A MODEL FOR THE ANALYSIS OF TRANSLATION PROCESSES WITHIN A FRAMEWORK OF SYSTEMIC LINGUISTICS

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1. Introductory Remarks

The considerations which will be made in this article can be located within the field of translation process analysis (cf. Gerloff, 1988; Jääskeläinen, 1990; Krings, 1986; Lörscher, 1991a; Séguinot, 1989; Tirkkonen-Condit, 1991). They are based on a research project which I have been carrying out since 1983. The aim of this project is to analyze psycholinguistically translation *performance* as contained in a corpus of orally produced translations from German into English and vice versa. This is done in order to reconstruct translation *strategies*. These underlie translation performance, operate within the translation *process*, and are thus not open to direct inspection. In the first stage of the project, translation processes of advanced foreign language learners were investigated. The results yielded are contained in Lörscher (1991a). The second stage of the project, in which professional translators' and, later on, bilingual children's translation processes are analyzed, is in progress (Lörscher, in preparation).

2. Methodology

As concerns the methodology employed in investigating translation processes, a distinction can be made between methods and procedures for the *elicitation* of data and those for the *analysis and evaluation* of data.

2.1 Methods for Data Elicitation

Among the *methods for the elicitation of data*, the introspective procedure of thinking-aloud (Ericsson & Simon, 1984) is of decisive importance. During the last years, many arguments have been put forward about the advantages and disadvantages of thinking-aloud. Elsewhere (Lörscher, 1991c) seven arguments in favour of this method for eliciting information about translation processes were discussed. As a conclusion, it was pointed out that thinking-aloud is a useful tool for collecting data about mental processes in general, and translation processes in particular, if we take into account the conditions under which the data are externalized and their inherent limitations.

2.2 Methods for Data Analysis and Evaluation

The *analysis and evaluation of data* is carried out by means of an interpretive approach, as this is customary in performance analysis. The primary aim of this approach is the hypothetical reconstruction of sense relations. In the process of interpretive reconstruction, certain data are interpreted as (observable) indicators of (unobservable, mental) translation strategies. These indicators represent the basis for the formation of hypotheses on the mental translation process. - A more detailed description of these phenomena is contained in Lörscher (1991a:56).

The process of knowledge accumulation with respect to translation strategies has a dialectical nature. On the one hand, the analysts must have some knowledge of the concept of translation

strategy in order to be able to ascribe the status of strategy indicators to certain signs. On the other hand, it is only by their indicators that translation strategies are constituted, so that knowledge of them can, to a very large extent, only be gained by means of strategy indicators. Therefore, the analysts must often proceed in a speculative and hypothetical way. They often do not interpret certain signs to be indicators as a result of their knowledge of the respective entity or of the relationship between an indicator and a segment of reality, but rather on the basis of considerations of probability. They can be corroborated or turn out to be false in the course of accumulating further knowledge of the phenomena and of gathering more experience in interpretation.

3. A Strategic Analysis of the Translation Process

Translation strategies have been defined by me as *procedures which the subjects employ in order to solve translation problems* (Lörscher, 1991a:76). Accordingly, translation strategies have their starting-point in the realization of a problem by a subject, and their termination in a (possibly preliminary) solution to the problem or in the subject's realization of the insolubility of the problem at the given point in time.

Between the realization of a translation problem and the realization of its solution or insolubility, further verbal and/or mental activities can occur which can be interpreted as being strategy steps or elements of translation strategies. They can be formalized to yield categories of a model for the strategic analysis of the translation process. Such a model was developed on the basis of a corpus of translations made by foreign language students. In the second stage of the project it was applied to translations performed by professional translators. Modifications of the model were hardly necessary for an adequate analysis of professional translation processes although the quality and structure of the translation strategies and their

elements, as well as their quantitative distribution differ considerably, at least in part.

