
Text Linguistic Models for the Study of Simultaneous Interpreting

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Text Linguistic Models for the Study of Simultaneous Interpreting

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Preface

The basis of this paper is a report from a pilot study on simultaneous interpreting, carried out at the Department of Finnish, Stockholm University, and financed by a grant from the Swedish Council for Research in the Humanities and Social Sciences (HSFR). The aim of the project was to test the applicability of some text linguistic and text-linguistically-oriented models to the study of simultaneous interpreting. The material that forms the basis for this analysis is a number of transcribed printouts of audio tape recordings of simultaneous interpreting situations using Finnish and Swedish, in both directions. The transcripts have been analysed at several linguistic levels, and the results of the analyses and the acquired empirical data are continuously being used as a resource and theoretical basis for new research.

The project supervisor was Professor Erling Wande. The interpretation corpus was recorded by Birgitta Romppanen, who also participated in the initial stage of the project, and the transcription of the tapes was done by Miriam Sissala. The final analyses and the compilation of the report was made by Helge Niska.

1 Introduction

1.1 The relevance of text linguistics to research on simultaneous interpreting

In the activity of interpreting, two aspects are especially significant: orality and interaction. The interpreter translates oral discourse (which may or may not have been prepared as written text) in various communicative situations, where messages are exchanged, through the interpreter, between people.

Text linguistics has emerged from the 1970s and onwards as the study of the property of texts (written or oral) and their uses in communicative interaction. The modern conception of text linguistics is a broad one, encompassing discourse analysis and pragmatics, as well as influences from cognitive sciences, communication studies and artificial intelligence. Written text is still the usual object of study within text linguistics, and monographs and scholarly papers abound with examples of written texts. But underneath, or behind, the written text, there are cognitive and other kinds of processes that can take the form of either written or spoken or signed discourse.

In working on this study, the contemporary text linguistic approaches of de Beaugrande & Dressler (1981) and van Dijk & Kintsch (1978, 1983) have been especially inspiring. Two other researchers, who are not text linguists, but who take utterances and whole texts as their point of departure in describing the interpreting process, have likewise been very influential, namely Chernov (1978, 1979, 1985, 1994) and Alexieva (1985, 1988). Of these two, Alexieva is probably the most text-linguistically oriented, while Chernov relies more heavily on psychological, especially cognitive research. Nevertheless, we feel that their models, apart from being highly relevant as descriptions of the interpreting process, in this context serve both as valuable complements and correctives of the more "explicitly" text linguistic model proposed by Kintsch and van Dijk.

1.2 Scope and purpose of the study

Internationally speaking, simultaneous interpreting is a relatively new research field, and in Sweden there is virtually no empirical or theoretical research in this area^[1]. The aim of this project was to make a preliminary study of the process of simultaneous interpreting, as a pilot study. The objectives were both to assess some of the text linguistic models for the description of the process of simultaneous interpreting that had been presented in previous research, and to test a hypothesis as to the existence, in the simultaneous interpreting situation, of a special variant of translation, for which we coined the term "translatorese". In order to do this, analyses of the interpretations had to be done on several linguistic levels. As a result of this, we also expected to get a preliminary inventory of linguistically and theoretically interesting topics for future research.

The languages involved are Finnish and Swedish. This is interesting from a typological point of view, as the bulk of all research on simultaneous interpreting so far has been conducted on Indo-European languages.

The pilot project nature of this project implies that another of our primary aims was, on the basis of specified theoretically-founded studies of samples from the empirical material, to develop a better point of departure for larger future projects in the area.

1.3 Research material and methods

1.3.1 The speakers and the interpreters

The material for this study was collected at two conferences in Finland in the autumn of 1990. Altogether, it consists of about 15 hours of audio recordings from two conferences. Within the time frame of the pilot study, we were only able to transcribe approximately five hours from one of the conferences, the participants of which were female authors from Sweden and Finland. From this conference we have analysed speeches delivered by government officials and professional authors, and the interpreting conducted by three, likewise female, professional conference interpreters.

The audio recordings were copied to four-channel audio tapes where the original speaker input occupies one channel pair, and the interpretation the other pair. In this way it is possible to listen to the speaker and the interpreter either separately or concurrently. The analyses have been made mainly on the basis of the transcribed material, and the original recordings have been used for control purposes.

1.3.2 Transcription

The transcription of the material was done by PhD student Miriam Sissala. In the transcriptions, only lower case letters have been used, and there is no punctuation. The transcription is orthographic, and spoken language forms have been used extensively, if not exclusively; e.g. 'ja' for Swedish 'jag' [I], 'å' for 'och' [and], 'med' for 'med' [with], 'hitta' for 'hittade' [found], 'e' for 'är' [is, are].

Because of technical limitations, there is no measurement of time, e.g., length of utterances, duration of pauses or lags between original speech and interpretation. The transcriptions have, however, been marked for pauses within the respective utterances, where a single slash '/' denotes a short pause, and double slash '//' denotes a long pause. False starts and mispronunciations are recorded in the transcripts. The transcription of both originals and interpretations are printed in two (roughly) synchronised parallel columns. For the sake of clarity, in the samples printed in this report translation into English of the original and the interpretation has been added. We have aimed at using spoken language forms in the translations as well.

The code within parenthesis at the bottom of the first column of the samples (T 20) shows the location of the extract in the transcribed corpus.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
men de e så många frågor som dyker upp när ja skriver å som ja inte har svar på // de e så mycket som händer / man borde ha tie liv // (T 20)	but there are so many questions popping up when I'm writing and which I don't have answers for // there is so much happening / you should have ten lives //	mutta on niin paljon kysymyksiä jotka tulevat mieleen kirjoittaessani enkä pysty vastaamaan niihin / on niin paljon mikä tapahtuu / pitäisi olla kymmenen elämää itsellä /	but there are so many questions that come into my mind when I'm writing and I am not able to answer them / there is so much happening / you should have ten lives for yourself /

Figure 1-1 Sample transcription with English translation

1.3.3 Research method

The basic method in our study was to compare, on the basis of the transcripts, the output of the original speaker to that of the interpreters. Although the text-linguistic approach was, obviously, the most important one, it was natural to make analyses on both "micro" and "macro" levels.

On the "micro level" we took note of anomalous intonation and mispronunciations, grammatical "errors" and possible interference from the source language in the target language, like changes in word order and other syntactic changes, changes in use of pronouns, lexical changes and mistranslation. The analyses on this level were made on short discourse segments, the equivalents of "sentences" in written texts. This is also a kind of analysis that we were used to do when assessing the performance of community interpreters in university examinations and state accreditation tests.

Already at this stage it was possible to match the findings of our analyses to the models that we were about to assess. Both Alexieva's and Chernov's models are well suited to cater for the phenomena that we noticed at this level (cf. section 6.3 for Alexieva's four stage simultaneous interpreting model).

The analyses on the "macro" level had to do with issues like the interpreters' "editing" of the texts, e.g. changes in the order of subtopics, their handling of special terminology, and strategies for coping with cognitive problems.

Since the aim of the study was to assess the applicability of text-linguistic models to the study of simultaneous interpreting, the main task for us was to try to apply the models to samples from the transcribed material. The results of these "tests" will be reported in the respective sections below.

1.3.4 Units of analysis

Traditional linguistics sees the sentence or possibly clauses within sentences as its basic unit of research. Even in text linguistics, which supposedly works with larger units, the sentence, or "the orthographic unit that is contained between full stops" (Halliday 1985:193), is often the unit quoted in examples etc. This is natural when dealing with written texts, but when working with a spoken corpus like ours, things are more complicated. In a forthcoming paper, Robert de Beaugrande proposes a new way of defining the sentence (de Beaugrande forthc.)^[2]:

Our prime question would then be: which sets of criteria might be relevant for making (or not making) a given stretch of discourse into a sentence, or for recognising it to be a sentence? At least the following sets of criteria might be considered:

5.2.1. structural: a "sentence" consists of an array of relations ("structures") among units, e.g., the "Subject" and the "Predicate" in an "independent clause";

5.2.2. formal: a "sentence" matches an array of formal symbols stipulated by a "formal grammar";

5.2.3. logical: a "sentence" is an "expression" derived via "rules" from a "logical system" of basic "axioms";

5.2.4. philosophical: a "sentence" is a "true or false statement" about a "state of affairs" in a "real or possible world";

5.2.5. cognitive: a "sentence" is a "proposition" with a "predicate" and one or more "arguments";

5.2.6. thematic: a sentence is a pattern for relating the "theme" (or "topic") conveying known or predictable information with the "rheme" (or "comment") conveying new or unpredictable information;

5.2.7. intonational: a "sentence" corresponds to a "tone group" uttered as a "prosodic" unit with a characteristic pitch, e.g., rising or falling;

5.2.8. pragmatic: a "sentence" is the expression of a "constative" or "performative speech act";

5.2.9. behavioural: a "sentence" is a separate segment within the "stream of speech";

5.2.10. orthographic: a "sentence" is an orthographic unit of written language whose outer boundaries and at least some of its inner patterns are indicated in many writing systems by punctuation;

5.2.11. stylistic: the sentence is one of the key units for working out the style of an individual or group, especially in literary discourse;

5.2.12. rhetorical: the sentence is one of the key units for achieving rhetorical effects such as being expansive or terse, brisk or relaxed, excited or calm, and so on;

5.2.13. registerial: the sentence is a unit whose form and organisation adapt to differing "registers", e.g., in an official business letter as compared to a casual memo;

5.2.14. social: the sentence is a unit of higher importance for persons in some social roles or positions than for others, e.g., for a BBC radio announcer as compared to a barman in a rural pub.

Among these criteria, in the work with a corpus like ours of oral interpreting, the tone group (5.2.7) and information group (5.2.6) seem to be the most valid ones (de Beaugrande, personal communication.) Since we have worked only on the written transcripts, we have rather used a combination of cognitive and thematic criteria (5.2.5 and 5.2.6). Cf. also section [2.3.3](#) in the present paper.



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2 Psycholinguistic theories and studies of the interpreting process

2.1 Interpretation studies in the West

According to Gile (1994:149-152) the history of interpreting research in the West can be divided into four periods:

1. The fifties: the first steps; based on personal experience without claiming any scientific validity, but nevertheless identifying most of the fundamental issues which are still discussed (Herbert 1952; Rozan 1956; Ilg 1959; the first academic study by Paneth 1957).
2. The sixties and early seventies: the experimental psychology period (Treisman, Oleron & Nanpon, Goldman-Eisler, Gerver, Barik - see Gerver 1976; Sinaiko 1978); a number of hypotheses were formulated regarding the interpreting process and the influence of other factors like the source language, noise, speed of speech delivery, etc. but the validity or representativeness of these studies is often doubtful.
3. The early seventies to the mid-eighties: the practitioners come in; Pinter (Kurz) (1969) was the first in a series of more than 20

2.2 The "Paris school"

dissertations; a number of ideas on the process of interpreting, developed mostly at ESIT in Paris and crystallised into a dogma ("le théorie du sens"), gained weight in the community of "practisearchers"; several models were developed, but there was little empirical evidence, experimental or observational, to support hypotheses (Moser 1978, Gerver 1976, Gile 1990, Déjean Le Féal 1978).

4. After the end of the 1980s: The "Renaissance"; increasing number of empirical studies and increased co-operation between researchers and practitioners (e.g. Gran & Fabbro 1987, Tommola & Niemi 1986) as well as between researchers. The practisearchers have become more open-minded, and ESIT has kept a low profile.

In this chapter we will give a brief overview of some of the earlier research on translation, which we have chosen to call "psycholinguistic" mainly to distinguish them from our "text-centred" approach; obviously, some of the approaches and findings in those studies are nevertheless highly pertinent to a text-linguistic study as well.

In Sweden, the interpretation theory of the "Paris school", whose main proponents are Danica Seleskovitch and Marianne Lederer, ESIT (École supérieure d'interprètes et de traducteurs), has had a great impact on training of interpreters and the theoretical conception of the interpreting process. The main idea behind this theory is that interpreting is based on meaning (Fr. "sens"), not on words or linguistic structures, and it has therefore become known as the "théorie du sens". It has nowadays been renamed to "La théorie interprétative de la traduction", the interpretative theory of translation.

In this theory, it is assumed that the spoken original (in chunks of 7-8 words, see below) is retained in short-term memory for only a few seconds, after which "cognitive complements" at work on these words transform them into meaning units. As soon as these meaning units are formed, they melt in turn into larger meaning units (Seleskovitch & Lederer 1989:247).

The model postulates that there exists a) an immediate short-time memory working on predominantly phonological input with a capacity of 7-8 words which are saved for 2-3 seconds; b) a cognitive short-time memory that forms the base for a semantic memory where the semes reside, dissociated from their formal support.

The interpreting process thus consists of three phases:

1. verbal phase - incoming discourse
2. non-verbal phase - processing
3. verbal phase - reproduction of the message

In the non-verbal phase the verbal input (phase 1) is split into meaning units which melt together with previous knowledge (subject specific or general knowledge) and enters the cognitive memory, thereby losing their verbal form by transforming into ideas.

"(...) the translation process appears to be not a direct conversion of the linguistic meaning of the source language to the target language but a conversion from source language to sense, the intermediate link being non-verbal thought which, once consciously grasped, can then be expressed in any language regardless of the words used in the original language." (D. Seleskovitch, paper read at the Institute of Linguists 1977, quoted in Macintosh 1985)

The hypothesis for how the meaning is constructed is based on the work of neurophysiologist J. Barbezier, see Seleskovitch & Lederer (1986:257-258).

The importance of the model as a pedagogical tool can hardly be over-estimated. It helps the training interpreters to concentrate on what people say instead of the words they are using. Thousands of conference interpreters have been trained according to strategies developed along the ideas of the model. The training consists of interpretation exercises where the emphasis is on comprehension of the content of the source language speech and the quality of the target language speech as such, not on linguistic equivalences.

While deverbalisation is a prominent feature in the theory, the model includes cases where the meaning does not need to be deverbalised — substitution or transfer of lexical items (Fr. transcodage) may be done of proper names, numbers, and standardised technical language:

"Il s'agit, (...) de sigles, de chiffres et de termes techniques transcodés d'une langue à l'autre. (...) La restitution est effectuée pendant la rémanence acoustique des mots ou des chiffres qui en font l'objet. Cependant la mémoire immédiate ne fournit pas seulement à l'interprète simultanément la possibilité de transcoder. La présence mnésique de 7 à 8 mots pendant quelques secondes signifie aussi que les champs cognitifs éveillés par l'ensemble phrastique (...) permettent la fusion en un sens de l'ensemble sémantique et des connaissances qu'elle mobilise. (...) L'information intégrée, devenue souvenir intelligent, acquiert une rémanence bien supérieure à celle qu'autorise la mémoire immédiate. Elle peut donc être restituée en dehors de son empan. Ce phénomène explique que l'interprète de simultanée ne transcode que par moments et non en permanence." (Seleskovitch & Lederer 1986:144-145)

In other words, the interpreter uses both strategies, that of transcoding, i.e. the conversion of words and/or numbers on the level of signification, on a limited scale however, and that of translating, i.e. restituting the meaning units on the level of sens.[\[3\]](#)

Barbara Moser (1978) depicts the interpreting process in a semantic flow-chart model, where she also operates with different memory levels and phases in accordance with the ESIT model. Production in the third phase is seen as a process where concepts, organised around the verb, are combined, and output is done according to the syntactic rules in the target language.

Neither of these models takes up the question of added processual load on the interpreters because they have to work concurrently with two languages, i.e. two lexicons, two syntactic and two stylistic systems. Chernov (1979), who also sees the interpreting process as a three stage process à la ESIT, has listed the following crucial process-specific features of simultaneous interpreting:

1. The source language (SL) message is presented to the interpreter only once and it develops in time (a "left-to-right process").
2. The two communicational acts, listening to the SL message and speaking (reproducing the message) in the target language (TL), are concurrent most of the time.
3. Only a limited amount of time is available for message decoding, re-encoding and reproduction, as evidenced by the average time lag of a few seconds.
4. As follows from (3), only a limited amount of information can be processed per unit of text in simultaneous interpretation (SI) (Chernov

1979:277-278).

In order to deal with the situation, the interpreter, according to Chernov, takes advantage of a mechanism of "probability prediction" in the reception of the SL message and "anticipatory synthesis", i.e. the inherent ability in humans to adjust immediately to changes in the physical surrounding, in the regeneration of the TL message (Chernov 1979:278). Chernov's probability prediction/semantic redundancy model will be described in section [7.1](#).

2.3 Deverbalisation or not?

2.3.1 Semantic structure and metalanguage

Alexieva (1985) contends that the simultaneous interpreter can understand the source language utterance and build a target language utterance "if and only if he is in the position to detect the semantic constructs of prepositional nature in the segment he is handling at the moment, for otherwise he will utter only disconnected words, mostly nouns, the way beginners do." (Alexieva 1985:196). In her study, Alexieva postulates a deep semantic structure which is built by means of a meta-language primarily consisting of natural language. In analysing the meaning of an utterance, we resort to natural language using it as a metalanguage, which has a very high degree of redundancy and hence lacks ambiguity. On this ground she disagrees with the notion put forward by the "Paris school" that the bulk of the speech is transformed in the interpreter's mind into mental representations devoid of any linguistic shape (cf. section [2.2](#)).

