 708
4.1.4 Emphatic focus — 709
4.1.5 Focus doubling — 709
4.2 Topic — 710
4.3 Morphological and prosodic markers of focus and topic — 711
4.3.1 Focus — 712
4.3.2 Topic — 713
Elicitation materials — 713
References — 714

Chapter 5 Discourse structure — 716
5.0 Definitions and challenges — 716
5.0.1 Discourse structure — 716
5.0.2 Analytical and methodological challenges — 717
5.1 Coherence and discourse markers — 717
5.1.1 Manual discourse markers — 718
5.1.2 Non-manual discourse markers — 720
5.1.3 Strategies using signing space — 721

5.2 Cohesion — 721
5.2.1 Manual strategies — 721
5.2.2 Non-manual strategies — 723
5.2.3 Strategies using signing space — 723
5.3 Foregrounding and backgrounding — 724
Elicitation materials — 724
References — 725

Chapter 6 Reporting and role shift — 726
6.0 Definitions and challenges — 726
6.0.1 Role shift — 726
6.0.2 Terminology — 727
6.0.3 Comparison with spoken languages — 728
6.0.4 Role shift and context/perspective shift — 729
6.0.5 Role shift and embodiment — 730
6.1 Attitude role shift and (in)direct speech — 731
6.2 Action role shift — 733
Elicitation materials — 734
References — 735

Chapter 7 Expressive meaning — 736
7.0 Definitions and challenges — 736
7.0.1 Expressive meaning — 736
7.0.2 Analytical challenges — 738
7.1 Conversational implicature — 738
7.2 Conventional implicature — 742
7.3 Presupposition — 742
Elicitation materials — 743
References — 744

Chapter 8 Signing space — 745
8.0 Definitions and challenges — 745
8.0.1 Signing space — 745
8.0.2 Analytical challenges — 746
8.1 Uses of signing space — 747
8.1.1 Abstract use — 747
8.1.2 Topographic use — 749
8.2 Temporal expressions — 752
8.3 Perspective — 753
Elicitation materials — 755
References — 756

Chapter 9 Figurative meaning — 759
9.0 Definitions and challenges — 759
9.1 Metaphor — 760
9.1.1 Cognitive basis of metaphors — 760
9.1.2 Types and combinations of metaphors — 762
9.1.3 Metaphors in grammar — 763
9.2 Metonymy — 763
9.2.1 Metonymy versus metaphor — 764
9.2.2 Body as metonymy — 765
References — 765

Chapter 10 Communicative interaction — 766
10.0 Definitions and challenges — 766
10.0.1 Discourse markers — 766
10.0.2 Turn, turn-taking signals, and transition relevance place — 766
10.0.3 Back-channeling — 767
10.0.4 Repairs — 767
10.1 Discourse markers — 767
10.2 Turn taking — 768
10.2.1 Types of turn-taking constructions — 768
10.2.1.1 Smooth turn taking — 768
10.2.1.2 Turn taking with pause — 769
10.2.1.3 Overlapping turns — 769
10.2.2 Turn taking signals — 770
10.2.2.1 Different turn-taking signals — 770
10.2.2.2 Turn-yielding signals — 770
10.2.2.3 Turn-taking signals — 771
10.3 Back-channeling — 771
10.4 Repairs — 772
Elicitation materials — 772
References — 773

Chapter 11 Register and politeness — 775
11.0 Definitions and challenges — 775
11.0.1 What is a register? — 775
11.0.2 What is politeness? — 775
11.1 Register — 776
11.2 Politeness — 777
Elicitation materials — 778
References — 778

Complete list of references – Pragmatics — 780

3.3 Aspect (Annika Herrmann)
3.4 Modality (Annika Herrmann)
3.5 Negation (Roland Pfau & Rannveig Sverrisdóttir)
Chapter 4 Nominal inflection (Roland Pfau, Rolf Piene Halvorsen & Odd-Inge Schröder)
Chapter 5 Classifiers (Roland Pfau, Aslı Göksel & Brendan Costello)

Part 5 Syntax
Chapter 1 Sentence types
1.1 Declaratives (Klimis Antzakas, Caterina Donati)
1.2 Interrogatives (Carlo Cecchetto, Meltem Kelepir)
1.3 Imperatives (Chiara Branchini, Caterina Donati)
1.4 Exclamatives (Caterina Donati, Klimis Antzakas)
1.5 Negatives (Klimis Antzakas, Josep Quer, Caterina Donati)
Chapter 2 Clause structure
2.1 The syntactic realization of argument structure (Josep Quer, Carlo Cecchetto)
2.2 Grammatical functions (Jóhannes Jónsson, Carlo Cecchetto, Caterina Donati)
2.3 Word order (Odd-Inge Schröder, Carlo Cecchetto, Jóhannes Jónsson, Chiara Branchini)
2.4 Null arguments (A. Sumru Özsoy, Chiara Branchini)
2.5 Clausal ellipsis (Carlo Cecchetto, Caterina Donati)
2.6 Pronoun copying (A. Sumru Özsoy, Caterina Donati)
Chapter 3 Coordination and subordination
3.1 Coordination of clauses (Chiara Branchini, Meltem Kelepir)
3.2 Subordination (Chiara Branchini, Meltem Kelepir)
3.3 Argument clauses (Caterina Donati, Sumru Ozsoy, Aslı Göksel)
3.4 Relative clauses (Chiara Branchini, Meltem Kelepir)
3.5 Adverbial clauses (Meltem Kelepir, Carlo Cecchetto, Markus Steinbach)
3.6 Comparative clauses (Caterina Donati)
3.7 Comparative correlatives (Carlo Geraci, Caterina Donati)
Chapter 4 The noun phrase
4.1 Determiners (Lara Mantovan, A. Sumru Özsoy)
4.2 Possessive phrases (Jóhannes Jónsson, Cristina Banfi)
4.3 Numerals (Lara Mantovan, A. Sumru Özsoy)
4.4 Quantifiers (Jóhannes Jónsson, Cristina Banfi)
4.5 Adjectives (A. Sumru Özsoy, Meltem Kelepir)
4.6 Multiple NP Constituents (A. Sumru Özsoy, Lara Mantovan)
Chapter 5 The structure of adjectival phrase (Caterina Donati, A. Sumru Özsoy)
Chapter 6 The structure of adverbial phrase (Chiara Branchini, Odd-Inge Schröder)

