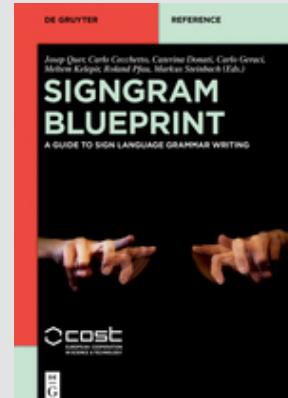


*Josep Quer, Carlo Cecchetto, Caterina Donati, Carlo Geraci,  
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## SIGNGRAM BLUEPRINT

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**

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# **SignGram Blueprint: Manual**

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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

The logo consists of the word "SIGNGRAM" in a bold, white, sans-serif font. Above the letter "G", there is a small icon depicting two hands forming a sign shape.

**SIGNGRAM**

## **SignGram Blueprint**



# SignGram Blueprint

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# 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.

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 or 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 TiD. 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:

${}_1\text{SIGN}_3$	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.).
$\text{INDEX}_3 / \text{IX}_3$	A pointing sign towards a locus in space; subscripts are used as explained above.
$\text{SIGN}^{++}$	indicates reduplication of a sign to express grammatical features such as plural or aspect.
$\text{SIGN}^{\wedge}\text{SIGN}$	indicates the combination of two signs, be it the combination of two independent signs by compounding or a sign plus affix combination.
$\text{SIGN-SIGN}$	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:

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

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

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

# **Structure of the SignGram COST Action IS1006**

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## 1.3. Imperatives

### 1.3.0. Definitions and Challenges

#### 1.3.0.1. What is an imperative?

An imperative is a grammatical form that is specialized to elicit a behavior from the addressee. Imperatives are one of the four well-recognized sentence types, the other three major types being **declaratives** [Syntax- Section 1.1], which are used to make an assertion, **exclamatives** [Syntax- Section 1.4], which are used to express surprise, and **questions** [Syntax- Section 1.2], which are used to obtain information.

A potential confounding factor is that sometimes a question can be used to express a command ('Could you pass me the salt, please?') and, conversely, an imperative can be used to elicit information from the addressee ('Tell me the name of the President.'). Still, languages develop grammaticalized forms that are *typically* associated with imperatives and these forms are the topic of the present Section in which we abstract away from the specific uses that these forms may have.

### 1.3.0.2. Functions of the imperative

Despite its name (imperative, from *impero* 'to command'), the imperative is not used only for commands. In most languages, the same form that is used to give orders is also used for other functions, which may not be obviously related. Typical uses of imperatives include at least:

- a. invitations
- b. suggestions/advice
- c. permission
- d. instructions
- e. recommendations

### 1.3.0.3. Orders with no imperative

It is important to bear in mind that imperative sentences are not the only way to express a command in a given language. In English, for example, you can give an order with a simple declarative (a), with a **Yes/No question/ Yes/No question** [Syntax- Section 1.2.1] (b) or with a deontic modal (c), such as *should* or *must*:

- a. You are going to wash your hand!
- b. Could you wash your hands(, please)?
- c. You should wash your hands.

The imperative can be distinguished from deontic modal constructions in a very simple and cross-linguistically valid way: while modal constructions, being propositional, can be true or false, imperative sentences cannot. Consider the following pair:

- a. Wash your hands!

- b. You should wash your hands

While you can say that (b) is true (or false), this simply does not apply to (a).

#### **1.3.0.4. Simultaneous or concatenative morphology in imperatives**

Since sign languages can be used to elicit a behavior from the addressee as in commands and in the other uses just listed, we expect them to develop grammaticalized forms associated with these conversational uses. Hence, it is reasonable to look for grammatical forms specialized for imperatives, both in their order use and in their other uses.

Still, the form that these imperatives take in sign languages might be quite different from the form we are used to in more studied spoken languages. For example, given the inherent multidimensionality of sign languages, imperative morphology might be expressed simultaneously with the lexical signs. This means that instead of finding a specific ending marking the verb in English, non-manual marking can be the manifestation of imperative morphology. This is not surprising, since non-manual-marking can be seen as the equivalent of intonation and in many spoken languages intonation distinguishes declaratives from imperatives. Moreover, given the way inflection appears to be expressed in most sign languages, we might expect imperatives to be signaled by a separate manual sign, rather than through a simple modification of the verbal sign. It is also possible that more than one manual sign, and more than one non-manual markers are available, possibly distinguishing the various uses of the imperative just mentioned.