2.3.2 Testing "deverbalisation"

Isham (1994) notes that very little work has been done to test the "deverbalisation" theory. Many researchers have found that interpreters wait a certain time after the speaker starts speaking before they start interpreting. Goldmann-Eisler (1972) and others have noted that interpreters wait for a subject NP and a predicate, i.e. a clause. While that is sufficient to form a proposition (a unit of meaning that can take truth value), it is not evidence that the propositions are in fact activated — only that they would be available before the interpreter starts production in the target language (Isham 1994:193). In Isham's experiment, which was based on a previous experiment by Jarvella (1971), twelve French/English bilinguals and nine professional interpreters listened to two passages of text consisting of a number of two-sentence pairs in which the last thirteen words were identical between matched pairs and formed the same two clause-type constituents. The crucial difference lay in whether the last two clauses were separated in the surface by a clause boundary or a sentence boundary. The sentences were built up in the following way:

A: The confidence of Kovach was not unfounded. To stack the meeting for McDonald, the union had even brought in outsiders.

B: Kovach had been persuaded by the officers to stack the meeting for McDonald. The union had even brought in outsiders.

In version A, the last two clauses belong to the same sentence, but in version B they do not. Jarvella (1971) showed that in listening, verbatim recall for the most recent clause was better than for the previous one (called the "critical" in Isham's study), and that this clause was recalled better in A than in B, i.e. when it is part of the most recently heard sentence. This demonstrated that verbatim recall is predicted not by a certain number of words, but the location of syntactic boundaries. Subjects generally paraphrased previous sentences, even if verbatim recall was emphasised.

Isham's experiment yielded somewhat unexpected results. Firstly, recall of the final sentences was poorer in the professional interpreter groups than in the listeners. The reason for this may be "phonological inference", caused by the fact that (spoken language) interpreters monitor their own speech while listening to new input at the same time (Isham 1994:204). Furthermore, the results divided the professional

interpreters into two groups, one with high scores in verbatim recall, and one with low scores. Isham argues that this would imply that there is more than one way to process the incoming sentences during simultaneous interpreting: one that leaves behind a memory trace for the form of the source-language sentence, and one that does not (Isham 1994:205 ff.).

It is doubtful whether Isham's study can be considered evidence against or for the deverbalisation hypothesis. Firstly, the experimental setting may not give the same result — especially for professional interpreters — as would a "live" interpreting session, where the interpreters' motivation to do a "good job" is probably higher. Secondly, the "sentence" is a rather problematic concept, especially from a text-linguistic point of view, see section [2.3.3](#) below.

2.3.3 The "sentence" as research unit

In psycholinguistics, the sentence was for a long time considered the basic unit of cognitive processing (de Beaugrande *forthc.*). But Kintsch (see e.g. Kintsch 1979; de Beaugrande 1980; de Beaugrande & Dressler 1981) has demonstrated with experiments that human processing of a text varies according to its organisation into propositions rather than sentences. In the famous "V-2 rocket" recall experiments the number of propositions recalled did not vary between the original text (1) and the revised version (1a) with longer sentences but the same propositions:

(1) A great black and yellow V-2 rocket 46 feet long stood in a desert in New Mexico. Empty, it weighed five tons. For fuel it carried eight tons of alcohol and liquid oxygen. Everything was ready. Scientists and generals withdrew to some distance and crouched behind earth mounds. Two red flares rose as a signal to fire the rocket [etc.]

(1a) With eight tons of alcohol and liquid oxygen as fuel to carry its five-ton frame, a 46-foot black and yellow rocket stood ready in a New Mexico desert. Upon a signal of two red flares, scientists and generals withdrew to crouch behind earth mounds. [etc.] (de Beaugrande *forthc.*)

de Beaugrande (*forthc.*) suggests that from a methodological perspective propositions should be ranked in importance, for example the thematic "rocket standing ready" ranking well above the "rocket" being "46-foot", or "black and yellow" (implying macrostructural processing, see section [5.1](#) below). In other experimental studies, pragmatic criteria were also found to be influential, such as the perspective of a reader who is interested in certain information (Anderson and Pichert 1978, cited in de Beaugrande *forthc.*).

2.4 The simultaneity of simultaneous interpreting

A central question in psycholinguistically oriented research on interpreting is how simultaneous interpreting, i.e. simultaneous perception in one language and production in another language is possible in the first place. The mechanisms behind the interpreting process have been studied by analysing parallel recordings of source texts and their interpretations. The research has focused on various factors that have been perceived as crucial in the interpreting process. Among temporal variables, the impact of speed of input by the speaker upon the interpreters' output has been studied, *inter alia*, by Gerver (1975). According to Gerver, 100-120 words per minute is the optimal speed for stimulus texts. In a study conducted in 1969, it was shown that an increase in stimulus speed increased the cognitive load of the interpreters, which showed in a higher rate of errors and omissions (Gerver 1975).

Le Ny (1978) maintains that the crucial factor is not really the nominal speed of the speaker, but rather the rate of new information presented (cf. Niedzielski (1988), section 4.3.2). For sentences of equal length, processing time is a function of the number of propositions in the texts.

The time lag or ear-voice-span (EVS) of simultaneous interpreters has been a central issue in many studies. Average time lags have been reported to be from two to six seconds; most studies report 2 - 3 seconds (Barik 1969, Gerver 1976, Vamling 1981, Cokely 1986). The actual simultaneity has been studied, and even questioned, by many researchers, whereby the pauses in the source text input have been of special interest. Some researchers, e.g. Barik (1969) hold that interpreters take advantage of speakers' pauses in interpreting, while others,

e.g. Gerver (1975) maintain that pauses are too short to be of any real use for the interpreter. Goldman-Eisler and Cohen (1974, see below) found that while interpreters do make use of pauses, it is only done when pauses occur at sentence boundaries, not within sentences. A study of Vamling (1981) indicates that simultaneity increases with higher input speed and is higher the better the interpreter's language skills are.

Simultaneity has also been studied as the amount of time that speaker and interpreter actually speak concurrently. Reported averages are between 65 and 75 per cent of total speaking time (Barik 1969, Gerver 1975, Chernov 1978; cf. Vamling 1981).

Simultaneity of reception and processing was the subject of a study by Goldman-Eisler & Cohen (1974). In a previous study (Goldman-Eisler 1972), it had been shown that interpreters were capable of performing such complicated operations as monitoring, storing and possibly decoding while engaged in the encoding of previously received sequences into the target language. It was now suggested that the acts being performed simultaneously would be monitoring and segmenting, which implies decoding on the one hand and recoding and encoding on the other. The supposition was that recoding and encoding are the more automatic ones, and that decoding the input requires most attention, since it involves comprehension. The researchers' concluded from the experiment that, strictly speaking, there can be no simultaneous interpreting when interpreting requires cognitive action. While monitoring and segmenting (decoding) may be simultaneous, recoding and encoding must represent a second phase. According to Goldman-Eisler & Cohen, simultaneous interpreting is possible because

a large part of the context of normal language consists of highly automatic overlearned sequences and redundancies. Thus consecutive translation can alternate with simultaneous translation and the attention which has been tied exclusively to decoding when monitoring a text with pauses within sentences (i.e., whose information content can be presumed to be high), can be liberated for recoding (and encoding) at the end of sentences. (Goldman-Eisler & Cohen 1974:9-10).

Cenkova (1989) is sceptical towards the idea of the crucial importance of pauses for a satisfactory simultaneous interpretation. Cenkova's experiments show that the interpreter can only to a small extent (at low speech rates) take advantage of the speaker's pauses to make interpretation easier — the pauses are simply too short. Furthermore, the interpreters do not have the time to make long enough pauses in their own utterances to allow for more time to listen to the speaker. In one of the experiments, the speaker and the interpreter talked concurrently 94,6 per cent of "net time", i.e. the total time minus pauses.

2.5 An early Swedish study on simultaneous interpreting: Vamling

2.5.1 Coherence

The first Swedish study on simultaneous interpreting was an exploratory study by Katarina Vamling (1982) on Russian-Swedish interpreting. The purpose of the study was to examine some aspects of simultaneous interpreting from a psycholinguistic perspective, e.g. speech rate, the relation between speech and pauses in the interpretation compared to the stimulus text (S-text), the delay between S-text and the interpretation, omissions, interpreters' resegmentation of the S-text, and linguistic errors like slips of the tongue and false starts.

The following issues in Vamling's study are of special interest in the present context of text linguistics.

Vamling tested interpreters' ability to interpret "unrelated texts", i.e. texts that consisted of sentences that were correct regarding content and grammar, but were unrelated to each other. These "texts" were interpreted in just about the same way as the normal texts in regard of temporal aspects, simultaneity, content and linguistic shape. According to this study then, simultaneous interpreting of texts without a

coherent theme is possible.

There is however an important caveat. Only three persons were studied in Vamling's experiment, and only one of these (interpreter A) was a qualified professional interpreter. There were in fact differences in the results between this interpreter and interpreters B and C. For example, interpreter A's simultaneity was lower in interpreting unrelated sentences than when interpreting "normal" texts.

2.5.2 Resegmentation

As for resegmentation of the S-text, interpreter A has less segments than the S-text and prefers to combine S-segments rather than to split them, which B and C do.

Resegmentation resulted in longer segments by interpreter A than in the original, while interpreters B and C had shorter segments. There was no specific study on where and how combination and splitting of segments was done in the interpretation.

2.5.3 Other findings

The study gave more ideas for further research than basis for conclusions, but it was nevertheless possible to make the following generalisations from the results of the experiments:

- 1) Interpreters use two strategies, the "dragging strategy" which means that the interpreter speaks so slowly that he can listen at the same time, and the "forcing strategy", whereby the interpreter tries to force his utterances trying to minimise the time that he has to speak and listen concurrently (cf. section 7 below).
- 2) Simultaneity increases with speech rate and is greater the better the language skills of the interpreter are. As far as simultaneity is concerned, the results of the professional interpreter in Vamling's sample correlates rather well with earlier studies by Gerver (1975) and Chernov (1978) on for how long professional interpreters listen and speak at the same time (Gerver reports an average of 65 % of the total time, Chernov 70,5 % of the speaker's speaking time.)
- 3) Time lag is 2-3 seconds.
- 4) Omissions of content increase at higher speech rates and decrease when the interpreter knows the issue well.
- 5) The input sequence, i.e. the part of the S-text the interpreter chooses to perceive before starting to speak, as a rule includes subject, finite verb and possible objects and adverbial expressions.
- 6) The number of filled hesitation pauses is lower when interpreting into the mother tongue.
- 7) False starts and slips of the tongue in simultaneous interpreting seems to be an interesting object of study for psycholinguistic research.



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3 Textuality in written and oral texts

3.1 Standards of textuality

In the approach to text linguistics by de Beaugrande & Dressler (1981), text, oral or printed, is established as a communicative occurrence, which has to meet seven standards of textuality. If any of these standards are not satisfied, the text is considered not to have fulfilled its function and not to be communicative.

Cohesion and *coherence* are text-centred notions, designating operations directed at the text materials. Cohesion concerns the ways in which the components of the surface text (the actual words we hear or see) are mutually connected within a sequence (de Beaugrande & Dressler 1981:3). Coherence on the other hand concerns the ways in which the components of the textual world, i.e. the concepts and relations which underlie the surface text are mutually accessible and relevant (1981:3-7).

The remaining standards of textuality are user-centred, concerning the activity of textual communication by the producers and receivers of texts:

Intentionality concerns the text producer's attitude that the set of occurrences should constitute a cohesive and coherent text instrumental in fulfilling the producer's intentions.

Acceptability concerns the receiver's attitude that the set of occurrences should constitute a cohesive and coherent text having some use or relevance for the receiver.

Informativity concerns the extent to which the occurrences of the text are expected vs. unexpected or known vs. unknown/uncertain.

Situationality concerns the factors which make a text relevant to a situation of occurrence.

Intertextuality concerns the factors which make the utilisation of one text dependent upon knowledge of one or more previously encountered texts.

The above seven standards of textuality are called constitutive principles (cf. Searle 1965), in that they define and create textual communication as well as set the rules for communicating. There are also at least three regulative principles that control textual communication: the *efficiency* of a text is contingent upon its being useful to the participants with a minimum of effort; its *effectiveness* depends upon whether it makes a strong impression and has a good potential for fulfilling an aim; and its *appropriateness* depends upon whether its own setting is in agreement with the seven standards of textuality (de Beaugrande & Dressler 1981:11).

3.2 Cohesion

Cohesion is the first of the seven textuality standards identified by de Beaugrande & Dressler. It has also been a most popular target for research, probably because it is easy to identify in written texts, which are the traditional research material of linguists. This does not mean, however, that there would be a general consensus as to the definition of the concept and its relation to the second of the textuality standards listed above, coherence (cf. section 3.2.6).

Since cohesive markers are important for the understanding of oral texts as well as written, it seems feasible to describe this textuality standard in some detail. Interpreters, as all speakers, make extensive use of cohesive devices, for example in order to enhance coherence, but also for reasons of economy (e.g. saving time and alleviating conceptual work load by using anaphoric devices like generalisations and pro-forms).

Halliday and Hasan, in their ground-breaking work "Cohesion in English" (1976), describe cohesion as a semantic concept that refers to relations of meaning that exist within a text. According to Renkema (1993) cohesion is the connection which results when the interpretation of a textual element is dependent upon another element in the text. According to Schiffrin (1987:9) cohesive devices are "clues used by speakers and hearers to find the meanings which underlie surface utterances".

Halliday and Hasan define two general categories of cohesion: *grammatical cohesion* (substitution, ellipsis, conjunction, reference) and *lexical cohesion*.

3.2.1 Substitution and ellipsis

One type of grammatical cohesion is *substitution*, which takes two forms: a) substitution per se, which is "the replacement of one item by another", and b) ellipsis, in which "the item is replaced by nothing" (Halliday and Hasan 1976:88). There are three types of substitution: nominal, verbal and clausal.

(a) substitution per se, (b) ellipsis (zero-replacement)

Substitution of noun:

- a) These biscuits are stale. Get some fresh ones.
- b) These biscuits are stale. Those are fresh.

Substitution of verb

In English, this is done by replacing a verbal expression with the lexical item "do":

- a) A: Have you called the doctor?
B: I haven't done it yet, but I will do it.
A: Though actually, I think you should do it.
- b) He participated in the debate, but you didn't.

Substitution of clause is accomplished by using the lexical items "so" and "not":

- a) A: Are they still arguing in there?
B: No, it just seems so.
- b) Who wants to go shopping? You?

(Examples are from Renkema 1993:37-38).

3.2.2 Conjunction

Conjunction is a relationship indicating how the subsequent sentence or clause should be linked to the preceding or the following sentence or parts of sentence. This is usually achieved by the use of conjunctions. Frequently occurring relationships are addition, causality and temporality.

The relationship can be hypotactic, combining a main clause with a subordinate clause or phrase, or paratactic, combining two main clauses.

3.2.2.1 Junction

de Beaugrande & Dressler (1981) prefer to call the type of cohesion in question "junction", and discuss four major types of junctive expressions:

conjunction links things which have the same status, e.g. both true in the textual world. Conjunction is the default junction, since, unless specified otherwise, events and situations are combined additively in a text. Thus, there is no motive to place "and", "also", "in addition" etc. between every clause or sentence, but only when interdependency is not obvious and should be stressed (1981:71-72).

disjunction links things which have alternative status, e.g. two things of which only one can be true in the textual world. "Or" is the most common disjunction signal, sometimes expanded to "either/or", "whether/not" etc. Within a sentence, "or" joins alternatives both of which are current in active storage, but only one of which obtains in the textual world. Between sentences, it tends rather to announce an afterthought, an alternative not considered before. When processing disjunctions, text users will have to carry forward both alternatives in active storage until a resolution is at hand, probably making disjunctions difficult to process (1981:71-72).

contrajunction links things having the same status but appearing incongruous or incompatible in the textual world, e.g. a cause and an unanticipated effect. It is signalled by "but" (most often), "however", "yet", "nevertheless", etc. It is the function of contrajunction to ease problematic transitions at points where seemingly improbable combinations of events or situations arise (1981:71-73).

subordination links things when the status of one depends on that of the other, e.g. things true under certain conditions or for certain motives (precondition/event, cause/effect, etc.). It is represented by a large number of conjunctive expressions: "because", "since", "as", "thus", "while", "therefore", etc. Subordinating junctives make explicit

- a) coherence relations, e.g. cause (necessary conditions), reason (rational human reaction);
- b) relations of temporal proximity ("then", "next", "before", "after", "since", "whenever", "while", "during", etc.);
- c) modality, i.e. the probability, possibility, or necessity of events and situations, e.g. "if".

(de Beaugrande & Dressler 1981:71-74).