The model consists of two hierarchical levels. The first and lowest contains those phenomena which can be interpreted to be *elements of translation strategies*, i.e. the smallest detectable problem-solving steps. The second level captures the manifestations of *translation strategies.* T*ranslation versions* can be located within strategies or can comprise several strategies, and are thus *intra-* or *interstrategic* phenomena. More about the hierarchical organization of the model will be pointed out in sections 3.3 and 4.

3.1 Elements of Translation Strategies

Elements of translation strategies can be distinguished as to whether they are original or potential. The former exclusively occur within strategic, i.e. problem-oriented phases of the translation process and are thus original elements of translation strategies. The latter also occur within non-strategic phases of the translation process.

The following 22 elements of translation strategies could be found in my data corpus:

Original Elements of Translation Strategies

RP:	*R*ealizing a Translational *P*roblem
VP:	*V*erbalizing a Translational *P*roblem
→SP:	Search for a (possibly preliminary) *S*olution to a Translational *P*roblem
SP:	*S*olution to a Translational *P*roblem
PSP:	*P*reliminary *S*olution to a Translational *P*roblem
SPa,b,c.:	Parts of a *S*olution to a Translational *P*roblem
SP Ø:	A *S*olution to a Translational *P*roblem is still to be found (*Ø*)
SP = Ø:	Negative (*Ø*) *S*olution to a Translational *P*roblem
PSL:	*P*roblem in the Reception of the *SL* Text

Potential Elements of Translation Strategies

MSL: ***M***onitoring (verbatim repetition) of ***SL*** Text Segments
MTL: ***M***onitoring (verbatim repetition) of ***TL*** Text Segments
REPHR.SL:***Rephr***asing (paraphrasing) of ***SL*** Text Segments
REPHR.TL: ***Rephr***asing (paraphrasing) of ***TL*** Text Segments
CHECK: Discernible Testing (= ***Check***ing) of a (preliminary) Solution to a Translational Problem
OSL: Mental ***Or***ganization of ***SL*** Text Segments
OTL: Mental ***Or***ganization of ***TL*** Text Segments
REC: ***Rec***eption (first reading) of SL Text Segments
[TS]com: ***Com***ment on a ***T***ext ***S***egment
TRANS: ***Trans***position of lexemes or combinations of lexemes
T: ***T***ranslation of Text Segments without any problems involved
→T2,3,.. n: Conceiving a Second, Third, etc. ***T***ranslation Version
ORG: O***rg***anization of Translational Discourse

3.2 Translation Strategies

Translation strategies are procedures for solving translation problems. They range from the realization of a translational problem to its solution or the realization of its insolubility by a subject at a given moment. They are constituted by those minimal problem-solving steps outlined above. The flow-chart represented below shows the interplay of the elements of translation strategies and thus the decision paths available to the subjects when they are engaged in solving translational problems.
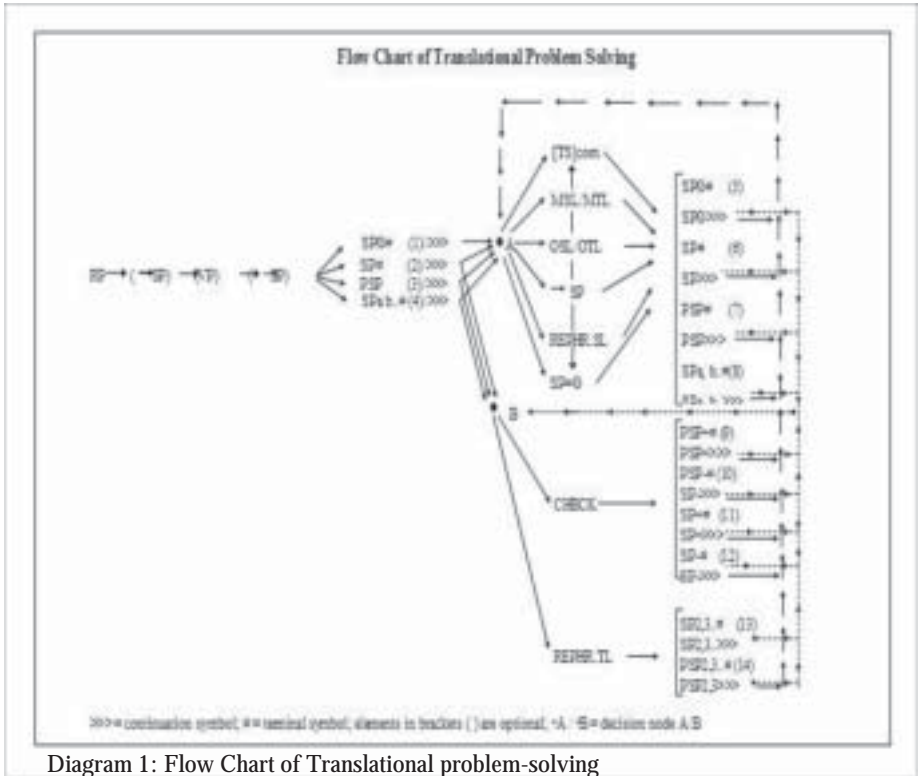
Diagram 1: Flow Chart of Translational problem-solving