Part 6 Semantics
Chapter 0 Preliminary considerations – The meaning of words and sentences (Markus Steinbach)

Chapter 1 Tense (Jette Kristoffersen, Andrea Lackner)
Chapter 2 Aspect (Josep Quer, Markus Steinbach)
Chapter 3 Event structure (Josep Quer, Markus Steinbach)
Chapter 4 Modality (Andrea Lackner, Jette Kristoffersen)
Chapter 5 Evidentiality (Vadim Kimmelman, Markus Steinbach)
Chapter 6 Argument structure (Josep Quer, Markus Steinbach)
Chapter 7 Classifiers predicates (Gemma Barberà, Markus Steinbach)
Chapter 8 Comparison (Valentina Aristodemo, Francesca Panzeri, Carlo Geraci)
Chapter 9 Plurality and number (Jette Kristoffersen, Andrea Lackner)
Chapter 10 Quantification (Josep Quer, Markus Steinbach)
Chapter 11 Possession (Jette Kristoffersen, Andrea Lackner)
Chapter 12 Negation (Markus Steinbach, Roland Pfau)
Chapter 13 Illocutionary force (Philippe Schlenker, Markus Steinbach, Josep Quer)
Chapter 14 The meaning of embedded clauses (Carlo Cecchetto, Markus Steinbach, Meltem Kelepir)

Part 7 Pragmatics

Chapter 0 Preliminary considerations – Meaning in discourse (Markus Steinbach)
Chapter 1 Reference (Gemma Barberà, Kearsy Cormier)
Chapter 2 Reference tracking (Vadim Kimmelman, Markus Steinbach)
Chapter 3 Speech acts (Markus Steinbach, Josep Quer)
Chapter 4 Information structure (Asli Göksel, Gemma Barberà, Vadim Kimmelman)
Chapter 5 Discourse structure (Gemma Barberà, Kearsy Cormier)
Chapter 6 Reporting and role shift (Philippe Schlenker, Asli Göksel, Carlo Cecchetto, Markus Steinbach)
Chapter 7 Expressive meaning (Gemma Barberà, Vadim Kimmelman, Markus Steinbach)
Chapter 8 Signing space (Gemma Barberà, Vadim Kimmelman)
Chapter 9 Figurative meaning (Vadim Kimmelman)
Chapter 10 Communicative interaction (Andrea Lackner, Jette Kristoffersen)
Chapter 11 Register and politeness (Jette Kristoffersen, Andrea Lackner)

Wulf, A., P. Dudis, R. Bayley & C. Lucas. 2002. Variable subject presence in ASL narratives. *Sign Language Studies* 3(1). 54-76.

General sources on adjuncts:

Afarli, T. 1995. A note on the syntax of adverbial phrases. *Norsk Lingvistisk Tidsskrift* 13. 23-40.

Alexiadou, A. 1994. *Issues in the syntax of adverbs*. PhD dissertation, Universität Potsdam.

Andrews, A. 1982. A note on the constituent structure of adverbials and auxiliaries. *Linguistic Inquiry* 13. 313-317.

Cinque, G. 1999. Adverbs and functional heads: A cross-linguistic perspective. Oxford: Oxford University Press.

2.3. Word Order

2.3.0. Definitions and challenges

2.3.0.1. Order between subject, object and verb

Although the notion of word order in principle applies to all constituents in a clause, in practice the investigation of word order in a given language usually starts from the identification of the order of the constituents bearing the grammatical function of subject and object with respect to the verb.

Languages of the world vary a lot as far as word order is concerned. Some languages are quite strict, so it is easy to identify a word order as the basic one. English is a good example. In the following sentences, the noun phrase that precedes the verb is interpreted as the agent, while the noun phrase that follows the verb is interpreted as the theme.

a. A teacher saw John
b. John saw a teacher

If a verb obligatorily takes both an agent and a theme, the agent will be the subject and the theme will the object. So the English sentences above provide evidence that the basic word order of English is S(ubject)-V(erb)-(O)bject. However, even in rigid word order languages like English the word order can be affected. For example, in the following sentence, where the object *a teacher* is contrastively focused [Pragmatics-Section 4.1], the word order becomes OSV.

