SignGram – a blueprint for sign language reference grammars[1]

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Background

Research in sign language linguistics has passed through numerous stages and made substantial progress since Stokoe's (1960) ground-breaking work. This is reflected not only by the considerable number of linguistic and applied publications, but also by the development of new research areas and the strengthening of international research networks.

During the first stage of sign language research between 1960 and 1980, the focus was basically to disprove the misconception that sign languages do not constitute full-fledged natural languages. At that time, research was mainly concerned with describing the basic grammatical structures of sign languages. Two main aims were to show that sign languages clearly differ from gestures and also strikingly resemble spoken languages in their basic grammatical structures. Research nearly exclusively focused on several western sign languages with a strong emphasis on American Sign Language (ASL).

During the second stage between 1980 and 1995, the focus of research shifted to the impact that the two (signed and spoken) modalities have on grammatical structures. In addition to studying modality-independent universals, research concentrated on modality-dependent differences between the auditory-oral modality of spoken languages and the visual-gestural modality of sign languages (cf. Meier 2002 and Aronoff et al. 2005). Furthermore, the analysis of diverse grammatical features in the frameworks of modern linguistic theories such as cognitive, functional and generative grammar became a main center of interest. In addition, research increasingly investigated the psycho- and neurolinguistic basis of sign languages. Since then, numerous detailed experimental and theoretical studies on diverse grammatical phenomena have been published.

During the third stage, starting in the 1990s, the range of issues within the field grew tremendously. Inspired by a new interest in the typology of sign languages, special emphasis was placed on the potential of variation among sign languages and the description and analysis of non-Western sign languages (cf. Zeshan 2004a and b; Perniss et al. 2007). In doing so, the so-called *Village Sign Languages* received particular attention. These sign languages are used in relatively small and typically isolated language communities with a high occurrence of inherited hearing impairment (cf. Nyst 2012). A second emphasis was on the generation of comprehensive annotated corpora and the corresponding machine processing of sign languages (cf. e.g. the Auslan Corpus, http://www.auslan.org.au/about/corpus/ and the DGS Corpus Project in Hamburg, www.sign-lang.uni-hamburg.de/dgs-korpus/). Further important issues of the present research in sign language linguistics address the form and function of so-called nonmanual components, text

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and discourse structures, the interface of sign language and gesture, sociolinguistic aspects, and language acquisition.

Today, sign language research constitutes an integral part of modern linguistics in all respects. On the one hand, this is reflected by various papers on sign languages which have been published in linguistic journals and handbooks on specific linguistic issues (cf. e.g. Sandler & Lillo-Martin 2001; Corina & Knapp 2006; Wilcox & Wilcox 2010; Pfau & Steinbach 2001, and Herrmann & Steinbach 2013), and on the other hand by the two international journals on sign language linguistics *Sign Language Studies* and *Sign Language & Linguistics* as well as the number of specific handbooks on sign language linguistics, which document the state of art of sign language research impressively (cf. Marschark & Spencer 2003 and 2010; Brentari 2010; Eichmann, Hansen & Heßmann 2012, and Pfau, Steinbach & Woll 2012).

Despite this very positive development of the field, one major shortcoming still remains for modern sign language linguistics. Although there are several introductory books on particular sign languages and many detailed studies on diverse grammatical phenomena, such as handshapes, verb argument agreement, use of signing space, metaphors or nonmanual prosody, comprehensive grammatical descriptions of sign languages are still lacking. This is in contrast to spoken languages, for which grammatical descriptions are available for a wide range of languages. Hence, modern sign language linguistics lacks an important tradition of basic grammatical description, which is essential not only for comparative linguistic studies, the development and verification of linguistic theories, and experimental linguistic research, but also for language teaching, language assessment, interpreter training, and the documentation and protection of an exceptional linguistic and cultural heritage.