Explanatory Remarks to the Flow Chart of Translational problem-solving

After realizing (RP) and possibly verbalizing (VP) a translational problem, and after a potential search for a solution (–> SP), a subject may achieve a solution (SP, SPa,b..) or a preliminary solution (PSP) immediately (2), (3), (4), in which cases the problem-solving process may come to an end (#). This may also be the case when the subject considers a problem insoluble (1). Having found a (preliminary) solution (2), (3), (4), the subject may go on dealing with the problem (> > >) and proceed to either decision node A or B (•A; • B). When te subject cannot find a solution (SPØ), s/he can only proceed to decision node A. Having reached

decision node A, the subject may try to bring about a solution by monitoring SL or TL text segments (MSL, MTL), and/or by re-phrasing SL text segments (REPHR.SL), and/or by (further) search-ing for a solution (–> SP), and/or by mentally organizing SL or TL text segments (OSL, OTL), and/or by commenting on text seg-ments ([TS]$_{com}$), and/or by conceiving a negative solution (SP= Ø). As a result of these problem-solving activities, the subject may either find a (preliminary) solution to the problem (PSP, SP, SPa,b..) or not (SPØ). Here again, the problem-solving process may come to a successful (6), (7), (8) or to an unsuccessful (5) end.

When the subject decides to continue, s/he may either go back to decision node A, which is possible after SPØ, PSP, SP, and SPa,b..; or s/he may proceed to decision node B, which, however, is not possible after SPØ.

Having reached decision node B, the subject continues by rephrasing (REPHR.TL) the respective TL text segment (SP, PSP, SPa,b..) or by testing it (CHECK). The result of the rephrasing is a new (preliminary) solution ((P)SP2,3.., SPa2,3.., SPb2,3.. ..). Here again, the problem-solving process may come to an end, as in (13) and (14), or the subject may proceed to one of the decision nodes again.

After the testing of a TL text segment, the (preliminary) solution may either be corroborated ((P)SP+) or rejected ((P)SP-). In both these cases, the subject may terminate the problem-solving process (9), (10), (11), (12) or proceed to either decision node A or B.

As the data show, the elements of translation strategies combine in specific ways only to build up structures. Accordingly, translation strategies contain one or more of these structures. Following a model for the analysis of discourse, which I developed in a different context (Lörscher, 1983), a distinction is made between *basic structures*, *expanded structures*, and *complex structures* of translation strategies. This is based on the fact that although translation strategies can be highly complex and thus difficult to document and describe in their manifold forms, they can be reduced to a fairly small number of

simpler structures. The application of a generative principle allows the transformation of *basic structures* into *expanded* and *complex structures*.

The types of translation strategies used by the subjects of my investigations are schematically represented as follows.