A TEACHER John saw

Other languages have a much more flexible word order than English, though. In fact, most sign languages studied up to now seem to belong to this group. For these languages, even the identification of the basic word order can be a challenge, so it is important to be clear on the very notion of *basic* word order.

2.3.0.2. Identifying the basic word order

One possibility is to identify the basic word order as the most frequent one. Another possibility is to identify it as the least pragmatically marked (i.e. unmarked), namely the most neutral one. Still another possibility is to spot the basic word order as the one that requires less morphological marking. As these factors may diverge, a proper combination of them has also been suggested (Hawkins 1983).

Various considerations converge in suggesting that word order frequency may not be the most promising approach for sign languages. On the one hand, few sign languages have large annotated corpora, and even for sign languages which do have a corpus, its dimension is not comparable to annotated corpora for major spoken languages. So it would be practically difficult to use the frequency criterion. A second caveat is that the search for the most frequent order should not be uninformed of the syntactic structures of the language under consideration. One example can illustrate this point. In Germanic languages like German and Dutch, a specific rule, called Verb Second, applies in matrix declarative clauses. According to this rule, the finite verb must immediately follow the first constituent in the sentence, but there is no restriction on what type of constituent can come first. This rule has the power to override the basic word order in matrix clauses. For these reasons, some researchers have proposed that in order to identify the word order of German and Dutch one should look at embedded clauses, where the Verb Second rule does not apply. As matrix sentences are more frequent than embedded clauses, the existence of rules that re-arrange word order in matrix clauses can jeopardize the prospect of identifying the basic word order as the most frequent one. The same concern applies to other types of structures. For example interrogative clauses or imperatives may have a special word order. In principle, one might look at the most frequent word order by keeping these factors under control (for example, not considering constructions with special word order rules). In practice, however, the grammar writer is likely to start his or her investigation of the syntax of a given sign language by word order, so at this early stage it might be impossible for him/her to have the necessary command of the language to keep confounding factors under control.

Given these difficulties, some researchers have proposed that there are languages that lack a basic word order. This has been proposed for spoken languages (cf. Mithun 1992) and for sign languages as well (cf. Bouchard & Dubuisson 1995).

However, although not without problems, the criterion that identifies the basic word order as the least pragmatically marked is easier to implement. There are ways to

identify sentences which have a neutral word order. For example, usually the first sentence in a narrative is the most neutral one, since it presupposes no preceding context. Another rule of thumb is to look at sentences that are the answer to questions like "What happened?". These questions require that the entire answer, not just a part of it, be in focus. More precisely, there is broad focus [Pragmatics- Section 4.1] / focus instead of narrow focus. For example, if I ask "What happened?", the sentence in (i) is a natural answer in English while the sentences in (ii) and (iii), which have a marked word order because the constituent Bill is a narrow focus or a topic, are weird.

What happened?
(i) John kicked Bill
(ii) BILL, John kicked
(iii) As for Bill, John kicked him

Finally, the last criterion that has been proposed is to look at sentences where there is less morphological marking. The rationale behind this proposal is that morphology can convey information that word order conveys in other cases. For example in English the SVO word order indicates that *John* is the subject in the sentence "John likes Mary". However in languages like Latin or Japanese where there is a morpheme for nominative and accusative, word order is more flexible since it is not necessary to set subject and object apart by looking at the linear order. Although sign languages typically do not have a rich concatenative morphology, they can use non-manual marking to indicate that a constituent is a topic [Pragmatics- Section 4.2] / topic or a focus [Pragmatics- Section 4.1]. For this reason, the grammar writer should be aware that sentences with special non-manual marking might be cases where the word order is marked, because it is affected by the informational structure.

Of course, word order investigation inside the clause should not be restricted to subject, object and verb. The position of adverbial expressions [Lexicon- Section 3.5] and functional signs like temporal and aspectual auxiliaries, agreement markers, modal verbs [Morphology- Section 3.4], negation signs [Morphology- Section 3.5] and subordinating conjunctions should also be investigated.

A debated issue in the linguistic literature is whether the order between verb and object correlates with the order between the verb and these functional words. It has been observed that in the languages in which the verb follows the object, these functional words tend to follow the verb, while in the languages in which the verb *precedes* the object, these functional words tend to precede the verb (Dryer 1992). The grammar writer may investigate if in his/her sign language such correlation holds or not.

A general concern regarding the investigation of word order is that non-grammatical factors may play a role. The first issue is the possible influence of the spoken language which is dominant in the area where the sign language under investigation is used. The usual precautionary measures should be taken, like excluding

(or analyzing separately) exchanges involving hearing people, especially if these are not fluent in the sign language.

Another important factor affecting word order is the genre of the text which is analyzed. For example a dialogue naturally builds a context which is presupposed among the participants of the dialogue and facilitates establishing certain constituents as topic or focus categories. As mentioned, the onset of a narrative may neutralize this.

2.3.0.3. The challenge of simultaneity

Spoken languages are intrinsically linear: coming through the oral channel, spoken words are produced linearly, one after the other and there is virtually no possibility for simultaneous productions during speech (with the limited exception of prosodic suprasegmental features [Phonology- Chapter 2] / features). On the contrary, sign languages exploit more articulators simultaneously: in particular, the two hands can sometime provide simultaneously two different bits of information, and the non-manual components can vehicle grammatical features that are not necessarily represented on the co-occurring manual signs. This modality-related specificity makes it difficult or even pointless to discuss about word *order* in some cases. The grammar writer should be aware of this possible complication in assessing the word order tendencies of the language under investigation.

