#### Annelise Grinsted

**Arnt Lykke Jakobsen (ed.):** Oversættelse af fagsproglige tekster, ARK 65. Handelshøjskolen i København, 1992.

This publication consists of a collection of articles written by researchers from the following Danish institutions: Handelshøjskolen i København, Handelshøjskolen i Århus, Århus Universitet, Københavns Universitet, Danmarks Lærerhøjskole og EUROTRA-DK/CST. The objectives of the group have been to create a dialogue, to strengthen the relations between researchers who have so far worked to describe LSP-translation each from their own approach: terminology and lexicography, phraseology, human and machine translation, contrastive linguistics and pragmatic/rethoric text theory and thus to integrate traditionally separate research disciplines. This was done by defining a common project in the field of LSP-translation.

The book consists of the project application and 14 separate articles relating to the project and a short account of the debate concluding the presentation of the papers on 21.-22. November 1991 at Sandbjerg, Denmark.

#### **Arnt Lykke Jakobsen:** A Survey of European Approaches to LSP Translation, 1970-1990: An Outline of OFT Project 1 (p. 25)

In this article the author argues for and against various ways of organising literature on translation theory covering the decades between 1970 and 1990, 1970 having been chosen due to the fact that important changes in the dominant conception of what constitutes translation can be traced to this point in time. Three possibilies for Western European lite- rature are mentioned:

- 1. by LSP sublanguage or special subject
- 2. chronologically by individuals or schools
- 3. thematically and systematically, in terms of approaches

The first possibility is dismissed with the argument that "the fundamentals of translation are not much affected by the type of sublanguage

involved in translation", the second with the argument that chronology is not "an important parameter in the two decades we are covering".

The third possibility is a linguistic approach in that the system is based on the traditional linguistic units from morpheme to text. By stretching the system, cultural behaviour and phycholinguistics or cognitive-empirical research into translation are included. It is not quite clear what is meant by "cultural behaviour" (not linguistic unit, but a form of human action) whereas psycholinguistics or cognitive-empirical research is defined as exploring "the process of mental operations involved in translation".

For the Eastern European literature another approach is used as theorists in this part of the world have focused on functional stylistics. As much of this material is not available to researchers in the West, an extensive annotated bibliography will be worked out.

A survey of European LSP translation theory since 1970 will be a valuable contribution to researchers in LSP-translation.

## **Peder Skyum-Nielsen and Arnt Lykke Jakobsen:** *En oversættelsesmodel* (p. 35)

This article outlines a translation model consisting of 13 steps:

1.	Original	source	language	text	(SLT)	creation
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- 2. SLT reception which motivates translation Prerequisites
- 3. Translation initiation
- 4. SLT analysis
- 5. Target language text (TLT) conceptualization
- 6. TLT creation Production
- 7. TLT revision
- 8. TLT reception
- 9. TLT effect Reception
- 10. Estimation of the (total) TLT effect
- 11. Analysis and criticism of the translation

process and product Analysis of

- 12. Increased awareness of translation result resulting from (11)
- 13. Effect on translation practice.

Each phase is described in headwords and it is, therefore, difficult to assess what each phase covers and whether they contain new aspects or approaches to LSP-translation.

As the subjects of the following three articles are closely related and the material investigated is extracted from the same corpus, I will consider them a group.

Henning Mørk: Teknisk sprog som afspejling af virkeligheden (p. 43) / Joel Nordborg Nielsen: Teksttype og sprogbrug: Træk af sprogbrugen i betjeningsvejledninger i russisk (p. 55) / Annie Christensen: Imperativ, infinitiv og andre udtryk for anvisninger og påbud i betjeningsvejledninger (p. 87)

In his article HM has chosen an interesting approach to syntactic models in Russian LSP, defined as agroindustrial texts. He outlines the actual situation in which the actions/processes described in the selected LSP-texts take place and argues that this physical frame is reflected in certain syntactic structures. He argues convincingly that the industrial/technical universe regulates linguistic aspects of the texts.

Through a (rather small) extract of his corpus he illustrates how the use of passive/impersonal expressions is a reflection of the processes in industrial/technical life in which the agent plays an increasingly anonymous role. Machines and products become the essential nouns, "do"- and "become"-verbs the essential verbs and the adjectives used describe physical characteristics.

JNN deals more specifically with instructions and instruction manuals, or rather sections of these: "Technical specifications" and "Operating instructions".

In the section on "technical specifications" he outlines the differences in the way weights and measures are expressed in Russian and Danish and the use of ellipsis in Russian. In the section on "operating instructions" he deals with the following trends: the use of passive/impersonal expressions and nominalisation (especially verbal nouns) as general to Russian LSP, and more specifically the preference in Russian to identify, or you could say to define, the objects in the text. Furthermore, he deals with modification.

He concludes that by identifying these specific traits, it is possible to take into account both equivalence and adequacy (at sentence level) when translating from one language into the other.