### 1.3.1. Subtypes of imperatives

As previously mentioned, imperatives do not fall into a single class but may be thought of as a sentence type that may take on different pragmatic interpretations and syntactic forms as described in the following sections.

### 1.3.1.1 Orders

The most obvious subtype of imperatives includes positive and negative orders. Orders express the will of the speaker for someone to do or not do something as in the English sentence ‘Eat properly!’ or ‘Don’t pull that rope!’. An example of a sentence expressing an order in Italian Sign Language (LIS) is offered below.

furrowed brows  
STOP PLAY STOP EAT PALM-UP (LIS)

‘Stop playing, stop. Eat!’

#### 1.3.1.2. Invitations

Imperatives may also take the form of an invitation when someone is warmly encouraged to do something, as in the English sentence ‘Have a piece of cake.’ As opposed to orders, invitations are expressions of politeness. An example of a LIS sentence expressing an invitation is provided below.

furrowed brows  
jTAKEk PALM-UPj  
‘Take it.’ (LIS)

#### 1.3.1.3. Suggestions/advice

Suggestions and advice also fall into the wider category of imperatives whose main goal is to advise the addressee on what is best for him/her to do in order to get a better result or to improve his/her situation. A suggestion/advice in English is illustrated by the sentence ‘Buy healthy food for your kids!’ and by the LIS sentence below.

furrowed brows  
BUY PALM-UP (pause) POWDER CONVENIENT  
‘Buy it. The powder one is convenient.’ (LIS)

#### 1.3.1.4. Permissions

This subvariety of imperatives expresses an authorization, and may be a reply to a request, as in ‘May I take your pen?’ –‘Yes, take it!’. An example of a LIS sentence expressing permission is provided below.

furrowed brows  
kTAKEj PALM-UP (pause) PEN  
‘Take it! The pen.’ (LIS)

#### 1.3.1.5. Instructions

Another subtype of imperative sentences is produced when the speaker gives instructions guiding his/her interlocutor on how to carry out a specific action such as

building, cooking, reaching a destination or any other performance. An English example of an imperative expressing instructions is ‘Take the first street on the left,’ while the example below illustrates a LIS sentence.

squinted eyes  
BOX TAPE-CL (pause) CUT  
'Cut the box's tape.' (LIS)

### 1.3.1.6. Recommendations

The imperative form may also be employed to express a recommendation to do or not to do something, either expressing the speaker's desire for a future situation, as in ‘Don't stay away too long!’, or the speaker's concern for a possible unfortunate future event damaging the interlocutor, as in ‘Be careful when you cross the street!’. Below is an example of this subtype of imperatives in LIS.

furrowed brows  
CL-DRIVE-MOTORBIKE-FAST NOT CL-DRIVE-MOTORBIKE RIGHT KNOW CL RIGHT  
'Don't go fast with your motorbike, drive at the right speed!' (LIS)

### 1.3.2. Imperative markers

#### 1.3.2.1. Manual signs

Some spoken languages have been reported to mark the different subvarieties of imperatives with specific syntactic morphemes. This is the case for example of Badiotto (Poletto and Zanuttini 2003), a dialect spoken in Northeastern Italy, where different particles can specify the subtype of an imperative sentence: the particle *mo* is used to give orders, as exemplified in (a) below, while the particle *ma* is used to give advice or permission, as in (b) below.

- a. Arjigneme *mo* cà le bagn!  
clean.IMP-me mo yet the shoes  
'Polish my shoes!' or 'You still have to polish my shoes!'  
(Badiotto, Poletto & Zanuttini 2003:179)
- b. Tèt *ma* n dé de vacanza!  
take.IMP-yourself ma a day of vacation  
'Take a day off for vacation!' (Badiotto, Poletto & Zanuttini 2003:178)

The grammar writer should verify the presence of specific morpho-syntactic manual markings expressing the imperative modality and/or the **various subtypes of imperatives** [Syntax – Section 1.3.1] and verify whether these specific markers are obligatory or whether they are an alternative to a more general imperative marker.