3.2.3 Reference

Reference is another well researched area within linguistics. It is defined by Halliday & Hasan (1976:31) as a case where the information to be retrieved is the referential meaning, the identity of the particular thing or class of things that is being referred to. The cohesion lies "in the continuity of reference, whereby the same thing enters into the discourse a second time."

In other words, reference deals with semantic relationship. Reference can be accomplished by

- *exophoric reference*, which signals that reference must be made to the context of the situation;
- *endophoric reference*: reference must be made to the text of the discourse itself; it is either anaphoric, referring to preceding text; or cataphoric, referring to text that follows.

Halliday & Hasan (1976) describe the following types of reference:

- personal reference: nouns, pronouns, determiners that refer to the speaker, the addressee, other persons or objects, or an object or unit of text;
- demonstrative reference: determiners or adverbs that refer to locative or temporal proximity or distance, or that are neutral;
- comparative reference: adjectives or verbs expressing a general comparison based on identity, or difference, or express a particular comparison.

When looking closer at our interpreting corpus it is striking how extensively reference is used as a coherence-enhancing device both by speaker and interpreter. Typically, the interpreter has no problems in keeping threads alive even during long and complicated sequences:

Section	Swedish original	Translation of	Finnish interpretation	Translation of	Reference
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No.		original		interpretation	referring to: (section no.)
71	// eeh när ja / läste de här programmet för ert seminarium	// eh when I / read this programme of your seminar	kun / eeh luin tämän seminaarin ohjelman / eeh	when / eh I read the programme of this seminar	Exophoric: programme sheet
72	så / tycker jag att	then / I think	totesin että	I noticed that	
73	där finns många väldigt intressanta / ämnen	there are many very interesting / issues	esillä on lukuisia erittäin mielenkiintoisia aiheita /	at display is a great number of very interesting issues	Anaphoric: programme (71)
74	å å vissa teman som eeh pågår eeh / fortfarande	and and certain themes which are going on / still	ja monet näistä teemoistahan ovat / edelleenkin ajankohtaisia /	and many of these themes are / still of current interest	Anaphoric: issues (73)
75	å (1) som har sin eeh grund och ursprung (2) redan i (3) den litterära situationen	and (1) whose basis and roots go back (2) as far as (3) the literary situation	ja ne (1) perustuvat eeh / (2) sen lisäksi (3) siihen kirjalliseen tilanteeseen	and they (1) are based eh / (2) furthermore (3)on that literary situation	(1) anaphoric: themes (74); (2) (3) cataphoric: literary situation (76)
76	som vi har haft möjlighet att uppleva / eeh	which we have had the opportunity to experience / eh	joka minulla on ollut mahdollisuus kokea	which I have had the opportunity to experience	anaphoric: situation (75)
77	från eeh kanske slutet av av / av sextitalet /	from eh maybe the end of of / of the sixties /	jo kuusikymmentä / luvun loppupuolelta alkaen	starting already at the end of the sixties	
78	och av dessa frågor har jag själv kanske	and of these issues I myself have maybe	ja itse olen / ehkä mitä näihin kysymyksiin tulee	and I myself have / maybe regarding these issues	anaphoric: themes (74) / issues (73)
79	känt / eeh mej närmast anknuten till / eeh frågan / om eeh / den kvinnliga författarens språk	felt / eh mostly connected to / eh the question / about eh / the female author's language	lähinnä ollut kinnostunut kysymyksestä / joka koskee / eeh naiskirjailijan käyttämää kieltä	been mostly interested in the question / which concerns / eh the language used by the female author	cataphoric: female authors' language (79)
80	och dess förhållande till verkligheten /	and its relation to reality /	ja sen suhdetta todellisuuteen /	and its relation to reality	anaphoric: female authors' language (79)
81	kanske just en av orsakerna till den	maybe one of the reasons for the fact that	muuan syy siihen	one reason for the fact that	cataphoric: women are left outside (82)

82	att att kvinnorna så lätt / blir utanför den / dominerande / eeh litterära strömmen /	that that women so easily / are left outside / of the dominating / literary channel /	että naiset niin mielellään eeh jäävät ulkopuolisiksi / eivätkä siis kuulu kirjallisuuden valtavirtauksiin /	women so easily eh are left as outsiders / and in other words do not belong to the main channel of literature	cataphoric: (reiteration of rheme)
83	beror på konflikten mellan språket och eeh verkligheten /	depends on the conflict between language and eh reality /	ehkä johtuu tuosta ristiriidista joka vallitsee kielen ja todellisuuden välillä /	maybe is due to that conflict going on between language and reality	cataphoric: conflict (83); possibly anaphoric: relation (80)
84	och här får vi säkert under dessa dagar eeh / få många eeh belysningar	and here surely we will during these days eh / get many illuminations	ja näitten päivien aikana varmaan / voimme / saada paljonkin lisätietoa ja /	and during these days surely / we can / get a lot of additional information and /	exophoric: conference
85	å också kanske många eeh / problematiseringar	and also maybe many / eh problematisations	eeh / voidaan todeta myöskin millaisia ongelmat ovat	eh / we may notice also what the problems are like	
86	(1) som ser de här frågan å (2) de här konflikten i ett från ett nytt eeh / perspektiv /	(1) which see this issue and (2) this conflict in a from a new eh / perspective	ja (1) niitä / voitaneen tarkastella täällä uudelta kannalta /	and we may be able to study (1) them from a new angle	(1) (2) anaphoric: problematisations / problems (85); (2) also cataphoric: conflict (reiteration)

References in **bold print**

Figure 3 -1 References in interpreted speech

3.2.4 Lexical cohesion

Lexical cohesion does not deal with grammatical or semantic connections but with connections based on the words used. It is achieved by selection of vocabulary, using semantically close items. Because lexical cohesion in itself carries no indication whether it is functioning cohesively or not, it always requires reference to the text, to some other lexical item to be interpreted correctly. There are two types of lexical cohesion: reiteration and collocation.

Reiteration includes (examples below are from Renkema 1993)

repetition (often involving reference)

A conference will be held on national environmental policy. At this conference the issue of salination will play an important role.

synonymy (often involving reference)

A conference will be held on national environmental policy. This environmental symposium will be primarily a conference dealing with water.

hyponymy (superordinate vs. subordinate concepts)

We were in town today shopping for furniture. We saw a lovely table.

metonymy (part vs. whole)

At its six-month check-up, the brakes had to be repaired. In general, however, the car was in good condition.

antonymy

The old movies just don't do it anymore. The new ones are more appealing.

Lahdenmäki (1989) calls these relations "(direct) synonym-type relations, since they all refer to another word which has the same referent (e.g. 'I met a man yesterday. The bastard stole all my money')".

Collocation is any pair of lexical items that stand to each other in some recognisable lexico-semantic relation, e.g. "sheep" and "wool", "congress" and "politician", and "college" and "study".

Red Cross helicopters were in the air continuously. The blood bank will soon be desperately in need of donors.

The hedgehog scurried across the road. Its speed surprised me.

(Examples above from Renkema 1993.)

Like in the case of synonymous reference, collocational relation exists without any explicit reference to another item, but now the nature of relation is different: it is indirect, more difficult to define and based on associations in the reader's mind (e.g. 'I looked into the room. The ceiling was very high.'). Interpretation of such relations is completely based on the knowledge of subject fields (Lahdenmäki 1989).

3.2.5 Lexical cohesion in interpreting

The interpreter sometimes "adds" coherence to the text by adding cohesion markers. In the following example where the referent is a book, the speaker uses an anaphoric pronoun to refer to it in the second clause while the interpreter chooses to add a synonym:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
vi har ju ha _ fått i finland / just i samband med eeh med den stora nordiska / kvinnolitteraturhistorieforskningen / en tjock / bok om eeh finska eeh kvinnliga eeh förfa_ författare och där / ser man å? mycket klart / den eeh / utvecklingen	in finland we have just received in connection with the large nordic research on women's literature a thick book about eh finnish eh female eh autho_ authors and there / you can see very clearly this development	suomessahan me olemme juuri / suuren pohjoismaisen eeh / kirjallisuudentutkimusprojektin eeh yhteydessä / laajan kirjan jossa käsitellään / naiskirjailijoita / ja eeh / tuosta teoksesta / voi hyvin selvästi havaita millainen kehitys on ollut /	in finland we have just received in connection with the large nordic literary research project / a comprehensive book dealing with / female authors / and eh / in that work / you can clearly see what the development has been like /

Figure 3 - 2 Addition of synonym (repetition of concept)

3.2.6 Cohesion vs. coherence

The term "cohesion" is often confused or conflated with "coherence". But it is necessary, both from a theoretical and a practical point of view to retain this distinction between connectivity on the surface and connectivity of underlying content. [4]

The term coherence, apart from being polysemic, is also controversial. While de Beaugrande & Dressler (1981) treat coherence as number two of the two text-centred standards, Carstens (1997), in his thorough work on Afrikaans text-linguistics, takes up coherence as the last standard of textuality, as coherence in his opinion entails all of the other six standards. According to Lundquist (1989:123; cited in Carstens 1997) coherence is not a typical linguistic problem, but a general principle for the interpretation of all human activity, verbal or non-verbal. Neither is coherence a property which is inherent in texts, but rather a property which is assigned to a text by its reader. To put it differently: texts are not automatically coherent, but become coherent when the recipients of the texts find them coherent (Carstens 1997:481-482).

Lahdenmäki (1989) underlines, that coherence is a purely semantic property of discourse, while cohesion is mainly concerned with morpho-syntactic devices in discourse. A coherent text is a semantically connected, integrated whole, expressing relations of closeness, e.g., causality, time, or location between its concepts and sentences. A condition on this continuity of sense is that the connected concepts are also related in the real world, and that the reader identifies the relations. Each sentence must also "satisfy" the text topic (van Dijk 1977:138) which "controls" or places limits upon things a concept can be related to (de Beaugrande 1987). Therefore, if two concepts are logically and associatively too distant in semantic space, they cannot function coherently, even if they were connected in the surface text by overt cohesion markers, e.g. connectives. Instead, in a coherent text, there are direct and indirect semantic referential links between lexical items in and between sentences, which the reader must interpret (Lahdenmäki 1989:27).

In the present study we are not primarily interested in whether or not coherence is a purely text-centred standard of textuality. But from a communicative point of view - because interpreters are paid to communicate! - a text must be coherent enough for the interlocutor to be able to interpret. It seems probable that this coherence can be achieved either through cohesion, i.e. markers/clues in the speakers' text, or through the employment of the "user-centred" textuality standards of intentionality, acceptability, informativity, situationality and intertextuality.

3.2.7 The importance of text structure

To sum up this section, it is interesting to quote the following point made by van Dijk & Kintsch (1983):

"On full analysis there are probably few surface structure items that are not produced in order to signal a semantic, pragmatic, cognitive, social, rhetorical, or stylistic function. Thus, at this level, little is left of the old Saussurian arbitrariness in the relations between expressions (signifiers) and their meanings (signifieds)." "Nearly all underlying (semantic, pragmatic, etc.) information can be mapped onto surface structures and parallel paratextual action." ... (Dijk & Kintsch 1983:285)

But the relation between surface structures and their semantic, pragmatic, or interactional functions on the one hand, and their relevance for production on the other, cannot be too strict:

"Some languages have quite varied surface structures, and it remains to be seen whether this will always directly presuppose different comprehension and production strategies." ... "Further work regarding these relationships between the (functional) structures of sentences in different languages and their cognitive processing is necessary — especially taking into account the textual relevance of these functions." (Dijk & Kintsch 1983:285)

3.3 Textuality and

de Beaugrande & Dressler's standards of textuality have been used as a basis for theoretical work by, e.g., Hildegund Bühler (1990).

Bühler discusses some characteristic features of orality or speech as contrasted to literacy or writing in the context of translation studies. She also relies heavily on the seven standards of textuality accounted for by de Beaugrande & Dressler (1981) as a theoretical framework for her discussion.

simultaneous interpreting

Referring to Halliday (1986:78), Bühler sees the issue from three interrelated aspects: the nature of the medium, the functions served, and the formal properties displayed.

The most striking formal difference between written and spoken language is the density with which the information is presented: lexical density is generally supposed to be about twice as high in written language as in speech. There is also a higher degree of redundancy in spoken language (cf. Chernov 1985). Speech is dynamic, it is impromptu and tentative, and can be rapidly adjusted as context changes (cf. section 7.1.3 on Chernov's "probability prediction mechanism".) Speech is furthermore characterised by brief silences, filled and unfilled pauses, hesitation, false starts, repetitions, and parenthetical remarks. In contrast, written language is "static, follows close-knit syntactic structures and develops an elaborate grammar" (Bühler 1990:537-538; cf. Halliday's (1987) critique of this widely held opinion, see section 3.4).

Cf. Ong (1982:32; cited in Garcia-Landa 1985:188):

"Written discourse develops more elaborate and fixed grammar than oral discourse does because to provide meaning it is more dependent simply upon linguistic structure, since it lacks the normal full existential contexts that surround oral discourse and help determine meaning in oral discourse somewhat independently of grammar."

The different formal properties of spoken and written language are inherent in a text in whatever form it is actually presented to us. Speeches presented at conferences range from unprepared oral texts to the reading of meticulously prepared written texts. Since conference interpreting itself by its nature is an oral activity, there will be clashes between its features and the features of orally presented written texts (Bühler 1990:538). But features of impromptu speech will always be present in the final product of interpretation, and it cannot have all the features of the written original (Kopczin'sky 1982:259 f.). Bühler stresses that too little attention has so far been given, in the context of interpreting, to the textual standard of intertextuality, which is responsible for the evolution of text types. A typology of text types in interpretation would be helpful for interpreters and also for interpretation teaching. This has also been suggested by Alexieva (1985); see section 4.4.1.

As for the nature of the medium, a written text is presented synoptically, spread out on the page, whereas when you listen to speech, the text is presented dynamically, it happens, as waves travel through the air. This "evanescence" of the spoken text is an important basis of the theory of interpreting put forward by Seleskovitch and others (Bühler 1990:358-359; cf. section 2.2 above). In this theory, it is assumed that the spoken original is retained in short-term memory for only a few seconds, leaving non-linguistic memory traces, from which the target text is reformulated. Mere substitution or transfer of lexical items is done only of proper names, numbers, and standardised technical language. The theoretical model thus shows a three-phase process, including a phase of analysis and a phase of restructuring, with an "interlingua" phase in-between. Since speech production has a rhythmic character, where periods of hesitancy alternate with periods of fluency - following cycles of planning and production of speech - interpreters, following this rhythm as they go along with the speaker, can discern sense units that may serve as translation units. In addition to verbal cues, interpreters will therefore be aware of non-verbal (often subsumed loosely under the heading of paralinguistic phenomena, such as voice quality, pitch, loudness, and timing), and non-vocal (i.e. visual) signs, which are highly relevant for the understanding of the spoken texts (Bühler 1990:539-540).

3.3.1 Cohesion in spoken texts

While textual cohesion in written texts rests upon syntactic surface structures, for spoken texts a number of other cohesive systems are available: rhythm, intonation and stress, degrees of loudness, timbre, pausing and phrasing.

David Brazil (1975), cited in de Beaugrande & Dressler (1981), has described intonation in whole texts or in texts within discourses. Brazil connects intonation with the kind of discourse actions involved. (An action is an intentional act which changes a situation in a way that would not have happened otherwise; a discourse action would then be reflected in the changes it effects upon the situation and the various states of the participants: knowledge state, social state, emotional state, etc.) (de Beaugrande & Dressler 1981:123).

Discourse actions involved are: invoking ("referring"): when the speaker presents predominantly known or expected material; informing ("proclaiming"): when the speaker presents predominantly new, unexpected, corrective, or contrastive material. There is also a neutral option when neither action applies. Brazil gives a detailed account of tones used in English for each of the above purposes. This basic scheme is combined with a differentiation of keys, i.e. whether the pitch used is considered normal for the circumstance, or if it is above or below the norm.

3.3.2 Intonation in interpreting

Miriam Shlesinger (1994) has made a twofold experiment designed at isolating the salient features of intonation in interpretation as a distinct mode of language use; and to examine the cumulative effect on these features on how well a text is perceived in terms of comprehension and recall. The results indicate that pauses within grammatical structures are the most salient feature of tonality in interpretation: interpreters are prone to introduce a disproportionate number of pauses in "unnatural" positions, liable to impede understanding. As for clause and sentence boundaries, the interpreted passages generally included pauses at sentence boundaries, but they tended to be tentative rather than final. Since tentative pauses usually serve a parenthetical function and correlate with an attitude of uncertainty, the cumulative pragmatic effect is bound to be altered (Shlesinger 1994:229).

Other frequent observations in the study include: anomalous tonicity, leading to misperceptions of new vs. given information; the use of nonfinal pitch movement in positions where a final one would be expected, likely to impede comprehension; unnatural placement of tone, impeding inferencing and disambiguation; and non-standard alterations of speed, liable to encumber comprehension in various ways. The level of listener comprehension and recall was found to be lower in subjects who listened to interpreted texts than in those who listened to the same texts read aloud by the same speakers (Shlesinger 1994:233).

