Building up Digital Video Resources for Sign Language Interpreter Training

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Abstract

The development and implementation of new digital video facilities for Sign Language Interpreter Training calls for a more pragmatically oriented system of data classification than what is commonly used for linguistic purposes today. A corpus that addresses the needs of an interpreter training program should reflect the full spectrum of sign language and allow for comparative analyses and practical exercises in interpretation and translation. The universities of applied sciences in Magdeburg and Zwickau have installed the same type of digital video facility and are currently working on a classification system for archiving video resources for interpreter training and research. To adapt to the pragmatic aspect our starting point is translation theory, which is interdisciplinary in nature and bears potential to include both linguistic and translation oriented aspects. Since the official acknowledgement of German Sign Language an increasing number of interpreting and recently also translation tasks emerge, and with it an increasing number of varieties in textual representations. Besides research purposes, training institutions need to take this into consideration and adapt their data to a digital format that enables the students and teachers to have easy access to potentially all textual representations that they might encounter in reality.

1. New challenges to old practices in sign language interpreter (SLI) training

Sign language interpreter training has been offered at the universities of applied sciences in Magdeburg and Zwickau since 1997 and 2000, respectively. Both training programs are set in the institutional context of East German universities that experienced a major reorganization after the reunification of Germany. The training programs share an applied perspective in research and teaching as well as many of the features typical for small-scale academic ventures in a developing field. Thus, the provision of teaching materials and, more particularly, sign language video resources, adequate in content, format and technical quality, has been a constant concern. For want of better options, a hands-on approach was chosen for the last ten years, and both programs have amassed a heterogeneous collection of analogue and digital video films for teaching and research purposes. In most cases, the only way of accessing this material consists of picking the brains of those colleagues who may have worked with some video clip or exercise suitable for one's own didactic or research purposes.

As it happens, both Magdeburg and Zwickau have installed the same type of digital training facilities (henceforth 'video lab') towards the end of 2007. These video labs consist of individual workstations linked to a central video server that hosts all the resources in a unified digital format. Both institutions now face the major challenge of facilitating a process that will transform and complement existing sign language materials so as to create an accessible library of video resources for research and training purposes. This presentation will report on our joint effort to undertake the first steps in this direction and focus especially on the criteria for annotating and archiving digital sign language resources.

2. Building up Sign Language Corpora: Specific demands of SLI Training

Building up a Sign Language Corpus, fundamental issues need to be raised such as *legal and ethical issues* or *issues regarding the administrative and technical prerequisites.* Up to now, questions of ownership and property rights have often been dealt with somewhat casually. Building up a digital library of video resources implies that such questions have been formally clarified. However, just what the conditions for using video materials gathered informally, passed on from one colleague to the next or published on the internet are, may be hard to decide. In order to create a legal basis for the desired cooperation and be able to access university funds, the two universities concerned will enter into formal agreements about the mutual use of video resources. This, in turn, demands that there are clearly defined ways of synchronizing, adding to and accessing the respective collections of resources. These fundamental topics are currently under scrutiny in both institutions. For the purpose of this workshop a third topic will be of specific interest, namely the *criteria for*

annotating and archiving video resources. While the process of digitizing and storing existing video materials can be dealt with somewhat mechanically, the development of systematic ways of annotating and organising sign language materials is crucial in order to make digital resources accessible. Clearly, this is an area where progress has been made in recent years, e.g. in the context of the ECHO project ('European Cultural Heritage Online')[1]. We will add to this discussion by considering the more specific demands of sign language interpreter training and research.

2.1 Demands on SLI

Sign language interpreting today is mostly performed as community interpreting which aims to provide or facilitate full access to intra-social public services in e.g. the legal, health care, educational, governmental, academic, religious, or social field. Interpreters must therefore be familiar with the form and content of a great variety of texts in their respective working languages. The working languages in our case are to date German as vocal language in written and spoken mode and German Sign Language. Interpreting can be either unilateral or bilateral and in both modalities multiple textual representations may occur. Until today, SLIs rarely specialize in just one field but are expected to be able to translate whatever written, spoken or signed text may occur in any given situation. It is due to the long history of oppression of sign languages that interpreters today are faced with a paradox. While a common definition of their interpreting task asks SLI to produce a target text that is presumed to have a similar meaning and/or effect as the source text (Pöchhacker, 2007), many spoken or written texts of vocal languages in the context of community interpreting have no such counterpart in sign language, for there has never been access to these areas. Following the definition of community interpreting, the sole access to these areas is often through interpreting, resulting in a target text that is based on little or no valid ground regarding its content and form. With increasing access of deaf professionals to the varying fields of community life a growing number of different sign language texts (one-time presentations and recorded) occur. Sign Language Interpreters and Translators are confronted with a very dynamic, fast-growing and changing language in use. In the case of an existing parallel text we face the problem that until today very few research has been done on register variation in sign language discourse (Hansen, 2007). We may be able to detect the overall function of the utterance but a classification of text functions and corresponding language registers must be considered as preliminary if there is one at all. We also must be aware that oral languages have less register variation than those with a long history of written codes (Biber, 1995). This leads to the notion of having skilled interpreters who not only possess exceptional textual skills but also know how to evaluate their skills and broaden their knowledge autodidactically.