We can descriptively distinguish three types of simultaneity that should be handled with care in trying to account for ordering restrictions in a given sign language.

1. Full simultaneity: In this type of simultaneous construction, each of the hands of the signer is active, each producing morphemes of separate lexical entities. At least one of the hands is actively moving in signing space. The example below illustrates a typical full simultaneous construction (Sallandre 2007; Miller 1994):

dh: CL:1 (person: approaches) CL:1 (person: moves away)
ndh: KNOWLEDGE-INCREASE KNOWLEDGE-DIMINISH
'When I'm around them (i.e. ASL) signers, (my ability) increases and when I'm not around them, it decreases.' (LSQ, Miller 1994: 88)

What happens here can be described as the simultaneous production of two related clauses, which are thus not ordered.

Typically, we might expect that the two hands perform one of the following functions (Sallandre 2007):

- they describe simultaneous actions (as in in the example above)
- they represent two different referents

- one represents a topic [Pragmatics- Section 4.2] while the other expresses the rest of the clause
- one hand expressed the cause of an event while the other depicts the result

In many cases simultaneous constructions make use of classifiers [Morphology-Chapter 5] / classifiers, in what has been called classifier constructions [Lexicon- Section 1.2.1; Semantics- Chapter 7].

2. Perseverations: In some other cases, both hands are active but one holds a sign introduced previously while the other hand goes on signing. Typically, after a two handed sign the non-dominant hand might retain the handshape of that sign throughout the next sign or signs. An example is given below.

DRIVE GO index-forward RECOGNIZE index BUILDING
(2 handed) ----------(2 handed)
'She drove around and recognized the building over there.'
(JSL, Verneerbergen et al. 2007: 248)

The syntactic function of this type of simultaneity is not clear, and many assume that it is purely a prosodic effect. Nevertheless the grammar writer should be aware of this possible confound in assessing the dimension of word order in the language under investigation.

3. Partial simultaneity: A source of partial simultaneity is given by pointing signs, which frequently double referential expressions on the non-dominant hand. An example is given below (Liddell 2003: 250).

Dh: BUT FOOD DELICIOUS
Ndh: POINTER-food (ASL)

Another frequent case of partial simultaneity is given by numerals, which are frequently held by the non-dominant hand while the dominant hand goes on describing what is associated to the given numbering.

Some of these cases of simultaneity are not unique to sign languages, but also happen in spoken languages with gestures accompanying speech (Vermeerbergen and Demey 2007; Liddell 2003; Crasborn 2006). Gestures in general constitute a grey area in the description of sign languages, and the grammar writer should be aware of the difficulty in some cases of teasing apart purely grammatical constructions from mere gestural phenomena.

2.3.1. Identification of the basic order of constituents in the main declarative clause

2.3.1.1. Order of subject, object and verb

The investigation of word order may start from the identification of the unmarked order of constituents in a main declarative clause. Although the order of subject, object and verb may not be rigid, the grammar writer might try to identify the order which is more natural as an answer to the question "What happened?" or in the first sentence of a narrative, where no constituent is likely to be given special prominence.

In many sign languages the subject or the object can be null, so not all the sentences with a transitive verb are suitable for the identification of the basic word order.

In sign languages that have been studied to date the basic word order has been identified as either SVO (e.g. ASL, LSB, HKSL, and SSL) or SOV (e.g. NGT, DGS, IPSL, LIS, VGT, and Irish SL).

Also in spoken languages, the two most common orders are by far SVO and SOV, although VSO is also fairly well attested (the other orders are very rare).

A potential complication is raised by the fact that the position of a pronominal subject may be different from the position of a full noun phrase subject. NSL can illustrate this. In NSL the basic word order is SVO as shown by the following sentence.

BOY DRINK MILK
'The boy drinks milk.' (NSL)

However, if the subject is a pronominal index, it can appear sentence finally. The VOS order is not attested when the subject is a full noun phrase.

DRINK MILK IX
'He drinks milk, (he does).'
*DRINK MILK BOY (NSL)

The VOS order is acceptable only is there is a pause between MILK and BOY and the pronominal index is repeated.

DRINK MILK. BOY IX-IX (NSL)

The investigation of word order should also mention the order between the subject and an intransitive verb. The basic order is expected to be SV, at least if the language is SVO or SOV. However, as in the case of transitive verbs, pronominal subjects may be special. We illustrate this with NSL, where the order is SV with a full noun phrase subject, unless the subject is pronominal. In the latter case the order can be VS.

a. MAN SLEEP

‘The man is sleeping.’

b. *SLEEP MAN

c. SLEEP IX
‘He is sleeping.’ (NSL)

Finally the grammar writer should investigate whether there are differences between the order of the subject and an unergative [Syntax- Section 2.1.1.2] / unergative verb and the order of the subject and an unaccusative [Syntax- Section 2.1.1.2] / unaccusative verb.