AC primarily concentrates her article on the difference between the use of perfective and imperfective imperative and infinitive in instruction manuals and secondly other syntactic means to instruct a user. She argues

that the use of imperative and infinitive correlates with the target group (consumer or technician) and that grammatical aspect does not deviate markedly from the use in standard Russian.

In summary the three articles deal with some characteristic aspects of Russian LSP-texts, especially instruction manuals, with a strong focus on passive/impersonal expressions. The objective is to point out to translators of this type of texts where to be careful in order to be true to the principle of "equivalence and adequacy".

# Annelise Bech and Bente Maegaard: Vidensrepræsentation i Maskinoversættelse (p.101)

As the model on which a translation system is based imposes certain constraints on the formation of a knowledge component and to a certain extent determines which information should be included, the article outlines the three basic methods of machine translation (MT) and their differences:

- the direct model
- the interlingua model
- the transfer model

The article deals with fundamental questions regarding knowledge representation in machine translation: what knowledge, how to find the relevant information and how to formalise it.

Two MT-systems with different approaches are described, KBMT and TACITUS, with focus on the representation of knowledge.

The KMBT-system is an interlingual system, i.e. uses a language independent representation as a link between source and target language - although the authors point out that this is difficult to see as the concepts are expressed in English. The KBMT-lexicon is based on ontological methods, i.e. concepts and their relations or top-down driven strategy. A basic problem, however, in a concept database is how to determine what are objects and what relations - a problem to which no solution is presented.

TACITUS which the authors have used in their own project is not based on an interlingua. It is a transfer system. Content words from the text to be translated are used as predicates in the logical representation of the text which also contains information from the knowledge base. In other words, the strategy here is bottom-up or data-driven. Knowledge is extracted from a carefully selected and defined corpus. The knowledge

base is used both in the analysis and in the translation phase if the target language requires more information in order to choose between several alternatives.

The conclusion is that the more knowledge - not only linguistic, but also extralinginguistic and domain-specific - that can be represented in a machine translation system, the better the resulting translation.

I am left with the question whether well-structured terminological databases containing definitions and relationships between the concepts would not in the future be a valuable contribution to the knowledge base?

## **Anna Braasch**: Valg af tekstsort - Korpus - Undersøgelsesaspekter (p.117)

The article is a step by step description of the considerations about how a text corpus suitable for machine translation is selected. The corpus consists of 80 pages of selected parts of "owners manuals" and is established for the following purposes:

- communicative aspects
- linguistic aspects
- knowledge representation

Special consideration has been given to the degree of knowledge representation in the text in that a primary investigation target is to find out how extralinguistic knowledge can be represented in the machine translation system.

### **Henrik Selsøe Sørensen**: Oversætterens viden som parameter ved oversættelse af faglige tekster (p.133)

This article deals with the knowledge required by the translator to perform a translation communicating the content of the source language in the target language. 4 parameters are outlined:

- knowledge of possible source/target world discrepancies
- knowledge of possible source/target text type discrepancies
- subject field knowledge needed for decompression of source text
- knowledge of/access to SL and TL terminology

The first parameter mentioned and applied in several examples is not, in my opinion, relevant to the translator. The question whether a product complies with fire testing regulations in the target language country is a

problem relevant to the initiator of the translation and not to the translator. This will be true whether we talk about machine or human translation. The 3 other parameters are relevant in that they relate to the question of "equivalence and adequacy".

**Frede Boje:** *Typologisierung von Mehrworteinheiten aus kontrastiver Sicht* (p. 159)

This article outlines the method whereby the author intends to typologize phrases ("Mehrworteinheiten") in Danish and German. The phrases are to be extracted from available corpora and dictionaries containing comparable phrases or idioms.

Using valency grammar the author's intention is to find and describe possible regularities in these phrases. The data is to be made available both for human and machine translation purposes. For the latter it is necessary that the phrases be expressed in formalisms of which the arti-cle gives an example.

Hans Kristian Mikkelsen: Teori og praksis i fagleksikografien med særlig vægt på beskrivelsesproblemer i forbindelse med empirisk analyse af danske fagordbøger (p. 173)

The purpose of the author is to develop a descriptive method, based on the self-knowledge (selvforståelse) of the dictionary, for empirical analysis of bilingual LSP-dictionaries for translation purposes. For this purpose the following criteria have been selected and applied to establish a register of relevant dictionaries:

1. Structural requirement: lexicographic macrostructure

Parameters: megastructure (structure of the dictionary)

macrostructure (structure of lemmata) microstructure (structure of the article)

2. Material requirement: special universe

Parameters: number of languages

universe (language, subject, concept)

LSP aspect

3. Functional requirement: relevance for translation

Parameters: attitude of sender

profile of receiver

application circumstances

A register of this type is very relevant to any translator in view of the difficulties confronted in just finding the dictionaries in the library classification system. However, I do not understand the application of the above criteria in that mono-, bi- and polylingual dictionaries are called central to the investigation, subject and concept dictionaries peripheral. I lack the argumentation for making this distinction as subject and concept dictionaries can be both mono-, bi- and polylingual.