A manual sign is attested in some sign languages like LIS and NGT is the sign conventionally glossed PALM-UP (PU) and produced with both hands open and with the palms facing upwards.

### **1.3.2.2. Non-manual markers**

Imperative sentences in spoken languages are quite often marked with peculiar intonational contours. As **non-manual markers** [Phonology – Section 1.5] in sign languages have been claimed to be the counterpart of intonation, it is very likely that the imperative mood is signaled in sign languages through specific non-manual markers. The analysis of specific non-manual markers in imperative sentences, as well as their obligatoriness or optionality, is therefore crucial in describing how imperatives are formed in the target sign language.

Sign languages usually employ a combination of different non-manual markers, including eye contact, body orientation, facial expressions and head movements. A set of different non-manual markers may be used to mark imperative sentences. A detailed analysis of the non-manuals in imperatives should include the description of their co-occurrence as well as of their potential difference connected to the type of imperatives produced. As with manual signs, specific non-manual markers may mark and distinguish the various types of imperatives listed in section 1.3.1.

The spreading domain of non-manual markers refers to their extension over the manual signs they co-occur with. Non-manual markers tend to spread over the syntactic domain of which they are a direct expression. Spreading of the non-manual markers in imperative sentences should be investigated.

### **1.3.3. Imperatives and verb classes**

In spoken languages, imperative are typically associated with reduced morphology (Zhang, 1990; Mauck, 2005). In English, for example, the simple verb root is an imperative (e.g. go). The grammar writer should verify whether the various verb classes differ in some way when used in an imperative clause. In particular, the grammar writer should examine **agreement verbs** [Lexicon - Section 3.2.2] carefully, since we might expect them to display a loss of or modification in their agreement morphology. With other verb classes, the grammar writer should pay attention to possible modifications in width, direction, and timing of the movement of the sign.

#### **1.3.4. Word order in imperatives**

The literature on spoken languages reports a marked word order in imperative sentences, such as subject-verb inversion, negation-verb inversion, and object-verb inversion. In Romance languages such as Italian, for example, while object clitics usually precede the verb in declarative sentences (a), they follow it in imperatives (b).

- a. Lo leggi.  
it read.2SG  
'(You) read it.' (Italian)
- b. Leggi-lo!  
read.IMP-it  
'Read it!' (Italian)

Possible word order changes throughout the different subtypes of imperatives should be detected and described.

Another option, which is reported to be very productive in the syntax of sign languages, is the doubling of constituents. A careful investigation should verify whether doubling of constituents is optional or obligatory in the production of the different subtypes of imperatives.

#### **1.3.5. Attention callers**

Since imperatives are means for eliciting a specific behavior of the addressee, we expect imperative clauses to be frequently preceded or accompanied by various forms of attention callers. The grammar writer should investigate whether this sign or class of signs is grammaticalized as part of the imperative sentence and whether there are systematic correlations between specific subtypes of imperatives and (types of) attention callers.

#### **1.3.6. Negation in imperatives**

In many languages, imperatives cannot be negated. In order to express a negative order, languages rely on some other resources that act as a surrogate. Typically, languages resort to the infinitive, as in (b) (Italian), or the subjunctive, as in (d) (Spanish).

- a. Vai al mare!  
go.IMP to-the sea (Italian)
- b. Non andare al mare!

- c. not go.IMP to-the sea (Italian)
- c. Ve al mar!  
go.IMP to-the sea (Spanish)
- d. No vayas al mar.  
NEG you go-SUBJ to-the sea  
'Go/Don't go to the sea!' (Spanish)

Evidence from other languages shows that imperatives are negated differently from declaratives. In English imperatives, for example, the copula is negated with *do*-support ('Don't be loud!'), an ungrammatical option in English declaratives ('\*He don't be loud/He isn't loud').

**Negation** [Syntax- Section 1.5] appears, therefore, to be a very interesting domain to be investigated in describing the imperative sentence type.

#### 1.3.6.1. Manual negation

The first issue to be described is the possibility for the imperative predicate to be negated. If it can, it should be further examined what manual sign for negation is employed.