2.3.1.2. Order of auxiliaries (i.e. agreement, tense and aspectual markers) with respect to the verb

In this section the grammar writer should describe the relative order of auxiliaries [Morphology- Section 3.3] with respect to the verb, verifying in particular whether they precede of they follow it.

2.3.1.3. Order of modals with respect to the verb

Modal [Morphology- Section 3.3.3] verbs are known to display in many languages a distribution which does not overlap with normal lexical verbs. In this section the grammar writer should verify whether modal verbs display any specific distribution in the language under investigation.

2.3.1.4. Order of negation with respect to verb, modals and auxiliaries

When the sentence contains functional signs that indicate agreement, tense or aspectual information, and negation [Lexicon- 3.11.1; Morphology- Section 2.1.1.2], it is useful to describe the possible positions of these functional signs with respect to the verb and its argument. For example, in DGS and other sign languages an agreement auxiliary [Lexicon-Section 3.3.4] (also called Person Agreement Marker or PAM) combines with a plain verb which cannot express agreement overtly (cf. Rathmann 2003; Steinbach & Pfau 2007). In DGS PAM may appear sentence-finally or it may occur between the subject and the object, possibly depending on dialectal variations.

a. I POSS CUP LIKE $_1$PAM$_3$
‘I like my cup.’

b. HANS$_i$ $_i$PAM$_j$ MARIE$_j$ LIKE
‘Hans likes like Marie.’ (DGS, Rathmann 2003: 183)

Other functional signs are aspectual markers [Lexicon- Section 3.3.2], for example the sign glossed as FINISH in ASL and the one glossed as DONE in LIS. In ASL, which has SVO as its basic order, the perfect marker FINISH precedes the verb. In LIS, which has SOV as its basic order, the perfect marker DONE follows the verb.

a. JOHN FINISH VISIT MARY
   'John has visited Mary.' (ASL, Zucchi et al. 2010: 199)
b. GIANNI HOUSE BUY DONE
   'John has bought a house.' (LIS, Zucchi et al. 2010: 204)

Although tense [Lexicon- Section 3.3.1, Semantics- Chapter 1] information is typically conveyed by time adverbials, some sign languages contain tense auxiliaries. These signs often derive from time adverbials (Aarons et al. 1995 for ASL) or from modal verbs (Cecchetto et al. 2015). The grammar writer may investigate the position of these signs and study if there are differences when they are used as auxiliaries and when they are used as modals (or time adverbials).

The position of negation [Lexicon- Section 3.11.1; Morphology- Section 2.1.1.2; Semantics- Chapter 12], with respect to the verb, modals and auxiliaries should also be verified. In LIS, a SOV language, negation follows the verb, modals and aspectual markers [Lexicon-section 3.3.2], while in ASL, a SVO language, it precedes the verb.

a. GIANNI ARRIVE NOT
   'Gianni doesn't arrive.' (LIS)
b. JOHN NOT BUY HOUSE
   'John has not bought a house.' (ASL)

The grammar writer should also consider that many sign languages display different signs of negation carrying different pragmatic meanings, such as negative particles [Lexicon- Section 3.11.1], negative words, and negative adverbials. The position of these different signs of negation may vary in the sentence and should therefore be investigated in the target sign language.

2.3.1.5. Order of arguments of ditransitive verbs

Ditransitive verbs/ditransitive (*give* or *send*) take three arguments. The grammar writer may want to describe the possible orders between them. Many languages admit a permutation between the theme argument and the goal [Semantics- Section 6.1], so this is an aspect that should be taken into consideration.

2.3.1.6. Position for different types of adverbs and adjuncts

Although it is not unusual for the same adverb [Lexicon- Section 3.5] to be found in more than one position in the sentence, each type of adverbs may be associated to one non-marked position, as with any adjunct [Syntax- Section 2.2.3]. The grammar writer should see if there are different positions for (among others) the following types of adverbs: adverbs of time (*yesterday*), adverbs of place (*outside*), adverbs of manner (*slowly*), adverbs of frequency (*often*) and sentential adverbs, which conveys the attitude of the speaker toward the content of the sentence (*probably*).

However, the grammar writer should consider that in sign languages some adverbs are naturally realized non-manually on the verb, so their order in the clause is by definition the same as the verb.

The grammar writer should keep in mind that adjunctscan also be realized through other means, such as adverbial clauses [Syntax- Section 3.5; Semantics- Section 14.2] and noun phrases.

2.3.2. Basic order of constituents in other clauses

2.3.2.1. Basic order in the different types of sentence

After analyzing the word order in declarative sentences [Syntax- Section 1.1; Semantics- Section 13.1], the grammar writer may want to see if in the other sentence types (question/question [Syntax- Section 1.2; Semantics- Section 13.2], imperative/imperative [Syntax- Section 1.3; Semantics- Section 13.3] and exclamative/exclamative[Syntax- Section 1.4; Semantics- Section 13.4]) the order is different. In particular, in many sign languages wh-signs/Wh-signs [Syntax- Section 1.2.3] are found in a position which does not correspond to their grammatical function (typically sentence finally or sentence initially). If a language uses a special sign to convey imperative force, its position should be detected. Also, since a property of imperative clauses observed in many spoken languages is a change in word order, the grammar writer should investigate if such a change also applies to the target sign language in the imperative mode.