According to Williams (1995), anomalous stress may be a result of automatic mechanisms beyond the interpreter's conscious control. In her study, Williams found that the anomalous stress produced by the interpreter while interpreting the previous message was immediately preceded by salient stress in the input that the interpreter was listening to. Thus it seemed as though the interpreter reacted to a stressed word in the speaker's "new" sentence by inadvertently producing salient stress while still producing the "old" sentence. One explanation to this phenomenon may be found in the tendency, in certain circumstances, to adapt one's own pitch to that of the interlocutor ("F0 mirroring"). Another explanation may be perceptual mixing of the speaker's prosody and the interpreter's own prosody ("proprioceptive audial control").

3.4 Oral and written language - Halliday's critique

Halliday (1987) criticises the generally held idea that spoken discourse is a "disorganised array of featureless fragments". We are told that speech is "marked by hesitations, false starts, anacolutha, slips and trips of the tongue, and a formidable paraphernalia of so called performance errors; these are regularly, more or less ritually, cited as its main distinguishing feature." (Halliday 1987: 68; cf. Linell's classic (1982) on the "written language bias" in linguistic research). Halliday acknowledges that these things occur, although less often than we think. But what is described here are characteristics of the rather self-conscious, closely self-monitored speech that takes place in, e.g., academic seminars: if you consciously plan and monitor your speech as it goes along, you will naturally tend to lose your way, and to hesitate, back up, cross out and stumble over the words, etc. But spontaneous discourse is not like that - it tends to be fluent, highly organised and grammatically well formed. Spontaneous discourse is also typically more regular in its patterns of rhythm.

The myth of the "scrappiness" of speech may have its origin in two factors: the kind of discourse that was first recorded, and the misleading conventions used for its presentation. When you speak, you cannot destroy your earlier drafts, as you do when writing. Halliday points out that if we were to represent written language in a way that is comparable to the conventional way spoken language is represented, then we should include in the text "every preliminary scrap of manuscript or typescript, with all the crossings out, misspellings, redraftings and periods of silent thought; this would then tell us what the writer actually wrote." (Halliday 1987:69). For other than, e.g., educational and clinical purposes, the discarded first attempts are just trivial, they clutter up the text, make it hard to read, and give it an air of quaintness. Even more serious is that this kind of transcription gives a false account of what it is really like.

The lexical density is the proportion of lexical items (content words) to the total discourse. Halliday (1987) has analysed lexical density in written and spoken texts with two measures: the number of lexical items (1) as a proportion of the number of running words, and (2) as a proportion of the number

of clauses. He concludes that lexical density in written texts increases not because the number of lexical items goes up but because the number of non-lexical items — grammatical words — goes down, and the number of clauses goes down even more. But only to say that spoken discourse has more words and clauses in it does not say anything very significant about spoken texts. When looking at how the words and clauses are organised in samples of written and spoken text, Halliday found that the sentence structure of spoken texts is more complex than the written one. Thus, the spoken text has a lower degree of lexical density, but a higher degree of grammatical intricacy. One sample text consisted of 13 clauses. However, these clauses were not strung out end to end, but constructed into a small number of clause complexes of mixed paratactic and hypotactic construction. A typical pattern is one in which both these kinds of interdependency between clauses occur, with frequent alternation both between parataxis and hypotaxis and also among their various subcategories.

"The more natural, un-self-monitored the discourse, the more intricate the grammatical patterns that can be woven. Usually, this kind of discourse will be spoken, because writing is in essence a more conscious process than speaking. But there are self-conscious modes of speech, whose output resembles what we think of as written language, and there is relatively spontaneous kinds of writing; spoken and written discourse are the outward forms that are typically associated with the critical variable, which is that of consciousness. We can use the terms spoken and written language, to refer to the idealised types defined by that variable." (Halliday 1987:66).

Thus, spoken language tends to accommodate more clauses into the syntagm (to favour grammatical intricacy), with fewer lexical items in the clause. Written language tends to accommodate more lexical items in the clause (to favour greater lexical density), with fewer clauses in the syntagm. But this does not mean that the average number of clauses per clause complex will be greater in spoken language - it would be better to say that the greater the intricacy of a clause complex the more likely it is to be a product of spontaneous speech. (Halliday 1987:71).

3.4.1 The oral-literate continuum in simultaneous interpreting

Shlesinger (1990) has explored shifts in the position of a target text along the oral-literate continuum, relative to that of its source, as a result of simultaneous interpreting. The position of a text on the oral-literate continuum is a function of the combined effect of various textual features. The five most salient parameters of textual orality are the degree of planning, shared context and situational knowledge, lexis, degree of involvement, and the role of nonverbal features.

The long-term aim of Shlesinger's study was to test hypotheses concerning the equalising effect of simultaneous translation on the position of a text on the oral-literate continuum by analysing several texts simultaneously interpreted from Hebrew to English by native English speakers. According to Shlesinger, the applicability of the oral-literate continuum to interpretation research is encumbered by limited previous experience in its use with languages other than (American) English and overlooking the interpreter as the addressee of spoken discourse.

3.5 Impromptu speech

Enkvist (1982) has introduced the term "impromptu speech" which he defines in the following way:

"...there are certain types of situations which call for rapid processing of spoken discourse, whether literally in real time or in small batches, and ... the needs of such processing are then reflected in the macrostructure and microstructure of the resulting texts. Such texts will be called 'impromptu'."

Enkvist mentions the conference paper as a common text type whose metamorphoses run from script through speech back to script: the author has written his paper to be read at a meeting, but is also, and perhaps primarily, thinking of its ultimate publication after the conference. There is a scale from completely unscripted speech to fully scripted speech, and we must decide what part of this scale we accept as "impromptu".

But "unscripted" does not necessarily mean "unprepared" or "unplanned". An unscripted text may very well have been meticulously worked out in advance, cf. political speeches.

Enkvist points out the importance of "planning-spans" in the preparation of texts. A text has a long planning span if it can be planned in advance and produced according to plan and without interference. Lectures^[5] can often be planned, and so can dialogues in which the planner remains in control,

e.g. as cross-examiner, interviewer, etc. Socially inferior or respondent members of unscripted dialogue on the contrary cannot control the dialogue enough for proper planning. They must adjust to whatever comes (Lehtonen 1982).

Lehtonen (1982) gives a classification of speaking types in terms of the immediacy of planning: a speech may be impromptu, i.e. delivered spontaneously without prior preparation; extemporaneous, i.e. planned in advance but presented freely; memorised, i.e. carefully prepared, committed to memory, and read by rote; or it may be a manuscript delivery, i.e. a speech read from a written manuscript.

In impromptu speech, both verbal and nonverbal choices made by the speaker are spontaneous, not planned as they might be, to some extent, in non-impromptu speech. In general, the importance of the nonverbal channel depends on the function of the discourse, which also determines the communication style. More informative discourse depends more on the linguistic code, while emphasis on the social and expressive function of the communication means greater dependence on the nonverbal (Lehtonen 1982).



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4 Text typology

4.1 Intertextuality and text types

Intertextuality as a standard of textuality concerns "the ways in which the production and reception of a given text depend upon the participants' knowledge of other texts" (de Beaugrande & Dressler 1981:182). According to Bell (1991:170-171) intertextuality refers to "the relationship between a particular text and other texts which share characteristics with it; the factors which allow text-processors to recognise, in a new text, features of other texts they have encountered". Neubert & Shreve (1992:120) see intertextuality as related to the notion of text type, and intertextual distinctions are "first-order text-typological distinctions":

Intertextuality is based on what the text user, not the analyst, expects to see in the text. (...) Intertextuality allows readers to identify scientific texts and poems as different types of texts. Their experience with previous instances of these two kinds of texts has taught them to look for different linguistic markers.

A text typology along functional lines could include descriptive, narrative, and argumentative texts (de Beaugrande & Dressler 1981:1). The characteristics of argumentative texts in translation have been discussed by Tirkkonen-Condit (1985; 1986), see section [5.2.1](#).

The following table, compiled on the basis of Reiss' description (Reiss 1976:97-100) shows some of the most well-known "classical" text typologies, based on Karl Bühler's tripartite model of the functions of linguistic signs. Reiss' own typology will be described in more detail in section [4.2](#) below.

Bühler functions of linguistic signs	Stiehler types of human cognition	Coseriu language forms	Reiss text types
informative (Darstellung)	thinking, perceiving	descriptive, declarative, informative	informative
expressive (Ausdruck)	feeling	expressive, affective, emotive	expressive
vocative (Appell)	willing	vocative, imperative	operative

Figure 4 -1 Text typologies (after Reiss 1976)

4.1.1 Text types and translation quality

According to Reiss (1976), the assessment of a translation requires that in the first place one must determine the kind of text the original represents (in term of text type and text variety); the translator's conception of the translation (to be inferred from his manner of translating, and perhaps also explicitly stated in a translator's preface); and the aim of the translated text. Only when these factors have become established is one in a position to judge a translation "fairly", in accordance with the appropriate criteria. (Reiss 1976:97-100.)

Text concept	Translation type	Translation aim
Text = sum of words	word-for-word translation (interlinear)	comparative linguistic research
Text = sum of sentences	literal translation (grammar translation)	foreign language learning
Text = basic linguistic sign	learned translation (deliberately marked + commentary)	study of culture-bound language differences
Text = verbal component of a communication process (text-with-a-function)	communicative translation a) normal case b) special subtype	a) integral communicative performance b) all kinds of changes of function

Figure 4-2 Typology of translation (Reiss 1976)

4.2 Katharina Reiss' text typology

In order to set up a text typology relevant to translation, Reiss (1976) begins with the basic communicative situations in which texts fulfil quite specific and distinct communicative functions. A tripartite aspect of language, based on Karl Bühler's terms *Darstellung*, *Ausdruck*, *Appell*, (Bühler 1934) suggests a similar division of basic verbal communicative situations with three corresponding text types:

Informative

Plain communication of facts (news, knowledge, information, arguments, opinions, feelings, judgements, intentions etc..) where the topic is in the foreground of the communicative intention. This includes phatic communication, the actual information value of which is zero, and the message is the communication process itself .

The dominant form of language is functional language.

The text is structured primarily on the semantic-syntactic level.

Expressive

Creative composition, an artistic shaping of the context. The sender is in the foreground. The author creates his topics himself, consciously exploits the expressive and associative possibilities of the language in order to communicate his thoughts in an artistic, creative way.

The text is doubly structured: first on the syntactic-semantic level, and on the level of artistic organisation.

In addition to this linguistic function, an expressive text must also fulfil an artistic function.

Operative

Text inducing behavioural responses, as stimuli to action or reaction on the part of the reader. The form of verbalisation is mainly determined by the addressed receiver of the text.

The text is doubly or triply structured: on the semantic-structural level, on the level of persuasion, and sometimes but not necessarily, on the level of artistic organisation.

An operative text must fulfil both a linguistic and a psychological function.

4.3 Typologies of texts in simultaneous interpreting situations

4.3.1 Kopczyn'ski (1980)

In the conference situation there is a variety of texts ranging from completely unprepared oral spontaneous speech to the reading of a prepared written text. Some of the typical input texts are:

1. unprepared oral monologue or dialogue (e.g. a toast, an exposé, free discussion);
2. semi-prepared oral monologue with notes (e.g. a lecture, a paper);
3. a written monologue intended for oral delivery — reading thereof (e.g. a lecture, a paper, a report, a speech);
4. a written monologue intended for written medium — reading thereof (e.g. a final communiqué, a resolution, a draft document, etc.),

Of those four types, type 3 is probably the most common.

According to Kopczyn'ski (1980), it is reasonable to assume that the output text produced by the interpreter has the form of extemporaneous speech.

Since the interpreter is an indirect source in the communication chain, his performance is not completely "spontaneous" in the sense of "unprepared, unplanned", because the interpreter follows the speaker's primary source text. The interpreter's output text is extemporaneous meaning "produced on the basis of a previously unknown text."

Kopczyn'ski (1980) assumes previous knowledge by the interpreter of the field of discourse of the translated texts including terminology, the topic of the conference, etc. By an "unknown text" is then meant concrete textual realisations of a previously known field of discourse.

Extemporaneous speech in this sense probably has most of the features of spontaneous oral speech (Kopczyn'ski 1982).

In terms of difference between written and spoken subcodes, and conceiving of translation in its broad, semiotic sense, Kopczyn'ski (1980) distinguishes the following translational processes when the simultaneous interpreter deals with the text types defined above:

Type 1, unprepared oral monologue or dialogue:

spoken subcode L1 --> spoken subcode L2

Type 2, semi-prepared oral monologue with notes:

spoken subcode L1 --> spoken subcode L2

Type 3, written monologue intended for oral delivery:

written subcode L1 --> spoken subcode INT (intersemiotic translation) --> spoken subcode L2

Type 4, written monologue intended for written medium:

written subcode L1 --> spoken subcode INT --> spoken subcode L2

In consecutive interpreting, where translation goes through the stage of note-taking, the process is even more complex:

Types 1 and 2. spoken subcode L1 --> graphic medium INT --> spoken subcode L2

Types 3 and 4. spoken subcode L1 --> graphic medium INT --> spoken subcode INT --> spoken subcode L2.

4.3.2 Niedzielski (1988)

Niedzielski (1988) has developed a typology of simultaneous interpreting, inspired by the characteristics of texts in conference interpreting described by Kopczyn'ski (1980). He relies on de Beaugrande's and Dressler's (1981) standards of textuality as a theoretical basis. To their seven standards, Niedzielski adds an eighth one, density of information (densité d'information). This is defined as the mathematical product of the length of the discourse, its semantic density, its morphosyntactic complexity, its acoustic clarity, and its speed of delivery (Niedzielski 1988:492-495).

Niedzielski distinguishes seven types of texts in simultaneous interpreting among the two main text types: "oral texts" which are not written, and

"written texts" that are written, read-aloud texts.

Oral texts:

Impromptu monologue

Prepared, not edited monologue

Partially prepared dialogue

Prepared and partially edited monologue

Monologues learnt by heart and recited

Recorded texts

Written texts:

Edited and recited monologue

Edited and read-aloud text

In simultaneous interpreting, text delivery spans from impromptu speech to the reading aloud of written documents. Niedzielski points out an interesting paradox in the fact that the interpreter tends to adopt a more "conversational" style when interpreting a speaker who reads his text, while he tends to "edit" a more spontaneous, spoken utterance. According to Niedzielski, this is apparently due to the perceived role of the interpreter as a conveyor of the intended meaning of the speaker. The interpreter thus has to make the text easy to understand for the listener, i.e. increase the acceptability in terms of textuality.

Another explanation could be that the interpreter, in the more or less "anonymous" conference interpreting situation, is trying to find some kind of perceived "middle norm" in his output — much in the same way as often has been described in the context of written translation.^[6] An illustration in our corpus of this "acceptability for all" principle can be found in section [6.1.2.4](#).

A third explanation for the "conversational" style of the interpreter has been suggested by Stolz (1992): the interpreter is actually talking freely and is therefore bound to be more redundant than the speaker. This is because in the interpreter's utterance additional unconscious redundancy is added to the conscious one (produced by the speaker and uttered by the interpreter). In order to avoid processual overload the interpreter often has to start to formulate an utterance before he knows the whole thought and can only guess the general intention of the speaker. If the following input does not contain information that the interpreter had anticipated and the interpreter has capacity to go back and deliver the corrected information, he will by necessity be more redundant (Stolz 1992:152).

According to the same principle of alleviating cognitive stress then, some of the redundancy in the speech flow of the "spontaneous" speaker can be reduced by the interpreter. This "compressing" by interpreters is described by Chernov (cf. section [7.1.2](#)).

In the following speech sample from our corpus, all of the latter (Finnish) part is strictly speaking redundant as it only refers to what the speaker has already stated in the initial utterance in Swedish. This reiteration by the speaker marks that she is now starting a new section, hence it is of course necessary to interpret, but some of the redundancy can be taken away without any negative consequence.

Section no.	Original	Translation of original	Interpretation	Translation of interpretation
102	i detta sammanhang har ja / haft lite att göra me operaforskning	in this connection I have had / some contacts with opera research	tässä yhteydessä olen jossain määrin joutunut tekemisiin oopperatutkimuksen kanssa	In this connection I have to some extent been in contact with opera research /
103	och ja tänker nu byta språk	and I am now going to change language	/ aion nyt seuraavaksi vaihtaa kieltä /	I am now next going to change language
104	eftersom de här forskningsprojektet går på finska	since this research project is carried out in finnish	koska projekti on suomenkielinen /	since the project is in the finnish language

108	olen todella	like I said I have	ja har alltså	I have as I said
109	<i>viime aikoina</i>	<i>recently</i>		
110	joutunu omassa tutkimuksessani	had the chance in my own research	i mitt forskning /	in my research
111	<i>aika paljon</i>	<i>quite a lot</i>		
112	perehtymään suomalaiseen oopperaan	to get to know finnish opera	kommit in i den finska operan	got into finnish opera
113	ja sen usimpiin teoksiin (SN)	and its newest works	å di nyaste verken /	and the newest works

Italics: deletion

Figure 4-3 Economical interpreting (compression)

4.4 The relevance of text

Gentile (1988:483) suggests further research on text typology based on textuality standards:

(...) it may be fruitful to proceed (...) with research on a typology based on textuality standards as outlined by Beaugrande and Dressler (1981), especially those standards which relate more to the receptor than to the text itself and precisely those of acceptability,

typology to interpreting

4.4.1 Alexieva's semantic model as a tool for establishing text types

informativity, situationality and intertextuality.