# **Henning Bergenholtz** / **Uwe Kaufmann**: *Konception af en ny fagordbog* (p. 183)

The authors outline and discuss the structure of a new subject specific dictionary "Genteknologisk ordbog Dansk-engelsk/engelsk-dansk molekylærbiologi og DNA-teknologi", consisting of 4 parts:

- 1. survey of the basic concepts and systems of gene technology
- 2. guidelines on the content and structure of the dictionary
- 3. Danish-English with 3000 lemmata
- 4. English-Danish with 3000 lemmata

There is no doubt that the first part is an area previously neglected in a subject specific dictionary. An introduction to the concepts and systems of an area is very important to a layman to give the basic understanding of the subject in question. Simple and relevant guidelines are a prerequisite to the user to get the intended information from the dictionary.

As far as the lexicographic parts are concerned the information registered is a selection from an open-ended taxanomy. The relevance of the selection depends on the target group. However, what can be considered new to lexicography is the systematic registration of an explanation of each concept and an authentic example which does not duplicate the content of the explanation. As a comment to these new aspects of lexicography I would like to point out that for the past decades terminology has dealt with these types of information and the systematisation of concepts and for that reason an integration of lexicography and terminology would be desirable as they are approaches to the same science - registration of linguistic information thus making communication of not very accessible subjects as unambiguous as possible.

As the subject of the following three articles are closely related in that they are based on the same hypotheses and make use of the same methodology and investigation material I will consider them a group.

**Lisbeth Maidahl:** Brugen af fagordbøger - En empirisk undersøgelse (p. 205) / **Bernt Møller:** Oversættelse af teknisk tekst: anførte problemer og konstaterede fejl (p. 219) / **Karin Balsgart:** En brugerundersøgelse og dens problemer: Ordbogsbrug ved oversættelse af engelsk teknologisk tekst (p. 245)

The basic hypothesis mentioned in the articles is that LSP-dictionaries must contain more encyclopedic and grammatical information.

LM outlines a user investigation on the use of LSP-dictionaries in which informants have made protocols of the translation problems (from Danish into either English, German, French, Spanish) encountered during the translations of LSP-texts (judicial, technical, economic). The aim is to clarify:

- 1. Typology of problems (which problems does the translator encounter?)
- 2. Solution strategy (how does the translator solve the problems encountered?)
- 3. Type and number of information types/indications in LSP-dictionaries (what must be taken into consideration when making an LSP-dictionary?)

The protocol methodology was preferred to questionnaires to obtain as detailed information on types of problems as possible.

The conclusion that the lexical and grammatical information in the LSP-dictionaries need to be more comprehensive to cover the needs of the user is not obvious or self-explanatory. Suggestions as to information categories necessary to meet these needs are not included.

BM applies the same methodology, but the investigation material is limited to translations from Danish into French. He goes a step further in that he looks not only at the problems encountered during the translation process with a special focus on neologisms but also at the errors found in the final translation.

Whereas the order of priority of problems during translation is equivalence, syntagmatic, grammatical and semantic problems, the order of priority of the errors found in the final translation is syntagmatic, equivalence and grammatical and pragmatic errors. BM suggests that focusing on equivalence problems during translation makes the translator ignore the syntagmatic problems. The fact that there is no alarming amount of equivalence errors is not attributed to good LSP-dictionaries but to qualified guesses on the part of the translator.

KB has limited her investigation material to translations from Danish into English. She describes in much detail the analytical model according to which the problems encountered during the translation process are classified. She is very critical as to the results obtained and comments on the various factors that may have influenced the trends to be deducted.

She concludes that the hypothesis cannot be confirmed and that other information categories seem more necessary, i.e. the relationship between related concepts.

There seems to be no unambiguous result of this investigation. Much depends on the text type and the background of the translatator (knowledge of subject, linguistic awareness, experience).

#### **Summary**

There is a great difference in the depth of treatment of the various subjects in the articles. Some outline a project in headwords without arriving at any conclusions, others deal in depth with the work and results of a task carried out. This is no surprise, of course, in that the publication ARK is intended for publication of preliminary work.

Except for researcherss carrying out projects in related areas within the same institution there seems to be no crossreference between the various subjects dealt with. I can see related areas in e.g. the treatment of "technical universes" in the articles about Russian LSP-texts and the concept of "possible source/target text discrepancies" in Henrik Selsøe Sørensen's article, but no attempt is made to correlate these ideas. And how do the various subjects fit into the translation model outlined by Peder Skyum Nielsen and Arnt Lykke Jakobsen - a translation model which - I assume - is to reflect the multiple findings of all project participants?

I do not maintain that the aim of this group of researchers is an easy one - on the contrary. Much work is still left to be done to correlate and integrate research carried out at the various institutions with similar or related research areas. Although the goal of the reasearchers - the integration of various research disciplines - may not yet have been expressly reached, I am convinced that in the course of the project a dialogue will continue to take place which will result in further cooperation in the future.

Much work has been done in the course of the project resulting in valuable contributions to translation of LSP-texts.