2.3.2.2. Basic order in the different types of subordinate clauses

Two types of clauses can be embedded: declarative [Syntax- Section 1.1] and interrogative clauses [Syntax- Section 1.2] (also called indirect questions). The basic word order in embedded declaratives and interrogatives may or may not be the same as the word order in matrix declaratives and interrogatives, even more so considering that

some (spoken) languages have special word order rules for matrix clauses (cf. Verb Second in Western Germanic languages). It may be interesting to study if the position of the wh-signs [Syntax- Section 1.2.3] is the same in matrix and embedded clauses. Finally, if the sign language under study has signs for subordinating conjunctions, these should be detected.

2.3.3. Deviations from the basic order of constituents

Although most known sign languages have a flexible word order, it is not the case that anything goes. So, after analyzing what is the basic, unmarked word order in the language, it is important to analyze the possible and impossible order permutations. In doing so, the grammar writer should try to determine which factor makes possible or favors these changes. Since, topic/topic [Pragmatics- Section 4.2] or focus/focus [Pragmatics- Section 4.1] constituents are often dislocated in specific positions in the sentence and are often accompanied by specific non-manual markers, attention should be given to these factors. For example, in NSL, which is usually SVO, the order may be reversed to OSV, if the object is focalized and a pause intervenes between the object and the rest of the clause:

CAR GRANDPA HAVE
'A car is what grandfather has?' (NSL)

2.3.3.1. List of attested and unattested permutations

After analyzing what is the basic, unmarked word order in the language, here the grammar writer should analyze the possible and impossible order permutations for the language under investigation.

2.3.3.2. Non-manuals accompanying the deviations from the basic word order

In describing permutations, the grammar writer should try to determine which factor favors these changes. Topic [Pragmatics- Section 4.2] or focus/focus [Pragmatics- Section 4.1] constituents are known to be often dislocated in specific positions in the sentence and are often accompanied by specific non-manual markers. In this section the grammar writer should describe which specific non-manual markers correlate with any given permutation.

2.3.3.3. Specific order for topicalized elements

Here the grammar writer should describe the permutations that correspond to topicalization strategies.

In sign languages, topics usually occupy the left periphery of the clause and are marked by dedicated non-manual markers. Studies on topic marking in various sign languages (Aarons 1994; 1996 for ASL; Sze 2013 for HKSL, Brunelli 2011 for LIS, a.o.) show that: (i) sign languages vary in the non-manuals marking topics; (ii) different kinds of topic may co-exist in the same sentence (usually not more than two); (iii) topics can be distinguished by ordering restrictions (distribution in the sentence), non-manual marking, discourse function, and whether they are base-generated in the left-periphery of the sentence or moved. (a) below illustrates an ASL sentence with a base-generated topic (VEGETABLE) marked by a large movement of the head back, wide eyes, and a forward head movement ('tm2'). The ASL sentence in (b) displays two topics preceding the main clause: a base-generated topic (JOHN) introducing known referent marked by a cluster of NMMs (head down, wide eyes, mouth open, raised eyebrows and rapid headnods, 't3-bg') and a moved topic (MARY) expressing contrastive focus and marked by raised eyebrows, wide eyes, head tilted back, and the head moving down ('t1-mv'). According to Aarons (1994), moved topics must follow base-generated topics in ASL.

tm2

a. VEGETABLE, JOHN LIKE CORN
'As for vegetables, John likes corn.' (ASL, Aarons 1996:78)

t3-bg t1-mv

b. JOHN$_j$, MARY$_i$, IX$_j$ LOVE t_i
'You know John, *Mary* he loves.' (ASL, Aarons 1994: 179)

2.3.3.4. Specific order for focused elements

Here the grammar writer should describe the permutations that correspond to focalization strategies.

Similarly to topics, focused elements usually tend to appear at the left of the sentence in sign languages, they are marked by dedicated non-manual markings and may carry out different discourse functions. In some sign languages, focused constituents may be followed by an indexical sign or by a determiner-like element functioning as an intensifier, as in the ASL example below. The focused constituent (KAY) is marked by brow raise and lean back ('br').

br

KAY THAT, TOLD FINISH
'It's Kay that I told.' (ASL, Wilbur 2012: 475)

Languages may vary as to the distribution of topic and focus in the sentence. In the ASL sentence below, a base-generated topic (FRUIT) must precede the focus (BANANA).

tm2 I-foc
FRUIT, BANANA, JOHN LIKE MORE
'As for fruit, John likes banana best.'
(ASL, Lillo-Martin and de Quadros 2008: 169)

2.3.3.5. Word order variations according to the different types of verbs (plain, agreeing)

Most sign languages of the world have three types of verbs (Padden 1983): plain verbs [Lexicon- Section 3.2.1], agreement verbs [Lexicon- Section 3.2.2] and spatial verbs [Lexicon- Section 3.2.3]. Word order may change according to these classes, as it is well known at least since Fischer (1974, 1975). In particular, sentences with agreement verbs exhibit a freer word order than sentences with plain verbs. For example, in NSL, where the basic word order is SVO, the order SOV is also commonly found with agreeing verbs:

JOE-IX$_i$ EVA-IX$_j$ $_i$KICK$_j$
'Joe kicked Eva.' (NSL)

Because of this, claims about the basic word order of particular sign languages are often based on sentences with plain verbs rather than agreement verbs.

