Edited by
Inger M. Mees
Fabio Alves
Susanne Göpferich

Methodology, Technology and Innovation in Translation Process Research

A Tribute to Arnt Lykke Jakobsen

38

Copenhagen Studies in Language

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[1] See pp. 33–36 for a select list of Arnt Lykke Jakobsen's publications.

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FOREWORD

CBS is unique among the thousands of business schools around the world. During the last two decades, it has developed a broad range of disciplines within the social sciences and the humanities, emphasising cross-disciplinary collaboration in order to meet the challenges from a fast changing and complex global knowledge society. Language, culture and communication are now recognised as core areas of its profile.

Within translation and translation technology, Arnt Lykke Jakobsen has been an invaluable academic entrepreneur, who has founded a research centre, implemented EU projects and established international networks. He has also been a key figure in one of the six world-class research environments started up at CBS in 2008. In addition, he has been actively involved in setting research agendas, developing strategies and facilitating collaboration across research areas both in the Academic Council and in countless everyday CBS activities.

Arnt has shown himself to have an open mind, boundless curiosity and proved in all ways a highly valued colleague. It has been a privilege to work with him.

Finn Junge-Jensen
President of CBS, 1987–2009

INTRODUCTION

On 27 December, 2009, Arnt Lykke Jakobson will celebrate his 65th birthday. Usually this age is associated with retirement but not so in Arnt's case. His pioneering spirit, innovative force and visionary ideas continue to give fresh impetus to translation and interpreting process research.

With the contributions collected in this *liber amicorum*, its authors and editors wish to honour Arnt Lykke Jakobsen as a researcher, as a teacher and as a friend, and to thank him for the inspiration he has given us.

In recognition of his achievements, the two opening contributions deal with Arnt's scholarly pursuits. The first, by **Inger M. Mees**, attempts to show just how multi-faceted his all-round talent is by emphasising highlights from his career and providing an overview of his most important publications. The second, by **Lasse Schou, Barbara Dragsted** and **Michael Carl**, gives an historical account of the development of *Translog*, the key-logging software conceived by Arnt, which is now a translation process research tool used worldwide.

The remainder of *Copenhagen Studies in Language* 38 is divided into four sections, which reflect Professor Jakobsen's broad range of interest in translation and interpreting studies.

Part I: Methodological issues

The first section comprises five contributions on methodological issues in empirical studies, and the articles move from the general to the more specific.

The section begins with **Andrew Chesterman**'s explanation of why he believes "Charles Darwin can be a model for any empirical researcher". Inspired by Darwin's *Origin of Species*, which originally appeared in 1859, Chesterman describes Darwin's way of thinking and writing, his sense of curiosity, his desire to question and test assumptions, his ability to unite a variety of facts under a single uniting principle, and his emphasis on considering counter-evidence. Darwin's rhetorical strategy is that of a

dialogue or debate. The paper is interspersed with parallels drawn between Darwin's empirical methods and those of translation research.

Franz Pöchhacker gives a broad perspective of methodologies in the field of interpreting studies (IS) from various vantage points. After providing a historiographical survey of the research methods employed in IS, Pöchhacker aims at substantiating a trend he has observed towards an increasing number of studies adopting qualitative approaches. He does this by examining the publications included in the *Interpreting Studies Reader* (Pöchhacker & Shlesinger 2002), containing material from 1956 to 2002; the Benjamins Translation library (1990s to the present); and the 100 papers published in the journal *Interpreting* since its foundation in 1996.

Ricardo Muñoz Martín argues that research into translation processes needs more methodological rigour. In his paper, which deals with subject profiling, Muñoz points out that not enough attention has been paid to variations in subjects' mental abilities and language skills. Unless these are comparable, it is uncertain whether findings are the result of the variables that are measured or whether they can be attributed to inter-individual variation. It is proposed that subjects can be classified by means of the WAIS (Wechsler Adult Intelligence Scale) and TOEFL (Test of English as a Foreign Language) subtests. The article discusses the results of an experiment in which 17 subjects who translated four texts using Translog were profiled on the basis of their performance in the above-mentioned tests.