The COST Action *SignGram - Unraveling the Grammars of European Sign Languages: Pathways to Full Citizenship of Deaf Signers and to the Protection of their Linguistic Heritage* is a first step towards filling this gap by setting the objective to define uniform standards for the compilation of reference grammars. Within the framework of this network, a blueprint for reference grammars is developed that meets both the standards of modern linguistics and matches the modality-specific requirements of sign languages. The following section gives a brief outline of this project.

The COST Action *SignGram*

In 2010, a group of linguists from seven different European countries headed by Josep Quer from the University Pompeu Fabra in Barcelona submitted a proposal for a scientific research network ('action') to the *European Cooperation in Science and Technology* (COST). The goal of the Action is to develop a blueprint for reference grammars of sign languages. Once the Action was approved with a duration of four years in late 2010, it started in the middle of 2011 after which eight additional countries joined it. As a consequence, scientists from fifteen countries are now working together in this Action (cf. fig. 1). Although Argentina and Australia do not constitute direct members of COST, they have the opportunity to contribute to COST Action projects due to a specific cooperation agreement.

Applicant countries	Additional participating countries
Germany	Argentina
France	Australia
Greece	Denmark
Italy	Great Britain
The Netherlands	Iceland
Poland	Norway
Spain	Austria
	Turkey

Figure 1: Participating countries

The main focus of the so-called COST Actions, which are assigned to one of nine different scientific areas, is to fund scientific networks and to promote young researchers. This includes regular workshops at one of the participating locations, exchange between scientists to work on topics relevant to the Action (so-called *Short Term Scientific Missions*, STSM), summer schools for junior researchers, and regular scientific conferences. As part of the *SignGram* Action, the conference *Formal and Experimental Advances in Sign Language Theory* (FEAST) has been established. The COST Action *SignGram* is part of the field *Individuals, Societies, Cultures and Health*. The motivation for the Action and the goals of the Action are summarized in a memorandum as follows:

> "Language policies for signing deaf Europeans require reliable reference grammars of their sign languages (SLs), which are generally lacking or of limited validity if they exist. They constitute the basis for teaching and training purposes. In addition, descriptive grammars are essential for the documentation of a European linguistic and cultural heritage which is largely unrecognized to date. Making SL grammars available to signing communities, policy makers, linguists and to civil society in general will strengthen the status of SLs and support full participation of their users in society. In parallel, deepening the knowledge on SL grammars with a theoretically informed comparative approach will contribute to the characterization of the human faculty of language, whose study is severely biased towards spoken languages. In this way, empirical and theoretical results from SLs will have an impact on several domains of the current agenda of Cognitive Sciences. This COST Action aims to develop the first European network to design a blueprint for those reference grammars, which are indispensable tools" (http://www.cost.eu/domains_actions/isch/Actions/IS1006).

By the development of a blueprint for reference grammars of sign languages, *SignGram* aims to provide a uniform basis for grammar developers in order to enable them to create reference grammars of particular sign languages according to agreed-upon standards. This means that the reference grammars are supposed to meet modern linguistic standards – that is, they do not only provide an important source of information for linguistic research of individual sign languages, but can also be used for comparative analyses of different sign languages as well as spoken and sign languages. In addition, both deaf and hearing users of those grammars will be able to gather comprehensive information on specific sign languages efficiently, no matter whether the goal concerns linguistic studies, sign language teaching or pure interest in a specific sign language or in sign languages in general. Consequently, all reference grammars

should be trilingual at least: besides the local sign and spoken language (e.g. in Germany, DGS and German) all information should also be made available in English.

A blueprint for reference grammars

The blueprint, which is developed within the framework of the COST Action *SignGram*, consists of the following four parts:

- A **table of contents**, which serves the grammar developer as a detailed checklist of all relevant grammatical categories, features and phenomena that should be described in a comprehensive reference grammar of the respective sign language.
- A **manual**, which provides important linguistic background information about the corresponding grammatical categories, features and phenomena and makes available guidelines that explain how those are implemented in the reference grammar. As further background information, the manual offers short descriptions of each grammatical phenomenon, illustrative examples from spoken and sign languages, caveats for the description of this category, and a short list of recommended literature.
- A **glossary**, which concisely explains the most important grammatical categories with links to the corresponding passages in the manual.
- A collection of **elicitation materials**, which helps the grammar developer to elicit data for each grammatical category.