The word order differences between plain verbs and agreement verbs can be further illustrated through LSB. As shown below, LSB allows an OSV order with the agreement verb ASSISTIR 'watch' but not with the plain verb GOSTAR ('like'). Note that since there is no topic marking in these examples, we can assume that they are not derived by topicalization. Importantly, the sentence with GOSTAR would be grammatical if the predicate were irreversible (for example, 'John likes football'), showing that the reversible/irreversible character of the predicate interacts with the agreeing/non agreeing character of the verb.

eg:b eg:a eg:b
a. TV$_i$ IX<det> JOÃO$_j$ $_j$ASSISTIR$_i$
'John watches TV.'

hn
b. *IX<det> MARIA IX<det> JOÃO GOSTAR
'John likes Mary.' (LSB, Quadros & Lillo-Martin 2010: 238-239)

2.3.3.6. Word order variations according to the different types of predicates (reversible/irreversible)

Another factor that has been claimed to play a role in word order is the reversible/irreversible character of the predicate. If the predicate is reversible, namely the two characters can perform the action on each other ('John saw Mary'), word order may be the only clue to understand who is the agent and who is the theme. If the predicate is irreversible, ('John is eating a sandwich'), word order is less crucial in determining argument structure. This may have consequences. For example, in NSL, sentences with SOV order are more commonly found in narratives and when the predicate is irreversible. The verb in SOV-clauses is normally intensified, as in the following sentence:

JOE CHOCOLATE EAT-intensified
'Joe gorged himself on chocolate.' (NSL)

In many sign languages, the SVO order is preferred in sentences with reversible arguments whereas SOV is more common with irreversible arguments. This holds in ASL (Fischer 1975), HZJ (Milković et al. 2006), LSB (de Quadros 1999), LIS (Volterra et al. 1984) and VGT (Vermeerbergen et al. 2007). Kimmelman (2012) also reports that semantic reversibility of the sentence favors SVO in RSL.

The contrast between irreversible arguments and reversible arguments is exemplified in (a) and (b) below:

hn
a. IX<det> JOÃO FUTEBOL GOSTAR
'John likes soccer.'

hn
b. *IX<det> JOÃO IX<det> MARIA GOSTAR
'John likes Mary.' (LSB, Quadros & Lillo-Martin 2010: 239)

Not only is an SOV order ruled out with reversible arguments in LSB (as shown above). The order OSV is also impossible, even though it is allowed with irreversible arguments:

hn
a. FUTEBOL IX<det> JOÃO GOSTAR
'John likes soccer.'

hn
b. *IX<det> MARIA IX<det> JOÃO GOSTAR
'John likes Mary.' (LSB, Quadros & Lillo-Martin 2010: 239)

Although reversibility/irreversibility of the subject and object arguments is relevant for word order in many sign languages, this is not the case for all sign languages. For instance, reversibility/irreversibility of subject and object does not influence word order in Auslan, Irish SL, and HKSL (Johnston et al. 2007; Sze 2003). Hence, the grammar writer should check if reversible sentences differ from non-reversible sentences in the sign language under investigation.

Elicitation materials

Researchers have adopted different approaches in collecting data on word order in sign language. The approach characterizing the first studies on word order involves the use of elicited data either in the form of translations from the spoken language, grammaticality judgments, or elicitation from drawings. In general, elicited data present some disadvantages: they often lack a discourse and pragmatic context against which to check their interpretation, or they might erroneously suggest one. However, elicitation procedures with the necessary recommendations may turn out to be a very useful approach. The grammar writer should avoid translations from the spoken language as this might induce the signer to follow the word order of the spoken language. The elicitation from drawings avoids such drawback favoring the presence of a narrative context with no shared information between the signer and his interlocutor, so it is likely elicits an unmarked word order. The grammar writer should avoid presenting images favoring a focused interpretation. To provide a clarifying example, the investigation on LIS word order carried out by Volterra et al. (1984) involved the participation of two interacting signers both provided with couples of drawings minimally different for the direction of the action performed (namely, 'the woman embraces the girl' vs. 'the girl embraces the woman'). One of the signers was told which of the two drawings he/she had to describe to his partner. This elicitation approach might have induced the signer to produce marked orders reflecting the contrastive information present in the two drawings.

More recently, the availability of technological equipment and the collection for some sign languages of naturalistic corpora, has induced researchers to annotate naturalistic and spontaneous data to investigate word order. Among the advantages of using naturalistic data is the possibility to interpret them at the light of the discourse context in which they are produced. However dialogues naturally build a context which is presupposed among participants, thus facilitating the establishment of certain constituents as topic or focus categories. On the other hand, naturalistic data might lack spontaneous production of specific structures preventing the grammar writer to carry out an in-depth analysis of the phenomenon. The grammar writer is therefore advised to use more than on approach when carrying out research on word order in the target sign language.

References

Main sources on simultaneity in sign languages:

Crasborn, O. 2011. The other hand in sign language phonology. In: van Oostendorp, M., C.J. Ewen, E. Hume & K. Rice (eds.), *The Blackwell companion to phonology*. Malden, MA: Wiley-Blackwell,223-240.

Geraci, C., M. Gozzi, C. Papagno & C. Cecchetto. 2008. How grammar can cope with limited short term memory: Simultaneity and Seriality in Sign Languages. *Cognition* 106. 780-804.