Another methodological paper is that authored by **Birgitta Englund Dimitrova** and **Elisabet Tiselius**. They discuss retrospection, cued by the source text/source speech, as a means of accessing the cognitive processing of problems and strategies in both translation and simultaneous interpreting. The protocols of six subjects (three in each mode) are subjected to close scrutiny, the main objective being to find a suitable way of coding and analysing the data obtained by this method.

Anthony Pym shows how translation process research can benefit the training of translators. Nineteen students from different language programs

(7 Chinese, 5 Korean, 1 Japanese, 6 French) participated in three experiments conducted in the classroom. Pym investigated whether machine translation slows down the translation process, whether different translators have different styles and whether time pressure leads to a loss in translation quality. He concludes that experimental approaches are definitely able to allow students to discover more about their own translator behaviour.

Part II: Computer assistance in process research

The second section brings together various contributions dealing with ways in which computers can assist translation process researchers in their endeavours.

Susanne Göpferich's article shows how electronic systems can be used to make the large amounts of data typically collected in process studies available on the Internet. In many cases, the data gathered in such studies are never published, which makes it difficult to reproduce and verify the results, or indeed to re-use the data. Göpferich argues in favour of employing Asset Management Systems for "storing, archiving, annotating, analysing and displaying digital resources of any type", exemplifying this by describing the one developed for her own longitudinal study TransComp. Amongst many other features, this system enables one to link transcripts to the corresponding sections in the video files.

Miriam Shlesinger, Moshe Koppel, Noam Ordan and **Brenda Malkiel** are interested in the interface between computational linguistics and translation studies. They draw attention to the fact that "translation scholars routinely use methodologies, terminology, and findings from fields as disparate as psychology, linguistics, comparative literature, sociology and cultural studies", but that "they are less prone to seek common ground with the 'hard sciences'". Their paper is an attempt to remedy this lacuna. Machine learning has earlier been shown to be successful in determining author gender, but Shlesinger and her co-authors have now taken this one step further. They investigate whether computers are also able to classify texts by translator gender based on features in the translation. Their corpus

consisted of 273 samples of literary prose translated into English from 12 different languages. Interestingly, the results showed that the computer could be trained to identify a number of male vs. female characteristics; however, as yet, the gender of the translator cannot accurately be predicted.

Matthias Buch-Kromann, **Iørn Korzen** and **Henrik Høeg Müller** are engaged in investigating how computers can be trained to contribute to our understanding of human translation processes. In their paper they outline the design principles behind the Copenhagen Dependency Treebanks, a set of parallel treebanks for a number of languages with a unified annotation of morphology, syntax, discourse and translational equivalence. These treebanks can be used to express structural relationships between source and target texts and thus provide answers to a number of qualitative and quantitative research questions about translations, such as how often particular structures occur in different languages, how they are mapped to other languages, and what the systematic differences between languages are. To illustrate the type of research they have in mind, they put forward some hypotheses about morphology and discourse and describe how these can be explored by means of treebanks.

Michael Carl proposes a strategy and a set of tools for cross-validating and triangulating Translog product and process data. Translation process scholars are familiar with translation units (cognitive entities in the process data), but Carl now introduces the notion of an alignment unit (AU), which refers to translation equivalences in the source and target texts in the *product* data. Once the source and target texts have been fragmented into AUs, all the keystroke data obtained from Translog can be allocated to them.

Part III: Eye-tracking

The third section comprises four papers dealing with eye-tracking.

Sharon O'Brien addresses methodological matters in translation process research, specifically those related to eye-tracking studies. The challenges posed are divided into five categories (research environment, research

participants, ethics, data explosion and validity), some of which have been further subdivided. Each of the issues is discussed followed by possible solutions to the problems.

Fabio Alves, Adriana Pagano and **Igor da Silva** conducted a study combining eye-tracking with key logging and retrospective protocols. Ten professional translators were asked to carry out a direct and an inverse translation. This was followed by two types of retrospection (verbalisation elicited by a replay of their own task and by means of questions) during which the eye-tracker was switched on. Firstly, the study tests whether average fixation length is affected by the use of different filters. Secondly, it measures the effect of directionality on fixation length, and on the amount of time spent on the different phases of translation. Finally, the retrospective protocols are analysed as a means of gaining insight into the metacognitive activity of professional translators.