This blueprint is being developed in the COST Action by four working groups, each of which is dealing with different aspects of the grammar of sign languages. The four working groups are supported by a coordination team, which organizes the regular workshops, the STSMs, the scientific conference FEAST, and the exchange with the COST organization.

Coordination
President: Josep Quer (Barcelona) *Vice president:* Carlo Cecchetto (Milano) *Administration:* Gemma Barberà (Barcelona/Paris) *STSM coordinator:* Meltem Kelepir (Istanbul)

Working groups		
Working group 1 Phonology, morphology and lexicon *Chair:* Roland Pfau (Amsterdam)	*Working group 2* Syntax *Chair:* Caterina Donati (Rome)	*Working group 3* Semantics and pragmatics *Chair:* Markus Steinbach (Göttingen)
Working group 4 Methodology and grammar design *Chair:* Carlo Geraci (Paris)		

Figure 2: SignGram *structure and working groups*

It is a special feature of the blueprint to complement the traditional formal perspective on grammar, which the first two working groups focus on, with a new functional perspective (working group 3). This means, that grammatical categories are not only formally defined, but also in terms of their possible functions and vice versa (cf. Matthewson 2004 and 2006). In addition to the traditional linguistic areas of phonology, morphology, lexicon, syntax, and semantics and pragmatics, the blueprint addresses methodological issues, which will be briefly described below (working group 4). Together these four working groups help ensure that the blueprint promotes the collection, analysis and documentation of linguistic data according to latest linguistic standards.

Besides general historical and sociolinguistic factors, the focus of the first working group (phonology, morphology and lexicon) is placed on the precise description of the sign language lexicon (parts of speech, core native lexicon, and loan elements), phonology (sublexical structures, phonological processes, and prosody), and morphology (verbal and nominal inflection, derivation, and composition). The second working group (syntax) deals with simple and complex syntactic structures such as simple sentences and constituents, grammatical relations, word order, different sentence types, as well as subordination and coordination. The third working group (semantics and pragmatics) expands on the semantic and pragmatic descriptions of the grammatical categories the first two working groups are concerned with (e.g. tense, aspect, argument structure, negation, sentence types, and embedding). Additionally, the meaning of text and discourse structures is an important topic of this working group (e.g. reference, anaphoric relations, information structure, metaphors, and communicative interaction).

The fourth working group is particularly dedicated to methodological issues and the coordination of the issues relevant to all working groups as well as all additional activities such as the FEAST conference, the summer schools, and the STSMs. In addition to the elicitation materials mentioned above, methodological issues especially involve the common

standards applied to the table of contents and the manual, including the structure of particular chapters and the style (and linguistic depth) of the description of the respective grammatical categories. A further important aspect concerns the publication and the subsequent specific implementation of the blueprint in an open access online platform. This will include not only the blueprint itself but also – in the long run – the grammars written using the blueprint. As a result, the grammar developer will be able to carry out the description of his/her reference grammar directly on this platform according to a common standard (cf. e.g. the *GALOES Online Grammar Tool*, www.galoes.org/home). Indeed, one long-term goal of this Action is to provide a platform on the internet that makes multilingual descriptions of all sign languages following uniform standards freely and globally available. However, this specific implementation of the blueprint as well as the generation of particular reference grammars cannot be accomplished in this COST Action due to the lack of resources necessary for this complex task.