The manual sign for negation might be subject to morphological changes in one or more of its parameters, it might change from a free to a bound morpheme or it might be substituted by a completely new sign. Negative manual signs, as well as their position in the sentence, might differ depending on the subtype of imperative produced.

Negative imperatives might involve changes in the word order of the sentence. Any change in word order should be described.

#### 1.3.6.2. Non-manual negation

Since negation involves the obligatory presence of specific non-manual markings in most sign languages, negative imperatives should also be described along this dimension. One relevant change, possibly affecting negative imperatives, might involve the presence of different non-manual markings or the use of a different set of non-manuals to mark different subtypes of imperatives.

Changes in the manual signs of negation might also involve changes in the negative non-manual markings. This is often due to the strong association between a negative manual sign and a specific non-manual marking accompanying it.

#### 1.3.7. Subjects in imperatives

Imperatives in spoken languages tend to allow null subjects, even in those languages in which null subjects are usually disallowed. In some languages, only null subjects are possible in imperative clauses, while other languages also allow overt subjects.

The only possible interpretation for null subjects in imperative sentences is a second person interpretation. Overt subjects, in the languages that allow them, are also very restricted: The only possibilities for an imperative is to have a second person pronoun subject, a bare noun phrase (proper name or bare noun) or a certain quantificational subject, binding a second person element (as in ‘Everyone eat your food’), contrary to what happens in declaratives and interrogatives.

#### **1.3.7.1. Null and/or overt subjects**

The first question that needs to be asked is whether imperatives allow for null and/or overt subjects, and to check this across the various subtypes of imperatives.

#### **1.3.7.2. The person of the subject**

A second step involves identifying the (null or overt) subject. Both with null subjects and (if allowed) overt subjects, their person feature should be checked, in particular whether only second person (singular and plural) subjects are possible, or whether other persons are also allowed.

#### **1.3.7.3. Anaphoric properties**

Imperative subjects in spoken languages display a very peculiar behavior: When allowed, quantificational subjects ('Everyone eat your food!'), proper names ('John bring your book!') and bare nouns ('Children always tie your shoes!') in imperative sentences can refer to a second person pronoun (while this possibility is sharply excluded in other sentence types). This possibility should be checked in the target sign language as well.

#### **1.3.8. Embedding imperatives**

A very robust property of imperatives cross-linguistically is their resistance to embedding. Typically, when an order needs to be embedded under a root predicate, languages resort to some other way of expressing it, such as **deontic constructions** [Semantics – Section 4.2] or **exhortative constructions** [Syntax – Section 1.3.10]. The grammar writer should verify whether simple imperative clauses can be embedded, and

whether this involves any modification in manual signs, word order, or non-manual markers.

### 1.3.9. Special constructions: IaD

What we call here Imperative and Declarative (IaD) (Iatridou 2008) is a very peculiar construction where an imperative is used in conjunction with a declarative clause, without it implying any suggested order or even permission and the like. This construction is illustrated below for English:

Go on like this and you will fail.

Here the imperative does not convey any order or suggestion but rather is very similar to a conditional clause ('If you go on like this, you will fail.'). Since this use of the imperative is very systematic across languages and has even been claimed to be a proper test for true imperatives, it is important to establish whether the same construction that is used in more central types of imperatives, and in particular the manual sign(s) that are used then, can also be found in this particular construction. This is the case in LIS. In the example below, the imperative sign PU is used in a IaD construction.

te  
LAUGH PU GO OUT  
'Keep laughing and you go out!' (LIS)

The sentence-initial clause of the LIS sentence above is marked by specific NMM roughly composed of tensed eyes ('te') and cheeks and repeated head nodding. The non-manuals marking this sentence, together with the sign PU, are responsible for the peculiar interpretation of the sentence as an IaD, thus making it minimally different from the sentence below, a conditional sentence, which lacks the sign PU and is marked by the typical non-manuals of conditional clauses in LIS.

cond  
LAUGH GO OUT  
'If you laugh, you will go out.' (LIS)

The grammar writer should be aware of the possibility of this peculiar construction robustly associated with the use of imperatives, and verify whether it is attested in the relevant sign language.