The development of an adequate text typology for interpreting is important for educational purposes in the training of interpreters, as well as the theoretical development within interpreting research. The following approaches could be part of the basis for such an endeavour.

In her work with developing tools for the study of simultaneous interpreting, Alexieva has presented a model for the analysis of the deep structure of interpreted texts. The model is built up around a three-tier system of semantic units:

- a) Semantic features (components) as the minimal differentiating factors;
- b) Clusters of semantic features, subdivided further into arguments, relatable to the semantic category of object, and predicates, relatable to the semantic category of event;
- c) Predications: a predication is a two-term semantic category of a propositional nature, consisting of a predicate and argument(s).

Within this framework, the meaning of an utterance, as the basic unit of speech, can be represented as a set of predications (Deep Semantic Structure). (For details of the model, see Alexieva 1985:195.)

The result of this predication analysis can help to find out the major predications of a text (micro-text) or an aggregate of texts (the macro-text) delivered at a conference; and to establish the types of semantic relationship between the micro-texts of a conference. This in turn helps us to build a typology of the texts delivered at a conference, and more particularly, their thematic progression, which is especially important for the operation of the probability prediction mechanism on the semantic level (Alexieva 1985:196-197; 1994; cf. Chernov, section [7.1](#)).

4.4.2 Suggestions for a hierarchical text typology for interpreting

According to Heinemann & Viehweger (1991), there is now a far-reaching consensus about the difference between text categories and text classes ("Textsorten" and "Textklassen"; i.e. text-externally definable 'genres') on the one hand and text typology ("Texttypologie") on the other.

The former concepts refer to the empirical classification of texts that are being used in various communicative situations and for various needs in human societies. This means that text categories and text classes (genres) are historically and socially determined and prone to change according to circumstance (cf. Bhatia 1993; Swales 1990).

Text typology, on the other hand, is the theoretical categorisation of texts into different types according to certain characteristics. Heinemann & Viehweger (1991) develop a hierarchical, multilevel typology for the classification of text types, the main levels being:

I Function types

II Situation types

III Action types

IV Text structure types

V Prototypical formulation patterns

Along those lines, I suggest that a text typology for interpreting would have to take into account the following factors:

- a) the discourse function, i.e. whether the text is, in Reiss' terms, see section [4.2](#), informative, expressive, operative (argumentative, persuasive) or phatic;
- b) situation types, i.e. the setting, e.g. type of institution where interpreting is conducted; the number of parties involved in the interaction and their roles in society, purpose of interaction etc.;
- c) type of action that the situation demands, i.e. choosing the (appropriate) genre or in Foucault's terms, the text produced within a "fellowship of discourse"; cf. Swales 1990;
- d) textual strategy types, i.e. macrostructure, rhetorical types and "aesthetic" features; etc. that the genre requires;
- e) prototypical formulation matrices, i.e. conventional phrases, conventions for interaction, e.g. politeness, etc.



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5 Text linguistic models

5.1 The Kintsch and van Dijk model for discourse processing

In 1978, Walter Kintsch and Teun van Dijk launched a theoretical framework for the study of the ability of language users to partially reproduce and summarise previously acquired information from discourse. This theory has subsequently evolved into a dynamic, process-oriented, "strategic" model of discourse comprehension and production (van Dijk & Kintsch 1983).

The theory presented in 1978 consists of several sub-theories (van Dijk & Kintsch 1978:67):

(i) a theory of discourse, consisting of

a) a grammar of discourse, with at least

a theory of semantic representations (propositions) for sentences and sequences of sentences (micro-structure);

a theory of semantic representations for global discourse structures (macro-structures);

a theory relating micro-structures with macro-structures.

b) a more general theory of (non-linguistic) discourse structures, with specific theories for different kind of discourse

(ii) a theory or model of discourse structure processing, in particular of semantic information, i.e. for comprehension/interpretation, storage in memory, memory transformations, retrieval, and (re-)production and use/application.

(iii) a more general theory for complex cognitive information processing, in which the ability to process discourse is related to our ability to perceive/interpret and memorise complex events and actions after visual input, and to plan or organise and execute complex actions, both bodily and mental (reasoning, problem solving).

The semantic structure of discourse is the formal reconstruction of the "information" or "content" of a discourse (van Dijk & Kintsch 1978:67). At the micro-level the semantics assigns sequences of propositions to the sequence of sentences of the discourse. Propositions combine in compound propositions and sequences of propositions, which are parities connected. Connection conditions are based on relations between facts and relative to a topic of discourse (van Dijk 1977). Connection is thus a specific kind of coherence, defined over sequences of propositions, not only in terms of relations between facts and relative to a topic of discourse, but also in terms of intensional and extensional relations between "parts" of propositions (quantifiers, predicates, arguments, etc.) (van Dijk & Kintsch 1978:68).

The set of factors (knowledge, beliefs, opinions, wishes, attitudes, or tasks) that in a particular context of action or discourse processing influences macrostructures is called the cognitive set of a language user or participant (van Dijk 1980).

The theory distinguishes between an implicit and an explicit text base underlying discourse. The first one is the one actually expressed in discourse, whereas the latter is a theoretical construction, containing also those postulated propositions which are necessary to establish coherence. These interpolated propositions are those which are "presupposed" by the propositions actually expressed in the discourse.

According to the Kintsch and van Dijk model, the surface structure of a discourse is interpreted as a set of micropropositions. Some of the propositions are present in the surface structure and the others are inferred on the basis of prior knowledge, stored in long-term memory. The micropropositions are then processed by the working memory in order to establish coherence with the propositions already stored in short-term memory, i.e. the previous segment that has been processed. Short-term memory acts as a buffer while the working memory searches for argument overlap between incoming propositions are those already stored. If there is no overlap, the working memory searches long-term memory. If an overlap is established, directly or through inferencing, the proposition in working memory enters short-term memory.

The global meaning of a discourse is represented by semantic macrostructures. Since these will be represented as propositions, semantic mappings, called macrorules are used to relate microstructures with macrostructures. Their function is to reduce and organise information, i.e. they delete and combine sequences of propositions. Macrorules are entailed by the sequence of propositions in the discourse, and due to this recursive nature, macrorules generate not only one, but several macro-structures at increasingly more global levels of semantic representation. No proposition may be deleted which is a presupposition for a subsequent (macro)proposition in the discourse.

Microstructures are processed into macrostructures by application of the following macrorules (Kintsch & van Dijk 1978; Renkema 1993):

Macrorule 1: Deletion

Of a sequence of propositions we may delete all those denoting an accidental property of a discourse referent (NB the general constraint: if not necessary for the interpretation of following propositions).

(1) A girl in a yellow dress passed by.

1. A girl passed by.

2. She was wearing a dress.

3. The dress was yellow.

Propositions 2. and 3. can be eliminated. Actually, the deletion rule can be used reversely, as a selection rule for those propositions that are necessary for the interpretation of other propositions:

(2) John is sick today. He will not be going to the meeting.

The microproposition "John is sick" is relevant for the interpretation of the following sentence. But if the theme of John's illness is not continued, then this proposition is irrelevant at the macrolevel and can be deleted.

Macrorule 2: Generalisation

Of a sequence of propositions we may substitute any subsequence by a proposition defining the immediate superconcept of the micropropositions.

(3) Mary was drawing a picture. Sally was jumping rope and Daniel was building something with Lego blocks.

1. The children were playing.

Specific predicates and arguments in a series of propositions are replaced by more general terms so that one proposition suffices.

Macrorule 3: Construction

Of a sequence of propositions we may substitute each subsequence by a proposition if they denote normal conditions, components or consequences of the macroproposition substituting them.

(4) John went to the station. He bought a ticket, started running when he saw what time it was and was forced to conclude that his watch was wrong when he reached the platform.

1. John missed the train.

Note that neither "train" nor "missed" are mentioned in (4). The proposition is constructed on the basis of general knowledge.

In Macro-rules 1 and 2 the information is irrecoverably lost. In rule 3 information is partly recoverable, inductively, by general knowledge of postulates and frame knowledge concerning normal conditions, components and consequences.

Superstructures are conventional schemas which provide the global form for the macrostructural content of discourse. In other words, macrostructures deal with the content and superstructure with the form. Renkema (1993) points out that the discourse form stands above the content in some sense. The superstructure of a lecture or of a scientific article are two examples of discourse forms that can be used with a specific content.

Kintsch and van Dijk have subsequently developed their model from a primarily structural/hierarchical one to a more dynamic, process-oriented on-line model which they refer to as strategic (van Dijk & Kintsch 1983). They now assume, inter alia, that understanding takes place successively, while incoming data is processed at once and not after all the data has been received.

5.2 Text linguistic methods in translation and interpretation research

Text linguistic approaches and models have been used to some extent in research on translation and interpretation. Two examples from the area of Finnish are Tirkkonen-Condit's studies of translations from English into Finnish (Tirkkonen-Condit 1985 and 1986) and Vehmas-Lehto's studies of translations of Russian newspaper articles into Finnish (Vehmas-Lehto 1989).

Shlesinger (1995) has studied shifts in cohesive elements in English–Hebrew simultaneous interpretation. Dillinger (1989) has investigated, with the use of text-structure variables, the component processes specific to simultaneous interpreting and common to interpreting and listening.

5.2.1 Description of argumentative texts (Tirkkonen-Condit)

Tirkkonen-Condit has developed a method for describing argumentative texts using text linguistic tools. The method contains problem-solution (PS) analysis, interactional and illocutionary (I&I) analysis, and macrostructure analysis. The purpose of the study was to describe two authentic texts in order to develop a method for the description of argumentative text structure in general, and at the same time contribute to the battery of text type criteria, and to shed light on text comprehension and interpretation, and, ultimately, translation.

The need to describe the structure of texts derives from problems in translator training, especially in the area of argumentative texts, which according to Tirkkonen-Condit have turned out to be the most difficult to translate of all factual prose text types. The problems are not related to linguistic proficiency, but rather to the comprehension and interpretation of this kind of texts in general. In shedding light on aspects of comprehension, Tirkkonen-Condit's study also aims at developing tools for translation assessment and marking, and for the selection of text extracts for translation exercises and examinations.

In a separate study (1986), Tirkkonen-Condit implements her ideas on translation assessment, using the text linguistic tools developed in the previous study. The text description used by Tirkkonen-Condit (1985) is a combination of three models for discourse analysis:

5.2.1.1 Illocutionary and interactional structure

The first is an analysis of the illocutionary and interactional (I & I) structure of the argumentative text (1985:42 ff.). This analysis reveals the hierarchical structure of the text (general vs. particular, superordinate vs. subordinate) as well as interactional aspects, e.g. the illocutions prevailing in sentences and groups of sentences.

5.2.1.1.1 Speech acts and illocutions

According to Austin (1976) all expressions of language must be viewed as acts. There are three kinds of action in each utterance:

1. locution, the physical act of producing an utterance;
2. illocution, the act which is committed by the utterance; and
3. perlocution, the act of producing an effect through locution and illocution.

In speech act theory, illocution is the main focus of attention. Certain minimum requirements must be met if an illocution is to be successful. Searle (1969) has defined four "felicity conditions" (see below) which illocutions must meet.

There are certain requirements which the production of a form, i.e. the locution, must meet to ensure that the illocution takes place. This illocution, then, serves as a prerequisite for the achievement of the intended perlocution. Here follows an example in the form of an interrogative, quoted from Renkema (1993:26).

Can you stop by in a minute?

Why is this interrogative generally interpreted as a request? A request can be identified by the following felicity conditions:

a. the propositional content

The content must refer to a future act, X, which is to be carried out by the addressee.

b. the preparatory condition (circumstances that are essential for the uptake of an illocution as the intended illocution)

1. The addressee is capable of executing X and the speaker believes that the addressee is capable of doing it.

2. It is obvious to both conversational participants that the addressee will not perform the act without being asked.

c. the sincerity condition

The speaker actually wants the addressee to do what had been requested.

d. the essential condition (the condition that separates the illocution in question from other illocutions)

The utterance serves as an attempt to persuade the addressee to execute X.

On the basis of these rules, the interrogative "Can you stop by in a minute?" does possess the illocutionary intent of a request. But it does not explain why it must be interpreted as an order when it is uttered by a supervisor to a subordinate. In this case the situation is not self-explanatory and a knowledge of the surrounding environment is required (Renkema 1993:26).

In this context Renkema (1993:28) points out:

The analysis of illocutions makes it clear that in the research into the relationship between form and function, form by itself cannot provide a definitive answer. Clearly, other factors, such as the co-operative principle^[7] [of Grice] and knowledge of the world (...) will have to be taken into account as well.

Illocutions can function as text type markers in the following way (Tirkkonen-Condit 1985:150):

Text type	Dominant illocution	Subsidiary illocution

Descriptive	Statement	-
Narrative	"	Directive
Expository	"	-
Argumentative	Assertion	Directive
Instructive	Directive	-

Figure 5-1 Illocutions as text type markers

5.2.1.2 Problem-solution analysis

The second mode of description is problem-solution (PS) analysis which aims at describing the superstructure of the text (cf. van Dijk & Kintsch op.cit.). PS analysis is part of the I & I analysis (see section 5.2.1.1). The text is described as a sequence of minitexts composed of situation, problem, solutions, and evaluation. By using information from the I & I analysis it is possible to detect the hierarchical and interactional relations between the minitexts. It is possible to show how minitexts can be embedded in other minitexts and also show the function of one minitext in relation to another.

The PS structure of an argumentative text can be illustrated as a Chinese box diagram, which gives hierarchy information in that superordinate sequences literally include the subordinate sequences. In the following diagram (after Tirkkonen-Condit 1985:126), we see that a minitext with the components situation, problem and solution has three minitexts subordinated to its problem component. The three minitexts are composed of situation + problem, situation + problem, and situation + problem + solution, respectively.

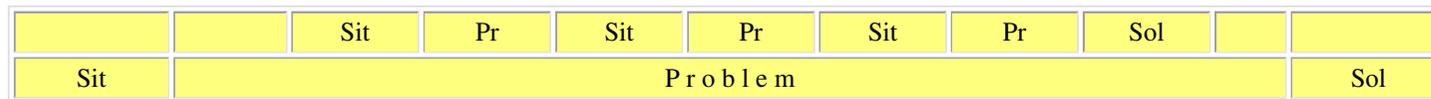


Figure 5-2 PS structure of an argumentative text

5.2.1.3 Macrostructure analysis

The third mode of description is the macrostructure analysis which reveals the semantic structure ("macrostructure" in van Dijk's terms) of the text. The macrostructure analysis derives information from the I & I and PS analyses and rearranges it in such a way as to turn out summaries of the text with varying degree of specificity. The summaries are the concrete representatives of the levels of macrostructure. The macrostructure analysis makes use of the hierarchical distinctions from the I & I analysis. It also uses information from the PS analysis, in that the summaries manifest four types of macropropositions which are relatable to the PS components of situation, problem, solution, and evaluation.

5.2.1.4 Textual analysis of an interpreted event: a dialogic approach

Seen from the point of view of dialogicity, a speech can be seen as a sequence of speech acts produced by the speaker in answer to imaginary questions of the audience (cf. Tirkkonen-Condit 1985:47). Of course at conferences the audience is often allowed to ask questions at some stage or another during or after the speech, but certain speech situations or types of speech do not allow such interruption.

In the following table we use the format used by Tirkkonen-Condit (1985:48) to show how the dialogical approach to the text helps in mapping the structure of the text in terms of I & I and PS description. The text is from the first minitext (which could be called "Setting the scene") of an inaugural speech taken from our corpus (see appendix 1).

The dialogue	I & I description		PS description
Speaker and imaginary audience (in brackets)	<u>Interactional role</u>	<u>Illocutionary value</u>	
Speaker: I feel privileged to be here (sect. 2, 3)	Situation	Statement	Situation component
(Audience: Can you elaborate on this?)			
Speaker: I'm not worthy to stand in the pulpit (4)	Negative evaluation	Assertion	Problem component
(Audience: On what grounds are you asserting this?)			
Speaker: I'm here only because of my readiness to serve science (sect. 5)	Justification	Statement	- " -
(Audience: What should be done about it?)			
Speaker: Best place would be in the middle (sect. 6)	Solution	Directive: recommendation	Solution component

Figure 5-3 Implicit dialogue in text (example from our corpus)

5.2.2 Inadequacy in translation (Vehmas-Lehto)

Vehmas-Lehto (1989) has studied Finnish translations of Russian newspaper articles from the aspect of adequacy as an inherent part of translation quality. Adequacy is defined as the compliance of a translation with the norms of the target language, and, to a certain extent, with those of the target culture. The study is based on the assumption that in order to be adequate, Finnish translations of Russian journalistic texts should resemble the corresponding Finnish functional style, i.e. Finnish journalistic language (cf. the textuality standard "acceptability", section 3.1).[8]

The text corpus used in Vehmas-Lehto's study consists of Russian journalistic texts, their published translations, alternative translations serving as suggestions for improvement, and authentic Finnish journalistic texts used as material for comparison.