Additional information

On the website of this Action (www.signgram.eu) further information on *SignGram* can be found. The website provides information about the goals, participants, workshops, conferences, and summer schools.
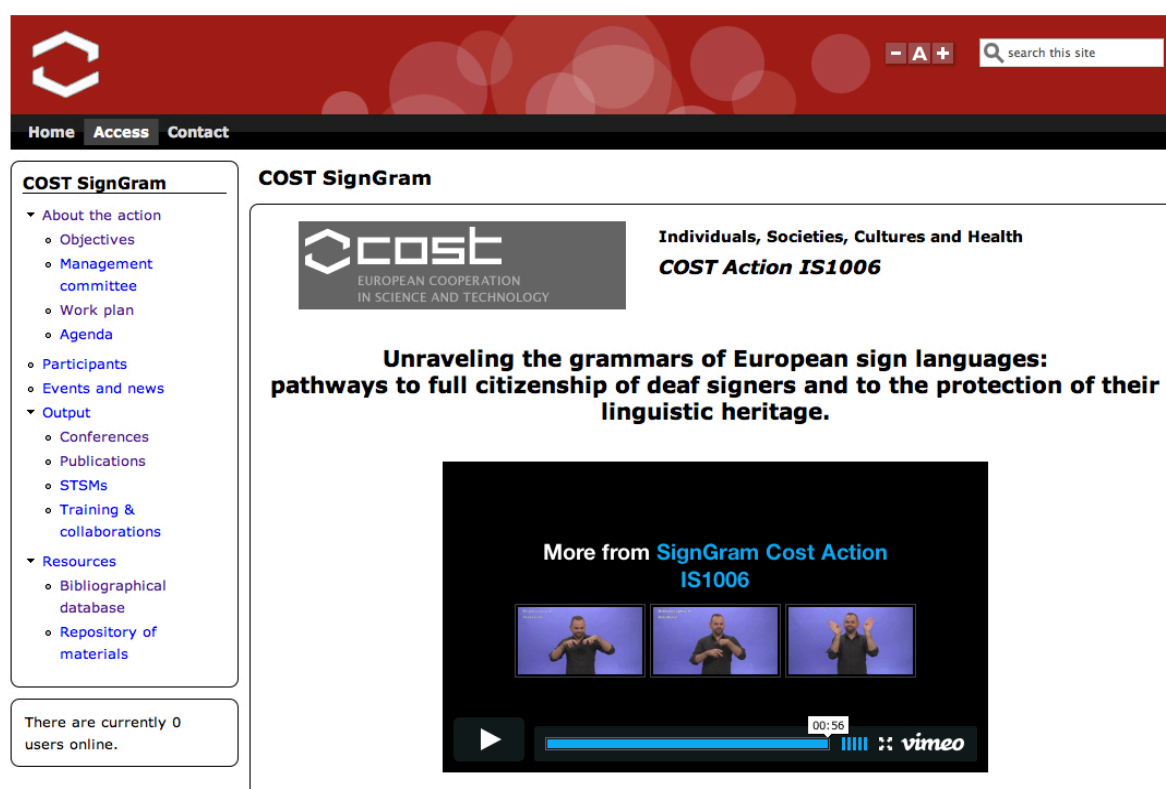

Figure 3: COST SignGram *Website*

In June 2014, the FEAST conference took place for the third time. FEAST 3 was organized by the University of Venice (virgo.unive.it/venicefeast). Moreover, the proceedings of the second FEAST conference, which took place in Warsaw in 2012, are now published in

Rutkowski (2013). Preceding FEAST 3, a three-day COST *SignGram* summer school in Venice offered courses on sign language phonology, morphology, and syntax/semantics to advanced postgraduates. To conclude, it should be pointed out that the blueprint will be presented at a final conference to an international audience in Barcelona in the spring of 2015. Information about it will be given by the website of the Action.

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Internet links

COST: http://www.cost.eu
COST SignGram: www.signgram.eu
FEAST conference at Venice in 2014: http://virgo.unive.it/venicefeast/
GALOES online grammar tool: http://www.galoes.org/home
DGS Corpus Project in Hamburg: http://www.sign-lang.uni-hamburg.de/dgs-korpus

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