Liddell, S.K., M. Vogt-Svendsen & B. Bergman. 2007. A crosslinguistic comparison of buoys. Evidence from American, Norwegian, and Swedish Sign Language. In: Vermeerbergen, M., L. Leeson & O. Crasborn (eds.), *Simultaneity in signed languages: Form and function*. Amsterdam: John Benjamins, 187-215.

Sallandre, M.-A. 2007. Simultaneity in French Sign Language discourse. In: Vermeerbergen, M., L. Leeson & O. Crasborn (eds.), *Simultaneity in signed languages: Form and function*. Amsterdam: John Benjamins, 103-126.

Vermeerbergen, M., L. Leeson & O. Crasborn (eds.). 2007. *Simultaneity in signed languages: Form and function*. Amsterdam: John Benjamins.

Main sources on word order in sign languages:

Bouchard, D. & C. Dubuisson. 1995. Grammar, order and position of wh-signs in Quebec Sign Language. *Sign Language Studies* 87. 99-139.

Leeson, L. & J. Saeed. 2012. Word order. In: Pfau, R., M. Steinbach & B. Woll (eds.)*, Sign language. An international handbook.* Berlin: de Gruyter Mouton, 245-265.

General sources on word order:

Dryer, M. 1992. The Greenbergian word order correlations. *Language* 68. 81-138.

Hawkins, J.A. 1983. *Word order universals*. New York: Academic Press.

Mithun M. 1992. Is basic word order universal? In: Payne D.L. (ed.), *Pragmatics of word order flexibility*. Amsterdam: John Benjamins, 15-61.

Sources on word order differences between agreement verbs and plain verbs:

Fischer, S. 1975. Influences on word order change in American Sign Language. In: Li, C.N. (ed.),*Word order and word order change*. Austin, TX: University of Texas Press, 1-25.

Fischer, S. 1974. Sign language and linguistic universals. In: Rohrer, T. & N. Ruwet (eds.), *Actes de Colloque Franco-Allemand de Grammaire Transformationelle*. Tübingen: Niemeyer, 187-204.

Padden, C. 1983. *Interaction of morphology and syntax in American Sign Language*. PhD dissertation, University of California, San Diego [published 1988, New York: Garland Press].

Quadros, R. Muller de & D. Lillo-Martin. 2010. Clause structure. In: Brentari, D. (ed.), *Sign languages*. Cambridge: Cambridge University Press, 225-251.

Sources on reversible/irreversible predicates in sign languages:

Fischer, S. 1975. Influences on word order change in American Sign Language. In: Li, C.N. (ed.), *Word order and word order change*. Austin, TX: University of Texas Press, 1-25.

Johnston, T., M. Vermeerbergen, A. Schembri & L. Leeson. 2007. 'Real data are messy': Considering cross-linguistic analysis of constituent ordering in Auslan, VGT, and ISL. In: Perniss, P., R. Pfau & M. Steinbach (eds.), *Visible variation. Comparative studies on sign language structure*. Berlin: Mouton de Gruyter, 163-206.

Kimmelman, V. 2012. Word order in Russian Sign Language: An extended report. *Linguistics in Amsterdam 2011*. 1-56.

Milković, M., S. Bradarić-Jončić & R.B. Wilbur. 2006. Word order in Croatian Sign Language. *Sign Language & Linguistics* 9(1/2). 169-206.

Miller, C. 1994. Simultaneous Constructions in Quebec Sign Language. In: Brennan, M. & G.H. Turner (eds.), *Word-Order issues in sign language*. Durham: International Sign Linguistic Association, 89-112.

Quadros, R. Muller de. 1999. *Phrase structure of Brazilian Sign Language*. PhD dissertation, Pontifícia Universidade Católica do Rio Grande do Sul.

Quadros, R. Muller de & D. Lillo-Martin. 2010. Clause structure. In: Brentari, D. (ed.), *Sign languages*. Cambridge University Press, Cambridge, 225-251.

Sze, F.Y.B. 2003. Word order of Hong Kong Sign Language. In: Baker, A., B. van den Bogaerde & O. Crasborn (eds.), *Cross-linguistic perspectives in sign language research* (*Selected papers from TISLR 2000*). Hamburg: Signum, 163-191.

Vermeerbergen, M., M. Van Herreweghe, P. Akach & E. Matabane. 2007. Constituent order in Flemish Sign Language (VGT) and South African Sign Language (SASL). *Sign Language & Linguistics* 10(1). 25-54.

Volterra,V., A. Laudanna, S. Corazza, E. Radutzky & F. Natale. 1984. Italian Sign Language: The order of elements in the declarative sentence. In: Loncke, F., P. Boyes-Braem & Y. Lebrun (eds.), *Recent research on European sign language*. Lisse: Swets and Zeitlinger, 19-48.

2.4. Null arguments

2.4.0. Definitions and challenges

2.4.0.1. What is a null argument?

Some languages allow the arguments of a verb in a tensed clause not to be expressed as an overt Pronoun [Lexicon- Section 3.7] or a lexical noun phrase [Syntax- Chapter 4]. This is the situation in which the term 'null argument' is commonly used. Spoken languages vary with respect to whether they allow the arguments of the verbs to be