Vehmas-Lehto's experiments gave the following results:

- 1) the published translations are usually identifiable as translations, primarily because of the general impression they make of clumsiness and obscurity;
- 2) the published translations are experienced as unpleasant, uninteresting, and apt to arouse suspicion;
- 3) there is an (unacceptable) abundance of emotive elements in the vocabulary;
- 4) the published translations are difficult to comprehend.

Textual comparisons revealed a number of deviations from the usage and recommendable norms of Finnish journalistic language. These errors are basically due to interference from the source texts. They are mostly quantitative: e.g. an abundance of coordinated constructions, emotive words, and clichés, a high average length of sentences, clauses, and noun phrases, a high frequency of nouns and adjectives, and a low frequency of connectives.

5.2.3 Shifts in cohesive elements in simultaneous interpretation (Shlesinger)

Shlesinger (1995) has examined the number and type of shifts in cohesive elements of an English-language text undergoing simultaneous interpretation into Hebrew. The productions of 13 advanced interpreting students working from an 11-minute impromptu speech were analysed, and the results revealed a regular occurrence of shifts in all types of cohesive devices, particularly those perceived by the interpreter as nonessential, the most common shift-type being complete omission. Shifts occurred with higher frequency at the beginning of texts. Omission/error rates decreased when interpreters benefited from prior exposure to the source text.^[9]

Shlesinger (1995) points out that cohesive devices serve a crucial function in text interpretation in that they define links and relationships between primary textual elements. Failure to reproduce these links in a translation can significantly alter text reception and meaning. Three intrinsic constraints have appreciable impact on an interpreter's ability to convey true meaning: (1) the speed of source-text delivery; (2) text linearity, which forces interpreters to work on smaller, incomplete language units; (3) assumptions by the speaker as to the level of subject knowledge available to the audience and/or the interpreter.

5.2.4 Component processes in simultaneous interpreting (Dillinger)

Dillinger (1989) has investigated the component processes specific to simultaneous interpreting and common to interpreting and listening. Experienced conference interpreters and inexperienced bilinguals performed simultaneous interpreting from English into French and then gave a free recall immediately afterwards. A comparison group of bilinguals performed a simple listening task with the same materials.

The texts were on an unfamiliar topic (positron emission tomography) and differed only with respect to frame type. Experience showed a main effect on interpreting measures, (experienced interpreters performed more accurately), and interacted with text-structure variables that indexed proposition generation, but did not affect recall. Task did not have a main effect on recall and interacted weakly with text-structure variables. Text and Text-structure variables had very strong effects both for the interpreting and the recall measures.

The results were viewed as evidence that interpreting involves the same component processes as normal listening comprehension rather than constituting a specialised comprehension skill. Analyses of text-structure variables provided evidence for influence of high-level conceptual processing and other component processes both on line and off line. Since there was no evidence that interpreting interfered with comprehension, the qualitative on-line measures possible in the interpreting task appear to be generalisable to comprehension under more usual circumstances.

However, as Dillinger himself stresses (Dillinger 1989:89) it would be misleading to draw the conclusion from his study that there are no differences

at all between expert and novice interpreters. Dillinger's study concentrates on the comprehension processes, and expert interpreters may very well differ from novices with respect to their production processes, which Dillinger has not studied:

It is possible that experienced interpreters will show more independence in their production; that is, the novices will tend to follow the surface features of the original, whereas the experts will produce target-language texts whose formal features are nearly independent of those of the original. The present study suggests precisely that this difference would not be due to problems in comprehension, but to differences in production ability. (Dillinger 1989:89)

Dillinger also points out (1989:88) that his results refer to simultaneous interpreting of prepared texts in conference settings, and may not be generalisable to interpreting more spontaneous dialogue or debates. Since texts of the latter type are generally less explicit and less predictable, they make greater demands on prior knowledge and inference generation. He cites Frederiksen (1989) who argues that the processing of different text types is independent of general comprehension skill. It is therefore possible that an interpreter may work well in the booth with well-prepared texts, but not perform so well with conversational dialogue, or vice versa.

5.3 Applications of the Kintch and van Dijk model in simultaneous interpreting research

5.3.1 Mackintosh (1985)

Mackintosh (1985) has made an attempt to verify the applicability of the Kintsch and van Dijk model to conference interpreting. Mackintosh distinguishes between consecutive and simultaneous interpreting in the possible applicability of the model. In consecutive interpreting, interpreters notes down the essential features of the message and its structure. Mackintosh's contention is that this schematic notation of the semantic features of the discourse is the result of the interpreter's application of the macrorules to the micropropositions of the original message, and that the interpreter's notes reproduce the resultant macropropositions. When reconstituting the message in the target language, the interpreter applies the macrorules once again, but this time in the inverse direction, in order to derive the micropropositions.

In simultaneous interpretation, the process is more complicated. When the interpreter hears an incoming segment of discourse, s/he starts processing it phonologically and semantically in working memory. At the same time, the previous segment is produced in the target language after being checked for relevance and coherence and stored in short-term memory for matching with subsequent incoming segments. (The number of micropropositions that a segment contains varies according to the interpreter's processing strategy, the microstructures of the discourse etc.) This implies that the processing load of a simultaneous interpreter is greater than that of a consecutive interpreter.

Mackintosh (1985) claims that observation of the macrostructural processing in simultaneous interpreting is not directly observable; in consecutive the process of note-taking and message-analysis can be described in terms of macrostructures. Mackintosh suggests that a recall test after interpreting would give evidence about the formation of macrostructures and macropropositions. If scores in the interpreting protocol correlate with scores in the recall protocol, message integrity in simultaneous interpreting could be seen as a function of macrostructural processing. The schemata within which the interpreter construes meaning play an important part in organising the application of the macrorules and restricting the lexicosemantic choices the interpreter has to make. (Mackintosh 1985:40).

To test the model, Mackintosh analysed protocols from a consecutive relay experiment and a similar simultaneous experiment. In addition to interpreter groups who interpreted between two languages, a control group relayed from English into English. All subjects interpreted into their A language except one in each group who interpreted into their B language.

The results of these studies show that the standard of L1 suffers under some conditions. Assuming that the extent to which the level of L1 deviates from the standard level is an indication of how demanding the task is for the interpreter, then self-cued recall from L1 into L1 at the interpreter's own pace, i.e. consecutive from English into English, was the least demanding. When the interpreter works in two languages, there are many more departures from standard English. These show in consecutive as awkward formulations, and in simultaneous as clumsy expressions and grammatical errors. The protocols indicate that simultaneous interpreting imposes the heaviest processing load, on the basis of departures from standard English.

In the simultaneous experiment, most of the micropropositions of the original are present in the target language text. An interesting indication that simultaneous interpreters also process the discourse according to the model is "soit plus de 13 milliards de centimes" which is incorrectly rendered by "which is about 13 times more than they are getting at the moment". This error can be explained by the fact that the interpreter had to explain an unknown concept for which she had to find a meaningful equivalent; in searching for argument overlap, under a severe time constraint, coherence was considered of overriding importance, and the statement of the interpreter is in fact coherent with the overall schema of the text and its macrostructures. The need to operate three cognitive sets simultaneously (the one the interpreter assumes for the speaker, the interpreter's own, and the hypothetical set of the listeners) can increase the processing load to the extent that part of the message is forfeited. Decisions about what is not to be forfeited are informed by the macrostructures of the text (Mackintosh 1985:42).

5.3.2 Lambert (1988)

Lambert (1988) has studied the recall of interpreters of four texts after simultaneous interpretation of the texts, consecutive interpreting and shadowing, and a straightforward listening task. The test was divided into two parts, one recall test, and following that, three recognition tests of lexical, semantic, and syntactic recognition. For recall, the input was in subjects' "passive" language, with recall in mother tongue (L2 into L1) and for recognition, both input and recognition was in subjects' "passive" language (L2 into L2). The text passages were broken down into a structured list of propositions following the methodology proposed by Kintsch and van Dijk (1978). (In the context of conference interpreting, "passive" languages are the interpreters' B or C languages; the "active" language, A language, is usually the mother tongue.)

By examining and comparing the amount and quality of retention following each processing type, it was hoped to gain a better understanding of what is meant by depth of processing, how deeply each type of message input is processed, and which type requires the greatest or the least amount of effort and attention on the part of the interpreter. By weighing the retention scores, it appeared that deeper processing of incoming material occurs during listening and consecutive interpretation, followed by simultaneous interpretation and shadowing.

It is hypothesised that the concurrent vocal activity on the part of the interpreter which takes place in both simultaneous interpreting and shadowing may be a source of conflict that prevents the interpreter to process the material to any greater extent. This problem does not arise in listening or consecutive interpreting. In the light of this hypothesis, Lambert questions Mackintosh's (1985) conclusion that simultaneous interpreting imposes a heavier processing load than consecutive interpreting. Lambert claims that the greater number of departures during simultaneous interpretation may have been due to the simultaneity of listening, translation and speaking — conflicting activities which prevent the interpreter from processing material

as deeply as under consecutive interpreting conditions (Lambert 1988:386).[\[10\]](#)



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6 Textual structures in simultaneous interpreting

6.1.1 The application of the Kintsch & van Dijk model in our study

As noted in section 5.2 Mackintosh (1985) claims that observation of the macrostructural processing in simultaneous interpreting is not directly observable. We have attempted at applying the macro-rules in the Kintsch & van Dijk model on samples from our transcripts and concluded that a lot of occurrences in the interpreting situation can indeed be explained as macrostructural processing. This process is in our opinion clearly observable in the recorded and transcribed output by the interpreter.

The following extracts shows how the Kintsch and van Dijk macrostructure model has been utilised in our research. Deletions are printed in italics, generalisations are underlined, and constructions are in bold type.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
ja lyckades till och me få ett ämne <i>att sysla med</i>	I even succeeded in getting a subject <i>to work with</i>	onnistuin jopa saamaan aiheen /	I even succeeded in getting a subject /
de handlade om att relatera / myter <i>alltså narrationer</i> berättelser / juridiskt och religiöst system me varandra	it was about relating / myths <i>that is narratives</i> stories / legal and religious system to each other	toisin sanoen minun piti suhteuttaa myytit / kertomukset / eeh / juriidinen ja / uskolloninen systeemi toisiinsa /	in other words I was to relate myths / stories / eh / the legal and the religious system to each other /
<i>å se hur dom här samspelade</i>	<i>and see how they interacted</i>		
/ på en ö <i>i sydostasiens som</i>	/ on an island <i>in south east</i>	lombokissa / eeh / kaukaisella	on lombok / eh / a distant

heter lombok (P 1?)	asia called lombok	saarella	island
de va tror ja första gången <u>någon</u> ja va / några å tjuge / <u>hade beskrivit för mej</u> att de kunde vara en stor fördel / att vara / kvinna / (P 16)	that was I think the first time <u>anyone</u> I was / a little over <u>twenty</u> / <u>had described to me</u> that it could be a great advantage / to be / a woman /	no / silloin / ensimmäistä kertaa <u>sain kuulla</u> / että oli etu / olla nainen	well / then / for the first time <u>I heard</u> / that it was an advantage / to be a woman /

deletion

generalisation

construction

Figure 6-1 Macrostructures in interpreting

The above sample is a good illustration of how the use of macrostructures, i.e. basically a good 'summarising' technique, makes interpretation fast and efficient without too much information loss. In fact, the only new factual information that is lost is that the island Lombok is in South East Asia (the interpreter only says it is far away, "distant"). The speaker's age at the time is implicitly clear as she is talking about her undergraduate studies, and in the context at hand, the deleted comment 'I was / a little over twenty' does not give any new information and is therefore redundant (see section 7.1.1; cf. Krippendorff 1986).

This example is, however, an ideal situation. Very often the transcripts give a more complicated, less clear-cut, picture of the process. We will now present a couple of transcripts which show some typical interpreting situations from our conference corpus.

6.1.2 The interpreter as editor

From a layman's perspective, it would seem obvious that the simultaneous interpreter, because of time constraints, will have to almost mechanically stick with the original speaker, more or less repeating what the speaker says, albeit in another language, not having many opportunities to make changes in the original text. From the results of our study, it is obvious that this is a misconception. On the contrary, it is almost surprising how much the interpreters actually edit in the original texts.

6.1.2.1 "Proof-reading"

There can be several reasons for an interpreter to "intervene". One type of intervention is a kind of oral "proof-reading", when the speaker makes false starts, mispronunciations, or makes an obvious slip of the tongue. In these cases the interpreter — since s/he usually lags several seconds behind the speaker — can make the text more soluble:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
... somliga börja skriva <i>jag</i> / <i>inte jagböcker</i>	... some started writing ' <i>self</i> ' / <i>not 'self' books</i>	... he alkoivat sen sijaan kirjoittaa lastenkirjoja /	... they started instead to write children's books /

förlåt de va / de va / önsketänkande di börja skriva barnböcker // (W 15b)	sorry that was / that was / wishful thinking they started writing children's books //		
---	---	--	--

Italics = deletion

Figure 6-2 The proof-reading interpreter

The reason for this slip of the tongue by the speaker is probably that she has earlier been talking about "self poetry" by female authors.

This is a good illustration of Halliday's observation (1987:69; see section 3.4) that when producing spoken utterances you cannot "destroy earlier drafts" as you can do in writing. As is obvious from this and other examples in our study, the interpreter will most often ignore these "drafts" and interpret what she understands to be the intended meaning — the "final version" as it were. Cf. Chernov's (1979) remark, that reduction of redundancy in the interpreting process results in "lexical compression" in the target text version (see section 7.1.2).

NB. In this kind of "controlled" spoken discourse it is also possible that the speaker is actually making a joke by deliberately letting her "tongue slip". But this is obviously not the way the interpreter interpreted it.

6.1.2.2 Explication

Another important reason for editing is the need for the interpreter to explain, to make something the speaker says more explicit in order for the target audience to understand. And vice versa, the interpreter may judge some information in the speech to be superfluous for the target audience, and in that case it can be described in a more general way or omitted altogether. The notions of explication, the tendency to spell things out, including adding background information, and its antonym implicitation (or simplification), are well-known features of translation and interpreting. They have been described, inter alia, by Alexieva (1985). Textual standards that come into play here are coherence, informativity and acceptability.

A simple example: 'grandmother' in Finnish, as well as English, can denote both father's mother and mother's mother. In the following extract the interpreter has decided that it is important to make this clear:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
farmor som va blind (T 2)	grandmother [father's mother] who was blind	isäni äiti oli sokea	my father's mother was blind

Figure 6-3 Explication

6.1.2.3 Cohesion

Cohesive devices serve an important function in the understanding of texts in that they define links and relationships between primary elements in the text (cf. Shlesinger 1995). Adding cohesive markers is another form of explicitation that is noticeable in our material.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation	Type of cohesive marker added
du får inte börja småskolan / ja fick gå i småskolan / ja fick gå i storskolan (T 3)	they won't let you go to infants school / they let me go to infants school / they let me go to high school	et pääse alakouluun / mutta minä sain käydä alakoulua / ja minä sain käydä yläkoulua	they won't let you go to infant school / but they let me go to infants school / and they let me go to high school	disjunction conjunction
på somrarna åkte ja hem (T 14)	in the summers I went home	ja mutta kesäisin matkustin kotiin	and but in the summers I travelled home	conjunction + disjunction

bold: construction (additions)

Figure 6-4 Cohesive markers (junctions)

In the following extract, the interpreter adds several kinds of cohesive markers, in Halliday & Hasan's (1976) terms both grammatical (reference, conjunction) and lexical (reiteration):

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation	Type of cohesive marker added
hårda tider / före p-pillrens tid / ja ni vet / alla som e i min ålder //	hard times / before the pill / well you know / all who are my age //	kovat ajat / ennen -pillereiden aikaa niin tähän tiedätte / kaikki jotka olette minun ikäisiäni / mimmosta se oli	hard times / before the pill well you know / all who are my age / how it was /	anaphoric > hard times before the pill; possibly also exophoric reference > historical facts
de här me politik / de existera inte //	this politics thing / it didn't exist //	niin ja sitten mitä tuli politiikkaan / sitä ei ollut /	well and then as far as politics goes / it didn't exist /	conjunctive expression
eeh de de de hade bara gubbar hand om / å ryssar /	eh it it it was done only by old men / and russians /	vain ukot ja / venäläiset hoitelivat politiikkaa	only old men and / russians did politics	reiteration: repetition
gubbar som va i svarta paletäer å ryssar /	old men in black overcoats and russians /	tarkoitin noita ukkoja joilla oli mustat palttoot	I mean those old men who	anaphora > old men and

		ja sitten oli niitä venäläisiä / kaik_ ne oli niitä neukkuja	wore black overcoats and then there were those russians / ev_ they were those soviets	Russians; conjunction; anaphora > Russians; reiteration: synonym
alla andra <i>skulle / göra / alla andra</i> skulle arbeta / från morron till kväll // (T 7)	everyone else <i>had to / do / everyone else</i> had to work / from morning till night //	kaikkien muiden piti tehdä töitä aamusta iltaan /	everyone else had to work from morning till night	

bold: construction (additions)

italics: deletion

Figure 6-5 Cohesion and coherence

With the first three additions: (you know) 'how it was', 'well', 'I mean', the interpreter fills out the elliptic style of the speaker, which resembles her way of writing.