[1] (cf. http://www.let.ru.nl/sign-lang/echo/index.html)

2.2 Demands on SLI Training

Acquisition and evaluation of textual skills are thus cornerstones of the SLI training. Training facilities should be able to provide their students with a great variety of different texts in both languages. While the students are exposed to an infinite number of vocal language texts in both the spoken and written mode in daily life, their access to sign language texts is limited in comparison. Some communicative events might not even be accessible for students at all, such as e.g. therapy sessions with a deaf therapist. Others might simply not be reachable, because they take place too far away. Magdeburg and Zwickau are both located in areas with a fairly small deaf community, which further limits exposure to sign language. Digital technology thus plays a crucial role in our training programs. It can and should never compensate for live encounters with the sign language community but can definitely add to it. It is vital to cover as many topics, constellations and situations as possible to prepare the students as thoroughly as possible for their ensuing professional life. With the video lab the material can be used for language/text and translation technique acquisition in class as well as for autodidactic purposes. Furthermore, it provides an option to compare and evaluate parallel texts in both languages as well as source and target text productions in regard to their adequacy in the respective interpretation or translation.

2.3 Demands on SLI Training Corpus

A corpus that addresses the needs of an interpreter training program should reflect the full spectrum of sign language in use and allow for comparative analyses and practical exercises in interpretation and translation.
Following the purposes mentioned above one can extract four major demands that reach beyond the needs of common linguistic corpora, namely:
- Extension and differentiation of sign language corpora to reflect the full spectrum of sign language use
- Creation of parallel corpora of spoken language texts to allow for comparative analysis and practical exercises
- Development of a system of classification that allows for following up systematic cross references not only within but between signed and spoken/written texts
- Collection of existing source-target text pairs, i.e. interpretation/translation of sign language and vocal language texts that may serve for analytical purposes as models, objects of critical reflection, etc.

It may seem odd to include vocal language texts in a sign language corpus but considering its purpose it seems mandatory to also work with parallel texts for comparative purposes. A carefully defined selection of spoken language texts in both oral and written forms that can be extracted from real interpreting/translation situations, can serve as models for comparison.
The corpus should be organized in a way that enables the SLI trainer to search for material according to the respective focus of the training, such as setting-oriented

training (e.g. only health care texts), discourse type oriented trainings (e.g. only speeches), function oriented trainings (e.g. only instructive texts), phenomenon oriented trainings (e.g. constructed action), or for evaluation purposes (e.g. analyzing simultaneous interpretation). This calls for a modified approach for the classification of digital text material.

3. Digital Video Corpora as training resources: Towards a system of signed/spoken text classification

Over the years Magdeburg and Zwickau both have collected a great number of recorded sign language data that is used but not systematically archived for teaching. Most of the material was taped for teaching sign language or conducting sign language research: the number of explicit interpreting or translation material is comparably small. Archiving activities are limited to databases, which give only a very rough overview i.e. on topic (oftentimes not necessarily well suited), recording date if known, name of signer if known, length, and quality of the recording. These attempts neither fit the requirements for SLI training nor the requirements of the new video lab. What is required is a system of text classifications. In search of a theoretical underpinning of our attempt to systematize our material we found Pöchhackers "Domains and Dimensions of interpreting theory" (2007) a useful model for a first careful approach. Since not enough research on sign language texts has been conducted, this model allows to translate an essentially text linguistic approach to the context of interpreting studies. According to Pöchhacker, interpreting studies differentiate between eight domains. Each can be characterized by a number of dimensions that form the interpreting event, which can be summarized in the following domain-dimension interplays:

1. *Medium* as either human or machine translation. Although there are just a few attempts to automate translation in the field of sign languages, this domain might gain a greater impact in future development.
2. *Setting* as differentiating between inter- and intra-social events, such as international conferences on the one hand and community interpreting in i.e. health care, court, education, etc. on the other.
3. *Mode* defining translation as simultaneous, short consecutive (without notes) and 'classical' consecutive (with notes), also giving information about the form of translation as interpreting or (sight) translation.
4. *Languages* considering the status and modality as in vocal vs. sign languages and conference language vs. migrant (minority) languages.
5. *Discourse* giving information about the type of text like speeches, debates or face-to-face talk.
6. *Participants* differentiating the status as equal representatives vs. individual with institutional representative, taking power constellations into consideration.
7. *Interpreter* described as professionally trained, semi-professional (not certified or trained but working up to the same standards as professionals) or 'natural' bilingual individuals without training in special translation skills.
8. Accompanying *problems* such as simultaneity, memory, quality, stress, effect and role.