Barbara Dragsted, **Inge Gorm Hansen** and **Henrik Selsøe Sørensen** have carried out an explorative study of the processes and products of three expert translators who were to a greater or lesser extent familiar with speech recognition (SR) technology. The participants were given five tasks: a reading task, a reading-for-the-purpose-of-translation task, a sight translation task, a sight translation task with the use of SR and a written translation task. Time consumption and translation behaviour are then compared. In addition to investigating a number of process variables, the authors have also undertaken a preliminary analysis of the translations produced in the written and SR conditions in order to detect potential differences in the quality of the spoken and written output.

Kristian TH Jensen, Annette Sjørup and **Laura Winther Balling** conducted an eye-tracking experiment with the purpose of establishing whether segments requiring a change in the word order in the translation had an effect on the participants' eye behaviour. Two Danish texts (the translators' L1) were translated into English (their L2). They contained clauses for which the order of subject and verb could be transferred directly and clauses where the order had to be reversed. It turned out that the participants gazed significantly longer at segments for which the word

order had to be reversed even though there was no significant word order effect on pupil dilation. The study suggests possible interpretations for this difference.

Part IV: Precision, strategies and quality assessment

Our last section comprises four articles on precision in translation, the different definitions of the concept of "strategy", and quality assessment of target texts.

Dorrit Faber and **Mette Hjort-Pedersen** adopt an interesting approach to exploring the issue of fidelity to the source text vs. catering for the needs of target-text readers in legal translation. They analyse eight translations of an English pre-marital contract produced by four lawyers and four professional translators, investigating to what extent explicitations and implicitations are handled differently by the two groups. The results show that the two groups do indeed vary in certain respects. This is attributed to differences (a) in drafting style conventions, (b) in the manner in which legal concepts are handled and (c) in the degree of narrowing of legal conceptual content.

Paul Kußmaul elaborates on "the principle of the necessary degree of precision" and illustrates this using examples from the translation of social surveys. Translators will often avoid taking risks for the sake of caution, but in this paper Kußmaul argues that being precise often involves taking chances, and that the crucial skill a translator needs to acquire is how to *manage* uncertainty (namely, risk reduction rather than risk avoidance). It is shown that, if dealt with properly, the concepts of explicitation and equivalence can be seen as forms of risk management. In order to arrive at the optimal degree of precision, translators should bear in mind the function of the segment to be translated, and make use of the notions of *prototypicality* and *scenes*.

Riitta Jääskeläinen discusses the difficult concept of "translation strategy", which has multiple definitions both in translation and other fields such as second language acquisition and cognitive psychology. She

illustrates how various scholars have attempted to come to grips with the notion by means of various categorisations (textual and procedural; local and global; product- and process-oriented). The paper concludes with a map showing how the different strategy notions might be related to each other.

The final paper in this volume, authored by **Gyde Hansen**, serves as a reminder to translation process researchers that, although process research is interesting in its own right, it is also important to consider the quality of the results of these processes, namely the evaluation of the product. The criteria adopted naturally depend on the purpose for which the evaluation is carried out, whether this is scientific translation criticism; practice (in companies); translation didactics; or translation process research. The article discusses issues such as the choice of evaluators, the value of pre-defined criteria and procedures, and the classification and weighting of errors.

Copenhagen, Belo Horizonte and Graz, October 2009   *The Editors*

Arnt Lykke Jakobsen: portrait of an innovator

Inger M. Mees

Early years at the university

A great age of literature is perhaps always a great age of translations.