The fourth addition 'they were those Soviets' is a special case. We must keep in mind that the speaker is talking about her youth in Finland immediately after World War II, and up till the end of the Soviet Union, 'Russians' usually meant — in the circumstances the speaker is describing, with a pejorative meaning — "commies" or "Soviets". The latter term never made its way into Swedish, and therefore the interpreter chooses to add the Finnish pejorative 'neukkuja' ('neu-' < Fin. Neuvostoliitto, the Soviet Union).

6.1.2.4 Other textual considerations: "Interpreter's edition"

The following extract from a speech at the writers' conference shows clearly how the interpreter can change the impact of a text with simple but efficient textual tools. The speaker is a middle-aged female author who talks about her youth in the 1970s when she moved to Sweden but went back home in the summers to her birthplace in rural Finland. Her speaking style is almost lapidarian at times, with little redundancy, and her language is straightforward, and apparently not in the taste of the interpreter.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
å vi läste germaine greer å hite å tite ursäkta nödrimmen / å vi bildade kvinnogrupp å fredsgrupp å	and we read germaine greer and hite and tite sorry for the bad rhymes / and we formed a women's group and a peace	ja luimme germaine greeriä ja hite ja tite:ia anteeksi nyt tämä on tämmönen hätäriimi / ja sitten me me muodostimme	and we read germaine greer and hite and tite sorry now this is a bad rhyme / and then we we formed women's groups and

<i>linje tregrupp</i> (1) å vi bejaka sexualiteten (2) å vi knulla me vem vi ville (3) // (T 13-14)	group <i>and an alternative</i> <i>three group</i> ^[11] (1) and we affirmed our sexuality (2) and we fucked with whom we wanted (3) //	naisryhmiä ja rauharyhmiä ja sitten me / palvoimme sekusuaalisuutta (2) ja m_ / hyppäsimme sänkyyn ken kanssa tahansa (3) /	peace groups and then we / worshipped sexuality (2) and l_ / jumped into bed with anyone (3) /
på somrarna åkte ja hem // ja försökte omvända pappa // smeden / från hans borgerliga ideologi /	in the summers I went home // I tried to convert daddy // the blacksmith / from his bourgeois ideology /	ja mutta (4) kesäisin matkustin kotiin // ja (5) yritin eeh saada isäni kääntymään hänhän (6) oli seppä jolla oli porvarillinen ideologia (7) /	and but (4) in the summers I went home // and (5) I tried eh to get my father to convert since (6) he was a blacksmith who had a bourgeois ideology (7) /
ja föreläste i senaste (8) jeansdress / om wilhelm reich å darwin /	I lectured in the latest (8) denim dress / about wilhelm reich and darwin /	ja olin eeh / pukeutunut viimeisein muodin mukaisiin (8) / eeh farkkuasuun ja l_ pidin luentoja wilhelm reichista ja darwinista /	and I was eh / dressed in a / denim dress according to the latest fashion (8) and I l_ held lectures about wilhelm reich and darwin /
va fan (9) har du på dej för städrock sa han (10) //	what the hell (9) is that housecoat you're wearing he (10) said //	mikä pahuksen (9) siivoustakki sinulla on ylläsi sanoi isä (10) /	what is that blasted (9) housecoat you are wearing father (10) said /
tror du vi kommer från aporna / sa han (12) //	do you think we come from the apes / he said (12) //	luuletko sinä että me olemme peräisin apinoista / vai mistä (11) / huusi isä (12) /	do you think we descend from the apes / or what (11) / father shouted (12) /
ta på dej en behå å va tyst / sa mamma / å så börja ja skriva // (T 14)	put on a bra and be quiet / said mummy / and then I started writing //	käytä r_ rintsikoita sanoi äiti ja ole hiljaa / no niin (13) sitten aloin kirjoittaa /	use b_ a bra said mother and be quiet / well (13) then I started to write /

italics: deletions

bold: additions (constructions)

Figure 6-6 Interpreter's edition

The numbers within brackets (1) - (13) point at the corresponding sections in the following analysis of the passage.

Analysis of the interpreter's interventions

Since we have made this analysis only of the recorded material and its transcript, we can only make (more or less educated) guesses of why the interpreter chose to edit the text in this way. An interview with the interpreter, and if possible, with some persons from the audience, would have helped us in getting the full picture of what actually happened. But in the following table we have tried to make a first, tentative analysis of the

occurrences in the preceding interpretation from a text linguistic point of view, which could then be used as a back-ground for further investigation.

Interpreter's linguistic action	Possible reason for action	Possible consequence for audience
(1) Deletion of 'alternative 3 group'	The issue does not have an interest for the Finnish audience. It was a local Swedish affair.	Information loss.
(2) Change of 'affirmed sexuality' to 'worshipped sexuality'.	Immoral way of life?	Gives a different (probably more negative) impression than the original.
(3) Change of 'fucked with whom we wanted' to 'jumped into bed with anyone'	Increase acceptability: too harsh language. Immoral way of life?	Gives probably another picture of the speaker's peer group than intended: having sex with 'anyone' is not the same as 'with whom we wanted'
(4), (5), (6) Additions of cohesive markers	Increase cohesion = help understanding.	
(7) Change of main clause with direct action 'convert daddy the blacksmith from his bourgeois ideology' to main clause with indirect action plus two causal relative clauses 'get my father to convert because he was a blacksmith who had a bourgeois ideology'		Indirect form ('get my father to convert') implies a less active role than in original utterance.
(8) 'latest' becomes 'according to the latest fashion'	Remove possible ambiguity: increase informativity	No negative consequence.
(9) the four-letter word is changed to a 'milder' variant	Increase of acceptability: too harsh language.	May give wrong impression of speaker.
(10) personal pronoun 'he' is changed to 'father'	Increasing informativity by removing potential ambiguity.	
(11) addition: 'or what'	Increasing coherence.	Gives a more aggressive picture of the father than in the original
(12) 'he said' changed to 'father shouted'	Compensation for missing "four-letter words"?	The negative picture of the father (see above) is even more accentuated

(13) addition: 'well'

Increasing cohesion.

Figure 6-7 Analysis of the Interpreter's edition

The style of the above passage from the conference implies that it probably consists of citations from the speaker's literary production. In other words, it contains very little redundancy. It seems like the interpreter is compensating for this lack of redundancy by adding cohesive markers ('and', 'but') and improving coherence by explicitations ('father' for 'he', "according to the latest fashion' for 'latest'). (Cf. the discussion on acceptability in interpreting in section [4.3.2](#).) But some changes in the interpreted version are undoubtedly precisely "interpretations" by the interpreter, and should perhaps be assessed as such, in the same way written translations of literary works are judged.

Conclusion

The Kintsch & van Dijk model is primarily a model for discourse processing in general. While they mention translation as one of the linguistic and psychological arguments which demonstrate the need for a "situation model" encompassing both textual and social factors (Kintsch & van Dijk 1994:338-339, 16-19), we also need models that account for the special circumstances of the interpreting situation. Such models have been developed by G.V. Chernov and Bistra Alexieva. They will be presented in the following section.



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7 Cognitive models

7.1 Chernov's "probability prediction mechanism"

7.1.1 Redundancy

In communication and information theory redundancy is described as essential to combat noise, to assure reliability and to maintain a communication channel. English writing is estimated to be 50 % redundant which accounts for the ability of native speakers to detect and correct typing errors. The amount of information actually transmitted is not increased (Krippendorff 1986). Chernov (1979, 1985) has pointed out that simultaneous interpreting is impossible without redundancy, and it plays a significant role in his model for simultaneous interpreting.

According to Chernov (1985) our understanding of language is based upon the human ability to make inferences. We are able to extract the meaning of a message after only receiving part of it by making linguistic, cognitive, deictic and pragmatic inferences. For this to be possible in such a complicated activity as simultaneous interpreting, there has to be a certain level of redundancy in the message, and this level is higher than in written translation. Another important factor in our comprehension process is our inherent ability to make prognoses, our "probability prediction mechanism" which helps us to adjust instantly to changes in the environment. This has to do with how the nervous system works: "the human central nervous system developed as a mechanism of maximal anticipation of sequential and iterative phenomena of the outside world at the greatest possible speed" (Anokhin 1978:19, quoted in Chernov 1994:145).

Chernov distinguishes between objective and subjective redundancy. Objective redundancy consists of iteration of message components and their interdependence, and these factors are independent of the message recipient. But a communication may also be subjectively redundant for the message

recipient. This redundancy is built up by inferences by the hearer about the meaning of the utterance and the part of discourse already produced. Inferences can be broken down into linguistic, cognitive, situational, and pragmatic.

Linguistic inferences are drawn about the verbal form of the message, and about the referential component of the semantic structure of the discourse. Both syntactic and semantic rules apply as sources of linguistic inference. Thus, a semantic constraint, as an objective factor of redundancy, becomes a subjective factor of linguistic inference for a given hearer, depending on, and drawn on the basis of, his/her knowledge of the language spoken (for a discussion, cf. Chernov 1994:142).[\[12\]](#)

Cognitive inferences are made when the utterance makes sense, i.e. when the semantic components already produced interact with the listener's background knowledge. E.g., to understand the utterance "he studied at Eton", one must have the appropriate background knowledge about Eton College in the United Kingdom (Chernov 1994:143).

Situational inference has the communicative situation or situational context as source of inference. E.g., a speaker's address "Mr. President..." could allude to the president of a country, or of a company, or the president of the United Nations, etc. Chernov has identified eight factors involved in simultaneous interpreting situations:

1. characteristics of the source message, or speaker (S), obtained from a reply to the question "Who is speaking?"
2. theme of the message (Th): "What is he talking about?"
3. relation of the act of speech to the event that provoked it (E): "In what connection is he speaking?"
4. message recipient, or audience (A): "Whom is he addressing?"
5. place, or forum (F): "Where is he speaking?"
6. time (T): "When is he speaking?"
7. purpose of the communication (P): "What is he aiming at?"
8. motive (M): "Why is he speaking?"

(Chernov 1975, 1978, 1987, 1994).

Pragmatic inference is made when the hearer draws conclusions about the speaker and his/her social role, on the basis of the semantic contents of the utterance, the background assumptions of the hearer, and the hearer's knowledge of the factors of the communicative situation.

7.1.2 Distribution of redundancy

Information content or redundancy are not evenly distributed throughout the communication. According to Chernov, redundancy is concentrated in the thematic, or topical, part of utterances, whereas the greatest density of information is at the rheme of the utterance. It is thus possible to compress speech in various ways in the thematic part by reducing the number of syllables, words or semantic components, and by simplifying syntactical structures. An example, given by Chernov: a chairman's announcement: "I now give the floor to the distinguished delegate of the United Republic of Tanzania!" can be

in texts

interpreted by a simple "Tanzania!". Here, only the rheme of the utterance remains after the act of compression.

Since humans identify figures through the perception of stretches of maximum curvature, not of straight line, and that moving objects are given priority in perception to stationary objects, Chernov argues that comprehending meaning and sense is subject to a similar law of perception. Attention is thus primarily focused on semantic components that carry new information. This means that the interpreter's attention is focused on the rheme of the utterance. Misperceptions or losses of items in the thematic, redundant, portion of the communication can be restored, but the loss of a rhematic item may easily result in mistranslation (Chernov 1994:147).

7.1.3 Probability prediction model

The "probability prediction machinery" in simultaneous interpretation works in four tiers:

- (a) Sound patterns (syllables encoding phonemes, intonation, stress, and other prosodic features)
- (b) Grammatical (syntactical) and categorical semantic features
- (c) Semantic tier per se
- (d) Sense tier per se

The levels of the "probability prediction machinery" are based on redundancy from the level of the syllable to that of the word, phrase, utterance, communication (text) and situational context. These levels are distributed among the tiers as follows:

Tier	Redundancy level
(a) prosodic: sound patterns	syllable, word, phrase, utterance
(b) syntactic: grammatical features and semantic categories	phrase, utterance
(c) semantic per se	phrase, utterance, text
(d) implicational: sense per se	utterance, text, situational context

Figure 7-1 Chernov's redundancy levels

A close co-operation between the various levels starts at the moment, or even before, the speaker is given the floor. If the speaker is known to the interpreter, the interpreter starts immediately to work out a probability prognosis for the semantic structure and sense of the incoming message. This is possible due to the interpreter's previous knowledge about other factors in the interpreting situation. The process can be described as a top-down prognosis made at the highest tier. The next step in the prognosis is effectuated at the acoustic/prosodic (a)-tier, from the bottom and upwards, immediately involving the syntactic and semantic tiers (b) and (c).

If the speaker is unknown to the interpreter, and the situation in general is unfamiliar, probability prediction begins in the bottom-to-top direction. As the message develops, which normally happens during the first few sentences, a probability prognosis for the whole message (or its first thematic part) is starting to take shape in the mind of the interpreter, with the interaction of all the levels described. If this interaction does not take place, interpretation errors and omissions appear. As the meaning and semantic structure of the message develop, the forecast of semantic and even purely linguistic features of the text narrows down at times to certainty (probability = 1). But as soon as the speaker starts on a new topic, the probability prediction process starts

all over again.

Probability prediction is facilitated by the fact that the feed-back process is carried out subconsciously as automatic operations according to internal programmes, plans of the utterances. Only when difficulties of perception occur, is attention fully switched over to perception and comprehension. Such disturbances can be 1) noise or rapid rate of speech, resulting in low perceptual redundancy at lower levels of the mechanism, 2) complicated syntactic structures or syntactic errors in the source language utterance, resulting in low redundancy at the syntactical tier, 3) unknown terminology, semantic gaps or reference to unknown facts or events, resulting in low redundancy at semantic and sense tiers. In such cases, the interpreter becomes unconscious of his/her own target language communication, and if errors and omissions occur, they are not corrected.

7.2 Cognitive problems: an example

In the following example from our study, the interpreter has a problem with the Swedish term "matrilinjal" (= Eng. matrilineal), which the speaker introduces — with some problem. At first the interpreter does not interpret the term at all, but the next time the speaker uses it, the interpreter introduces the non-existing word "*matriaallinen" (Eng. approx. *matrial) and the last time the speaker uses the term, the interpreter decides to choose the existing word "matriarkaallinen" (= Eng. matriarchal), but which is also wrong.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
...han beskriver den prehellenistiska världen // som ju va en värld / eeh en matria_ matrilinjal värld / en värld en matriar_ en värld / som ni vet / som man tror / dyrkade den stora gudinnan / ... (P 19-20)	...he describes the prehellenistic world // which was a world / eh a matria_ matrilineal world / a world a matriar_ a world / which as you know / as we believe / worshipped the great goddess /	...hän kuvaa tätä prehellenististä ai_ maailmaa / maailmaa / eeh jossa / maailma / kuten te tiedätte / tai ainakin / kuvitellaan näin / siinä palvettiin / eeh suurta jumalatartanta / [13]	...he describes this prehellenistic ti_ world / a world / eh where / a world / as you know / or at least / so we believe / there they worshipped / eh the great goddess /
.....men de gick på den matrilinjala linjen och / och mannen flyttade ju till kvinnans hem / allt de här som ni säkert känner till å / å de e ju etnografiska fakta att / att den matrilinjala eeh / världen den finns ju fortfarande kvar på sina håll (P 21)	... but it followed the matrilineal line and / the man moved to the woman's house / all this that you probably know and / and these are ethnographic facts that / that the matrilineal eh / world it still does exist in some places /mutta kaikki kulki tässä matriaalisella linjalla ja / eeh ja mies muutti naisen kotiin ja niin edelleen / eeh se tämä maailmahan on edelleenkin olemassa / tietyillä alueilla /	... but everything followed the matrial line and / eh and the man moved to the woman's house and so on / eh it this world does still exist / in some areas /
....stadier i övergången från modergudinnan å till dom manliga gudarna å från hela den organisationsform som e / de matrilinjala / systemet till de patri_ / p_ patrikala / patriarkala / (P 23-24)	... stages in the transition from the mother goddess and to the male gods and from all of this form of organisation which is / the matrilineal / system to the patri_ / p_patrichal /vaiheista jossa siirrytään äitijumalasta / miesjumaliin / ja koko tästä matriarkaalisesta eeh järjestelmästä / tähän patriarkaaliseen järjestelmään / stages where they change from the mother god / to male gods / and from the whole matriarchal system / to this patriarchal system /

bold italics the term 'matrilinjal' and its translations

Figure 7-2 The term "matrilineal" in various shapes

Note that the speaker in the beginning has obvious problems with the term . She begins ' — after some hesitation — with the false start 'matria-', immediately followed by 'matrilineal', and the rest of the passage shows continued uncertainty: 'a world a matriar_ a world / which as you know / as we believe / worshipped the great goddess'. Irrespective of whether the interpreter is familiar with the term 'matrilineal' or not, her omission of the term in the first passage may be a strategic choice: waiting for the term to be stabilised by the speaker.[14] Anyway, as a result of these dramatic events, the interpreter's output is affected on the phonological and morphological level (cf. next section).