While the "interplay of the first seven dimensions serves to highlight some of the key factors in the various prototypical domains", the last dimension represents "a set of major research concerns to date" (Pöchhacker, 2007). According to this model an international conference prototypically is an interpreted event that is characterized by making use of a professional human interpreter in simultaneous working mode in a booth, most likely between typical spoken conference languages with equal representatives holding speeches. In contrast the typical interplay of intra-social dimensions, e.g. translating a doctor's appointment, would be characterized also by a human translator in the consecutive or simultaneous working mode, personally present in the situation who is oftentimes a semi-professional or 'natural' bilingual individual, interpreting between the official language of the country and a migrant/minority language for an individual that seeks help from a representative of a health care facility. Although patterns can be detected, the number of actual texts that are uttered in the respective situations is countless. Considering the underlying general goal of SLI training as stated in 2.2, purpose oriented metadata can be organized according to the domains/dimensions mentioned above, leading to a set of metadata different from those used in linguistic research today. It should enable the SLI trainer to search and pick material pragmatically, depending on the main focus of training. Bearing in mind that metadata should " allow the user to discover relevant material with a high precision and recall" (Wittenburg & Broeder, 2003), a more translation-oriented approach seems to be justified. Descriptions of the material should come up as "descriptions at a general level of the nature of the data that can be considered constant for a whole recording" (Hanke & Crasborn, 2003). From our present viewpoint - keeping in mind that we are at the very beginning - we consider the Pöchhacker model to meet these requirements in addition to general and technical information about the recording itself. Combining metadata as in use today with the Pöchhacker categories, we will have to extend these i.e. by adding information about the actors to the domain of *participants etc.* Work on this is still in progress and hopefully the discussion about our attempt will add to creating these categories.

While most of the categories are specific to translation, the domain of *discourse* is the one where translation studies and linguistics obviously meet. As mentioned above, no sufficient research has been conducted that enables us to categorize sign language texts as we can for spoken language texts. Although even in spoken

languages there is a diversity of approaches of text classification (Adamzik, 2004), there are at least common labels that are used. The distinction between text external and internal factors described in Stede (2007), and for translations purposes by Nord (1995) reflects the problem. While external factors such as the function of a text, the situation, the degree of publicity can be notated in metadata, the internal features such as the structure of the text, syntactic patterns, typical lexical items in regard to the function must be part of a linguistic annotation. It seems practicable to not focus on text types as general categories of texts (e.g. speech, business letter) but to use this term according to Werlich (1975) and define function-oriented patterns of textual representations in regard to the contextual focus. Werlich defines five such patterns and labels them as *descriptive*, *narrative*, *expository*, *argumentative* and *instructive*. According to Biber, adapting the same labels and using them for a different language, bares the danger of denying or ignoring phenomena that are specific to this particular language (1995). This must be taken into consideration when dealing with labels developed for vocal languages and possibly apply them to signed languages. Furthermore the aspect of literacy/orality should be taken into consideration when contructing parallel texts, as "the context of primary orality means that the meaning of the exchange will be strikingly different from a similar exchange in the context of literacy" (Cronin, 2002). The potential in our approach might be to not only to be able to categorize and label but possibly also to gain insight into new patterns and forms of sign language communication. Metadata concerning external text factors in combination with linguistically annotated internal text factors will hopefully enable us in the long run to conduct combined searches such as looking for instances of constructed action (annotated data) in instructive texts (metadata) in educational settings (metadata).

4. Next steps

Since both Magdeburg and Zwickau are under pressure to start storing their data in an organized compatible way, the first step (besides legal, ethical and administrative considerations) must be the implementation of a framework for metadata where future linguistic findings on sign language texts find their place and can easily be added. As pointed out, addressing the problem from the perspective of translation theory seems to be a useful approach, since the nature of translation study is interdisciplinary. We believe that there is potential for future research from a cross linguistic perspective: having stored context information about the communication event in which a text occurred or was translated and knowing more about register variation, parallel corpora can be drawn upon in SLI training. We are fully aware that we are talking about decades here, but we believe that in the long run it could lead to enhancements in translation as it enables deaf and hearing to perform a more theoretically informed translation of spoken and/or written, respectably signed texts. Especially the growing market for sign language translations (e.g. translations of websites that are permanently accessible as movies on the site or sign language websites whith subtitles and/or voice over) supports our attempt to systematize from a translation theory perspective.

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