(Ezra Pound)

When, in 1985, Arnt Lykke Jakobsen moved from his post at Copenhagen University to accept an associate professorship at the Copenhagen Business School (CBS), his father jumped for joy. Now the grocer's son was back where he belonged. He'd had the good sense to return to a business environment with every promise of a secure and successful future career. And today, almost twenty-five years on, were he still alive, Jakobsen *père* would have every reason to say "I told you so". At the time, our protagonist might have had his doubts about his decision. Coming as he did from a traditional arts faculty with an emphasis on core university subjects such as literature, history and philosophy, and having as his main interest English literature, the move to the Business School was a major step, and he must have felt uncertain as to what the future held in store. His research had so far largely focussed on literary theory and analysis, notably the works of Malcolm Lowry (Jakobsen 1980, 1981) and D. H. Lawrence (Einersen and Jakobsen 1984). In Jakobsen (1985a) he had attempted to explain why Lawrence still appeals so much to modern readers – even though the reasons for reading him are so different from the situation in the thirties. Jakobsen (1985b) is a meticulous and captivating account of how Lawrence's works were received and interpreted in Denmark in the half-century spanning 1932 to 1982. Incidentally, we may also note Jakobsen (2007), where Arnt returns to his early literary interests. But although the main focus was on literature, one can also trace an early fascination with text linguistics, pragmatics and semantics, all of which formed a basis for his literary analyses, and which would now prove invaluable to him in his

new role of making the teaching of translation at CBS more theoretically informed. His faculty for critical thinking and the intellectual curiosity that drove his research were clearly present right from the outset of his career.

Arnt Lykke Jakobsen was born on 27 December 1944, and grew up in the little town of Skjern in western Jutland – far from the bustle of the metropolis, and where at the time a large percentage of the population had only limited education with very little chance of acquiring more. His all-round talents were evident from an early age, both to his parents and his schoolteachers. It was therefore no surprise that he became, as his mother respectfully used to put it, "the first academic in the family". After completing secondary school in Tarm, a nearby town, at the age of 18 he moved to the capital to read English at Copenhagen University, obtaining his MA in 1972. He was appointed Assistant Professor at the University in the same year, and Associate Professor in 1978. In 1973/74 he spent a year in the USA as Visiting Lecturer at Tufts University, Medford/Massachusetts.

Coming from a somewhat remote area had given him an insatiable curiosity about the wider world and one of the ways he satisfied this was through reading the classics of world literature. Above all, he devoured works in English by famous authors – Laurence Sterne, Joseph Fielding, George Eliot, Joseph Conrad, W.B. Yeats, James Joyce, Graham Greene, John Fowles, Salman Rushdie, to name just a few. Even today, his desire to obtain information about anything and everything remains undiminished. I have often seen him grab a dictionary, or start googling, right in the middle of a conversation if a topic crops up where he feels he needs to boost his knowledge. It could be anything – translating an English word into German, the rendering in English of a Danish idiomatic expression, the geographical location of a town or country (Google Earth is a favourite!), a composer's date of birth, the Latin name of a flower or bird, the workings of software programs, or even the rules of cricket – I could go on. His genuine need to soak up all kinds of information is doubtless the explanation for his encyclopaedic knowledge covering a wide range of topics. And it is also why he is such a fascinating conversationalist.

Research interests: literature, text analysis and semantics

Translation is not a matter of words only: it is a matter of making intelligible a whole culture.

(Anthony Burgess)

So Arnt Lykke Jakobsen's early years as a researcher were devoted to literature, his approach always being guided by a broad understanding of the concept of meaning. No fuzzy interpretations are to be found in his analyses; he always takes due account of the speaker, the receiver and the situation. Meaning is embedded in the text, the co-text and the context, and the interpretation of an utterance therefore goes far beyond what can be looked up in a dictionary. People's backgrounds, cultures and experiences, the manner in which something is spoken, accompanying facial expressions and gestures, all contribute to the way we perceive and understand matters.

This approach is evident if one watches Arnt trying to read and interpret a text. He takes off his glasses, bends down over the book, picks up a pen, scrutinises the text and underlines all the relevant portions. A slight frown is visible as he raises his eyebrows and accesses the knowledge stored in his brain in order to add this to the information he is gleaning from the text. One can virtually see him constructing meaning as he goes along. He doesn't gladly tolerate incompetence: incorrect grammar and orthography, infelicitous phrasing, illogical sequencing, the use of clichés, stereotypes and unsuccessful imagery are all likely to provoke severe criticism, or at least obvious displeasure. In contrast, well-written work gives him intense pleasure: beauty and quality of language contribute greatly to the enjoyment he obtains from reading and listening. He is a gifted translator and writer himself, having an unsurpassed ability for phrasing matters elegantly, precisely and concisely. He has at his disposal a vast vocabulary in both Danish and English – with the possible exception of the little word "no", which he finds hard to articulate if asked for help or advice. This may account for the amazing number of undertakings in which he is involved.