Chernov's model presupposes concurrent operation of the probability prediction model at several levels at each given moment in time; multichannel information processing; and heuristic interplay of levels from bottom to top and from the top down. It is thus a dynamic model like the one by Kintsch and van Dijk.

Another dynamic model of the comprehension and production processes in simultaneous interpreting has been developed by Bistra Alexieva (1985, 1988, 1994). She refers to her model as "semantic" (1988), although she emphasises the necessity of studying units of text larger than the phrase, such as paragraphs and whole texts.

Alexieva has defined four levels for the simultaneous interpreting process:

A-level: the temporal properties of the interpretation (speed, number of pauses, the length and function of pauses);

B-level: other "oral" factors: pronunciation and prosody, para-linguistic and extralinguistic features, e.g. variations in pitch, loudness, diction;

C-level: a linguistic level, which can be divided into three parts: morphological, syntactic, and lexical;

D-level: semantic entities above word level, i.e. phrases, paragraphs, utterances and suprasentential segments in the text produced.

Phenomena that are noticed at a lower level, may be explained by analysing the interpretation at the highest level.

**7.3
Alexieva's
model**

**7.3.1
Pronunciation
errors**

In this sample, which is part of the example in the previous section, the interpreter makes two errors in pronunciation of two quite usual Finnish words:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
... värld / en värld en matriar_ en värld / som ni vet / som man tror / dyrkade den stora gudinnan / ... (P 20)	... a world a world a matriar_ a world / which as you know / as we believe / worshipped the great goddess /	... / maailma / kuten te tiedätte / tai ainakin / kuvitellaan näin / siinä palvettiin / eeh suurta jumalatartanta /	... a world / as you know / or at least / so we believe / there they [worshipped] / eh the great [goddess] /

bold: mispronounced words

Figure 7-3 Pronunciation error due to cognitive overload

Note the interpreter's *palvetiin instead of palvottiin 'was/were worshipped', and *jumalatartanta instead of jumalatarta = partitive singular of jumalatar 'goddess'.

In the terms of Alexieva's model these 'neologisms' can be described as morphological problems on the C-level (or possibly, in the case of *palvetiin, a phonological feature on level B). They are signs of a broader "cognitive overload" problem on the D-level: the interpreter is processing the unclear utterance of the speaker (see previous example) and the normal self-correcting mechanism is disabled.

Alexieva's semantic model as a tool for the construction of a text typology of interpreted events is described in section [4.4.1](#).



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8 The relationship between interpreting and translator-variants

8.1 Interpreting strategies: "Translatorese"

In the literature on translation, the concept of "translationese" has been discussed as a label for the language product presented by any translator. As a function of the language pairs involved and the direction of translation, it would be more reasonable to discuss specific varieties of translation for given language pairs and direction (for which it would be possible to use "translationese" as a collective abstraction, without thereby necessarily generalising as to its universal nature).

In the present case, then, we might discuss a specific variant of translation applicable to translation from Finnish into Swedish and vice versa. We might also assume that there is reason to talk about "translatorese" as an idiolectal description of variants used by individual translators, one of the main ingredients of which would be the individual strategies used by an interpreter to solve "acute" translation problems — i.e. in a general sense the product presented by individual interpreters and which is different, in specific respects, from the way other interpreters solve corresponding problems (including individual features of style, personal "stereotypes").

Interpreting is affected by many things including, for example, the language competence level of the interpreter, his or her personal language biography, ability to comprehend the source language and to produce cohesive, coherent texts in the target language.

8.2 Two interpreter types

In the exploratory study by Katarina Vamling (1982) on Russian-Swedish interpreting (see section [2.5](#)), it was found that interpreters use two strategies, the "dragging principle" which means that the interpreter speaks so slowly that he can listen at the same time, and the "forcing principle", whereby the interpreter tries to force his utterances trying to minimise the time that he has to speak and listen concurrently.

In our study, we have also observed two distinct strategies, although the "dragging" principle was not present. Instead, the two main forms of "translatorese" that we found was, indeed, the "forcing" type, and the "analytical" type.

Interpreter 1 (analytical)

This interpreter waits a couple of seconds before starting the interpretation, which is performed in a calm, even pace. She uses an analytical strategy with reductions and generalisation (and even explications) without losing the main content. There are few mistranslations.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
eeh sen kan de ju också vara bra att ha de här seminariet dokumenterat på band <i>efteråt</i> för oss alla <i>som får vara med</i>	eh then it may also be good to have this seminar documented on tape <i>afterwards</i> for all of us <i>who are able to be here</i>	ja tietysti on hyvä ehkä että meidän kaikkienkin osalta että tämä seminaari dokumentoidaan ja nauhoitetaan	and of course it is good perhaps for all of us that this seminar is documented and taped
och om kontakterna / dem skulle jag också vilja presentera för di kommer att finnas här framme i salen så småningom / di sitter också längst bak just nu (SN 3)	and about those contacts / I would like to introduce them too because they will be here in the front of the room eventually / and they are right at the back just now	ja niistä yhteyksistä haluaisin esitellä nämä yhteishenkilöt sillä hekin tulevat olemaan täällä / he nyt tällä hetkellä ovat tuolla kauempana takaosassa	and about those contacts I would like to introduce these contact persons since they are also going to be here / they are at the moment further away over there at the back

Italics: deletion

Bold: construction

Figure 8-1 Analytical interpreter type

Note that the interpreter adds yhteishenkilöt 'contact persons' in order to clarify the ambiguous 'contacts'.

Interpreter 2 (forcing)

The forcing type interpreter attempts at translating "everything", and starts interpreting after a very short delay in a fast, almost forced pace. There is a lot of false starts and additions; and there are more mistranslations and linguistic errors than in Interpreter 1's performance.

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
ja tycker att de e väldigt viktigt att vi klart sätter vårt mål / framåt (SN 5)	I think it is very important that we clearly set our goal / forward	ja mielestäni on erittäin tärkeää / jotta me selkeästi ajattelemme / eeh tavoitettamme sikäli että se on tulevaisuudessa	and in my opinion it is very important / that we clearly think / eh about our goal so far as that it is in the future

Figure 8-2 Forcing type interpreter



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-



9 Conclusions for future research

9.1 The relevance of the models

Our study has shown that models based on a text-linguistic analysis can give an increased understanding of what is happening during simultaneous interpreting. This applies to both the macro level (text structure and message content) and the micro level (morphology and syntax). A combination of text-linguistic and cognitive approaches seems to be especially fruitful.

9.2 Text typology for interpreting

The development of an adequate text typology for interpreting is important for educational purposes in the training of interpreters, as well as the theoretical development within interpreting research.

Such a typology would have to take into account the following factors:

- a) the discourse function, i.e. whether the text is, in Reiss' (1976) terms, informative, expressive, operative (argumentative, persuasive) or phatic;
- b) situation types, i.e. the setting, e.g. type of institution where interpreting is conducted; the number of parties involved in the interaction and their roles in society, purpose of interaction etc.;
- c) type of action that the situation demands, i.e. choosing the (appropriate) genre or in Foucault's terms, the text produced within a "fellowship of discourse"; cf. Swales 1990;
- d) textual strategy types, i.e. macrostructure, rhetorical types and "aesthetic" features; etc. that the genre requires;

9.3 References, understanding and production strategies in the interpretation of specialist discourse

e) prototypical formulation matrices, i.e. conventional phrases, conventions for interaction, e.g. politeness, etc.

The study in a broader context of interpreters' understanding and production strategies of expert discourse would be highly interesting not only for translation theory, but also for the development of the theories of text linguistics and terminology, as the relation between terminology, LSP phraseology and LSP discourse has barely been the object of research.

To round up this paper, I would therefore like to briefly return to one of the most important issues in this paper and in interpreting: understanding, and discuss strategies for coping with problems of reference in technical / specialist texts^[15].

To be able to interpret, the interpreter has to understand what the speaker says. But the interpreter is usually not a subject specialist. Consequently, various types of problems of understanding occur — terminological problems, and difficulties in understanding the structure of the text. In expert discourse references may not be explicit in surface structure, and coherence is often upheld only with the use of implicit references. How and when does the interpreter "begin to understand" in such a situation?

An example of a terminological problem which is solved by the interpreter during the interpreting session is reported in section [7.2](#) above. In that example, the speaker's term 'matrilineal' was treated in the following way by the interpreter:

1. not translated
2. 'matrial'
3. 'matriarchal'

In this case, the interpreter chooses not to translate the term the first time it occurs; the reason for this may be a) that she does not have time to search for the correct target language term, b) she does not know the target language term, or c) does not understand the source language term.

However, as the speaker continues using the term, it becomes impossible not to translate it, so the interpreter chooses the rendering 'matrial', (which is in fact, in the actual situation, used twice in a row). Finally, the interpreter settles for 'matriarchal'. (None of the translations is correct, but that is not the point here.)

How and when does the interpreter develop 'understanding' in these situations?

According to Sørensen (1992) the main purpose and the very raison d'être of LSP (Language for Special Purposes) texts is deduced from the chain of action of which they form part. When special pragmatic-communicative problems occur, the translator must be able to refer to this chain of actions in order to make relevant decisions. The more consciously the translator is able to do this, the better the translation is. Specialist texts are often tailor-made to satisfy the chain of actions as briefly as possible; knowledge that is supposed to be known by the recipient is not rendered, explicit coherence is not upheld, and the texts abound with special terminology. An LSP text can therefore be like a coded message which can only be decoded by someone who has the necessary expert knowledge, and who possibly takes part in the same chain of actions as the message sender, or at least has a knowledge about this type of chain of actions.

"Lexical cohesion", according to Halliday and Hasan (1976; cf. section [3.2.4](#)), is achieved by selection of vocabulary, using semantically close items, e.g. general nouns, synonyms and hyperordinate concepts. Because lexical cohesion in itself carries no indication whether it is functioning

cohesively or not, it always requires reference to the text, to some other lexical item to be interpreted correctly.

An especially complicated form of reference in texts is "collocation", which is defined as "any pair of lexical items that stand to each other in some recognisable lexico-semantic relation" (ibid.). Such a relation is indirect, more difficult to define and based on the readers' associations. The interpretation of such relations is based entirely on the knowledge of the subject. Relations between lexical entities may be implicit in the surface structure of the text; they are presupposed to be known by the readers/listeners ("given information"). The recipients have to make inferences on the basis of the textual context and their own subject knowledge (Lahdenmäki 1989).

9.3.1 Lexical problems

The conference interpreter has a special problem: as a mediator between subject specialists the interpreter also has to be able to make inferences in spite of his/her incomplete knowledge of the subject under discussion.

But even if the interpreter does know the subject and has a good understanding of subject terminology (often, if not often enough, the interpreter has an opportunity to prepare for assignments by reading the manuscript in advance, looking up special terminology etc.), there may be problems in rendering special terms in the other language. "Knowledge transfer" from one language area to another calls for development of new terminology as well as standardisation of neologisms and harmonisation between languages. As linguistic mediators, interpreters — as well as translators — also take part in these activities.

Not always is the original speaker "helpful" when it comes to neologisms. In this sample, the speaker introduces the neology (Swe.) 'okärlek' ['unlove'], which the interpreter easily converts to (Fin.) 'epärakkaus' ['unlove']. Later on, as the speaker starts to elaborate on this word, the interpreter is forced to do the same:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
förlamningen som kommer när ja upplever okärleken / (W 48)	the paralysis that comes when I experience unlove	lamaantumista / jonka / kokee silloin kun / tuntee tämän / epärakkauden	the paralysis / which / you feel when / you experience this / unlove
okärlek e ju ett s_ e ju ett ord som / man kan använda ja brukar använda de just för de som ja upplever som okärlek de vill säga rejektion / (W 49)	unlove is [?] a word which / you can use I keep using it precisely for what I experience as unlove that is rejection /	siis tämä okärlek rakkaudettomuus / j_ okärlek sitä voi käyttää / silloin kun koen jotakin tällaista rakkauden vastakohtaa /	well this okärlek lovelessness / [?] okärlek you can use that / when I experience this kind of opposite of love /

Bold: "unlove" and its translations

Figure 9-1 Lexical solutions: Unlove

In the second extract the interpreter changes (Fin.) 'epärakkaus' to 'rakkaudettomuus' [lovelessness]. This new translation is probably compelled by the speaker's explanation of the Swedish word. Note that in Finnish, like in Swedish and English, the use of the antonym prefix 'epä-', 'o-' and 'un-', respectively, is an acceptable way of coining a new, but completely understandable word. The interpreter's (Fin.) 'rakkaudettomuus' [lovelessness] is an existing word, corresponding to (Swe.) 'kärlekslöshet' [lovelessness], which is not what the speaker means. Apparently, the interpreter is aware of this, since she changes her translation to (Fin.) 'rakkauden vastakohta' [opposite of love].

The term (Swe.) 'rejektion' [rejection] — which is left unrendered by the interpreter — has been used by the interpreter earlier in this session, when the speaker used the verb form (Swe.) 'rejekterad' [rejected]. The words 'rejektion' and its verb form 'rejekterad' are probably equally unusual words in both Swedish and Finnish. 'Rejektio' in Finnish is still acceptable as a special term, but the verb form *rejektoitu would probably be incomprehensible:

Swedish original	Translation of original	Finnish interpretation	Translation of interpretation
/ om ja f_ blir rejekterad å ja upplevde mej / rejekterad ... (W 31)	/ if I [?_] get rejected and I felt myself rejected	...jos minut torjutaan niin minulle käy / ja / tämä oli siis rejektio siis eeh / eeh / minut torjuttiin kokonaan if I get rejected then I / and / this was a rejection that is eeh / eeh / I was rejected completely ...

Bold: 'rejected' and its translations

Figure 9-2 Lexical solutions: Rejection

9.3.2 Interpretation strategies

The study in a broader context of interpreters' understanding and production strategies of expert discourse would be highly rewarding. Such research would have to cover not only questions about texts per se, but also issues like norms and attitudes within the interpreter group and society at large in the use of textual strategies.

Reports on a more restricted study of strategies for solving lexical problems in the interpreting of neologisms and culture-specific terms are published in the documents ["Translational creativity: Strategies for interpreting neologisms"](#) and ["The interpreter as language planner"](#).



- [Footnotes](#)



Footnotes

- [1] Vamling's study (1982) will be presented in section 2.5, Williams' (1995) in section 3.3.2. In Finland, simultaneous interpreting involving Finnish and Swedish is being studied by Gun-Viol Vik-Tuovinen, Vaasa University; see e.g. Vik-Tuovinen 1993, 1995; Koskela & Vik-Tuovinen 1994).
- [2] I am indebted to Professor Robert de Beaugrande for kindly placing the material at my disposal.
- [3] This has been pointed out by Dr. Antin Rydning.
- [4] For a review of the discussion about this issue, see Carstens (1997).
- [5] Lectures as discourse types have been studied, inter alia, by Piirainen-Marsh (1987) and Monteiro & Rösler (1993).
- [6] Swedish book publisher Thomas von Vegesack once told that his impression as a publisher was that editors tend to "normalise" translated text more than they normalise original language texts (Erling Wande, personal communication).
- [7] "Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the speech exchange in which you are engaged" (Grice 1975).
- [8] Toury (1995) wants to make a distinction between *adequacy* and *acceptability*: "... whereas adherence to source norms determines a translation's adequacy as compared to the source text, subscription to norms originating in the target culture determines its acceptability" (1995:57).
- [9] Cf. Alexieva (1994:184ff.) on the importance of "intertextual redundancy", involving retention of information from previously interpreted texts.
- [10] This is an interesting issue; however, Mackintosh talks about "heavier processing load", while Lambert discusses "deep processing". Erling Wande (personal communication) has pointed out that the two concepts should not be conflated.
- [11] One of the three alternatives in the Swedish referendum on nuclear energy in 1980.
- [12] Cf. Zipf's Law (Zipf 1949). Zipf's Law states that there is an inverse relationship between the length of a word and its frequency of use, so that shorter words are the more frequent words and longer words aren't used as commonly.
- [13] For the mispronunciations 'palvetiin' and 'jumalatartanta', see section 7.3.1.
- [14] Lexical strategies in interpreting are discussed the second paper in the present thesis (Niska (forthc)).

[15] The English language lacks a good term for the practical concept (Ger.) *Fachtext*, (Swe.) *facktext*, (Fin.) *asiateksti*.



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