### **1.3.10. Exhortative constructions**

Given that imperatives are typically restricted to the addressee, languages use other constructions to express an order or an exhortation involving other participants, i.e. first and third persons. Exhortative constructions across languages might either involve a grammaticalized modal (such as *let* in English: ‘Let’s go!’), or some specific (subjunctive, optative) mood.

The exhortative construction(s) displayed by the target language should be described by the grammar writer, who should pay special attention to manual and non-manual signs, the realization of the subject and the possibility of embedding.

## **Elicitation Materials**

Although imperatives occur quite frequently in spontaneous production, an in-depth analysis may require a substantial body of evidence for each imperative type to be investigated. This may not be easy to find in a corpus containing only free conversation. If a general description of the phenomenon is already available, a researcher investigating the grammar of imperatives may ask for grammaticality judgments or ask the signer to produce a target sentence. This has the advantage that the linguist can focus on the fine-grained aspects for which a detailed investigation is needed. However, this may be risky. For example, intonation in spoken languages and non-manual-marking in sign languages can be omitted in the artificial situations in which the sentence to be judged as grammatical or ungrammatical is later produced by the signer. Moreover, given the variety of uses attested for imperatives, it might be advisable to control the context of utterance of each imperative form in order to control the exact function of the specific form observed. For these reasons, it may also be useful to use elicitation techniques that lead to the production of imperatives in a semi-naturalistic setting. Some possible options are described below.

As the various types of imperatives are very sensitive to the discourse context, it is essential for each subvariety to be introduced by an appropriate eliciting context. A good elicitation strategy involves designing variety-specific contexts of elicitation to be presented by a deaf signer in the target sign language, eventually accompanied by explicative pictures. The interaction of two informants during the elicitation process can be very useful to gather metalinguistic insights into the language phenomena.

In the following, possible contexts likely to elicit the various types of imperatives are briefly presented.

#### **a. Orders**

Suggested contexts:

1. Evidence of an approaching or possible danger. The informant is asked to order someone to do or not to do something;

2. The informant is involved in a hierarchical relationship (boss-employee kind of relationship) where he has the social authority to give orders.

b. Invitations

Suggested context:

The informant is asked to politely invite somebody to help himself with something.

c. Suggestions/advice

Suggested context:

The informant is required to provide a suggestion or advice in the form of something which should be done in order to improve a situation.

d. Permissions

Suggested context:

The informant is asked to provide a positive reply to a request of permission to do something.

e. Instructions

Suggested context:

The informant is in a position of giving instructions for directions, on cooking recipes, on how to build something, etc.

f. Recommendations

Suggested contexts:

1. The informant is required to provide a recommendation from a parent's, lover's, friend's point of view.
2. The informant plays the role of a fairy tale character traditionally giving recommendations to another character (as in Little Red Riding Hood when her mother says: 'Don't talk to anyone! Go straight to Granny's house!')

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## 1.4. Exclamatives

### 1.4.0. Definitions and Challenges

#### 1.4.0.1. What is an exclamative?

By exclamative we mean a grammatical form which is specialized to convey surprise, denoting that all or some part of the content of a clause is unexpected. In other words, the unexpectedness either concerns the entire clause, or one constituent of the clause. In the first case, illustrated in (a) below for English, we speak of a total exclamative; in the latter, shown in (b), we are dealing with a partial exclamative.

- a. John has arrived!
- b. What a beautiful day!

Exclamatives are one of the four well recognized sentence types, the other three major types being declaratives, which are used to make an assertion, interrogatives, which are used to obtain information, and imperatives, which are typically used to elicit a certain behavior from the addressee.

A potential confounding factor is that any sentence type can be used to express surprise provided that it is uttered with the correct intonation, and there is a great deal of ambiguity in many cases. In English, for example, both a declarative ((a) below) and an interrogative ((b) below) can be uttered with an exclamative intonation and convey surprise.

- a. He's so nasty! (Declarative)
- b. Isn't he the nastiest man on earth?! (Interrogative)

Still, most languages develop grammaticalized forms that are *typically* associated with exclamatives and these forms are the topic of the present Section. English displays clear examples of unambiguous exclamatives, as exemplified below.

- a. What a nasty boy he is! (cf. \*What a nasty boy is he?)
- b. How very tall she is! (cf. \*How very tall is she?)