Arnt's spoken English is also excellent. His pronunciation is almost flawless, and in Britain people rarely take him for anything other than a native speaker. He is also a superb mimic, and seems able to imitate many varieties of Danish and English, all the more convincingly because he so

effortlessly reproduces speakers' voice qualities. His co-authorship of a piece on Danish students' identification and evaluation of different accents of English (Jarvella *et al.* 2001) bears testimony to his liking for dialects.

Another of his talents is that he is a brilliant annotator. To get a taste of this, read Jakobsen's (1980) annotation of Malcolm Lowry's *Under the Volcano* (1947), which contains a host of comments and notes. In fact, in his early days, Arnt's outstanding analytical powers were mainly revealed in the form of writings based on his close reading of the works of literary critics – "Critique of Wayne C. Booth's *Rhetoric of Irony*" (Jakobsen 1977) being a good example. His interest in semantics is reflected in another pre-CBS publication on hypostasis forms (Jakobsen 1982), an article which measured up to his own high standards (Arnt is invariably his own sternest critic).

Although Jakobsen's early work did not deal with translation per se, his curiosity about what constitutes textual meaning clearly paved the way for his new field of research. Bearing this in mind, it is not so surprising that he managed to adapt so easily to the study of translation at CBS.

The move to CBS: from literature to translation

As mentioned above, 1985 saw him make the move from Copenhagen University to the Department of English at CBS. His new CBS colleagues had a lot of experience in teaching practical translation skills, but the subject was greatly in need of a person who could provide a theoretical foundation.

Before Arnt began to concentrate on domain-specific translation, there was a transitional period in which his original interest in literature was still clearly apparent, but in which one could already see in which direction he was heading. In his last year at the university he had contributed numerous brief entries on British and American literature to the supplementary volumes of a Danish encyclopaedia, *Gyldendals Leksikon*. Although he was rapidly adjusting to his new situation, for a time Arnt remained much preoccupied with literary matters; he was still working on D. H. Lawrence's reception in Denmark, and was also invited to talk on the main Danish radio channel on various authors (for example, on Lawrence and his wife Frieda von Richthofen, and on John Fowles). Arnt still retains

his love of literature, one manifestation of this being his personal library containing many thousands of books (including many first editions) for which he is ever trying to find new storage space. It is a joy to watch him picking up a book, gently removing the dust jacket, fingering the covers, studying the title page, and then slowly turning the pages.

In the year of his CBS appointment, he published a paper in Danish (Jakobsen 1985c) on translation and localisation (in its original broad sense of adapting a text to a local culture, rather than the current more specialised meaning of translating software packages, websites and other products that need to be adapted for international markets). In this piece, his literary roots are still clearly to be seen. The examples are from older Danish and English literary works, including a translation into Danish of Alexander Pope's *Rape of the Lock*, where, among other things, the translator has localised the Thames as a Danish equivalent, *Øresund* ('the Sound'). In an attempt to define the difference between translation and localisation, he explains (1985c: 12) that translation involves equivalence between two semantic structures while localisation consists in equivalence between two semiotic structures, namely the complete meaning structures of the two linguistic communities involved.

Jakobsen (1988) provides a detailed overview of the earliest translations from English into Danish; these appeared in the middle of the seventeenth century – the very first translated writings having come via Latin. Translations of English literature into other modern European languages emerged at the beginning of the seventeenth century but in Denmark things moved somewhat more slowly. At that time, English was little known, and the availability of German translations had made translations from English into Danish seem superfluous (pp. 367ff.). The vast amount of work involved in tracing these early specimens, and the accurate biographical information provided on the translators, are typical of Arnt's approach to research. Like his previously mentioned study of Lawrence (1985b), this research is characterised by the same patient, conscientious and meticulous search for facts, precise details and evidence of extensive reading. Arnt never goes for the easy way out. Every line he produces is considered and reconsidered, written and rewritten, and then checked and double-checked.