Five types of *basic structures* occur in my data corpus:

Type I: RP - (P)SP#/SPØ
Type II: RP - →SP - (P)SP#/SPØ
Type III: (RP) - VP - (P)SP#/SPØ
Type IV: (RP) - (→SP) - VP - (→SP) - (P)SP#/SPØ;
              at least one →SP must be realized.
Type V: (…)(P)SPa/SPaØ(…)(P)SPb/SPbØ(…)(P)SPc/
              SPcØ(…)

According to the generative principle, types II to IV can be derived from type I. Type II contains an additional phase of searching for a solution (SP), type III contains an additional verbalization of the translational problem (VP), and type IV contains both an additional phase of searching (→SP) and a verbalization (VP).

Expanded structures of translation strategies consist of a basic structure which contains one or more expansions. Expansions are defined as additional elements of a strategy itself. So, for example, the strategy RP - VP - →SP - VP2 - →SP - PSP contains a type IV structure, i.e. RP - (→SP) - VP - (→SP) - (P)SP, with two additional elements of the structure itself, (VP2, →SP), i.e. with two expansions.

Complex Structures are built up of several basic and/or expanded structures. An example may elucidate this. The strategy VP - SPØ -→SP - PSP contains a type III and a type II structure. The former is terminated by SPØ , i.e. with the subject leaving the problem aside in order to try and solve it later. The second part of the strategy

is the realization of a type II structure. It terminates with a preliminary solution to the translation problem.

3.3 Translation Versions

As shown in the previous sections, the translation process contains both strategic phases, which are directed towards solving translational problems, and non-strategic phases, which aim at accomplishing tasks. The former ranges from the realization of a translational problem to its solution or to the realization of its insolubility at a given point in time. The latter start with the extraction of a unit of translation and terminate when it has been (preliminarily) rendered into TL or when a translational problem arises. Whereas translation strategies can, by definition, only occur within strategic phases of the translation process, translation versions can be located within strategic or non-strategic phases, or can extend from strategic into non-strategic phases or vice versa.

As my data reveal, the subjects often produce several translation versions. They can comprise the entire text or only parts of it (e.g. paragraphs, sentences, clauses, or phrases). The production of several translation versions can have various reasons, of which at least four can be interpreted from the data:

i. If a subject does not succeed in solving a translational problem at the first attempt, s/he may try to solve the problem *in its further context*. This may require a second, third, etc. translation version which potentially also contains non-strategic parts of the translation.

ii. If, at the first attempt, a subject does not succeed in rendering a strategic or non-strategic part of an SL text into TL in a way which is considered adequate, the subject may try to optimize the TL text production by conceiving a more adequate second, third, etc. translation version.

iii. If a subject, while checking a complex TL text segment, finds an alternative for it, s/he may conceive a further translation version which contains the alternative TL text segment plus part of its context.

iv. If a subject translates a complex SL text segment consisting of several strategic and/or non-strategic parts by successively rendering its components into TL, the subject may produce a further version of the TL text segment. Thus, s/he may become aware of the complex interrelationships between the components of the TL text segment. S/he may realize that the components, in order to make an adequate stretch of TL discourse, cannot be put together in the same way as they were successively translated from the SL.

As far as the investigation of translation strategies is concerned, the potential conception of several translation versions by a subject plays an important part because translation strategies and translation versions are interconnected in various ways.

Two cases are of special interest here:

In the first case, a further translation version contains one or more translation strategies. They are called *intraversional strategies*. In the second case, a translation strategy contains one or more translation versions. They are called *intrastrategic versions*.

I. Example of an *intraversional translation strategy* /S28/

Category of T e x t Analysis

vielleicht fang ich nochmal ganz	TRANS	
anders an	$\rightarrow$	T4 ——
(1s) ehm (4s)		$\rightarrow$
vielleicht fangen wir mal so an		OTL
mit dem 'on which the decision'		< MSL>
(1s) ehm (2s)	RP/ SP	
Für die Entscheidung	SP $\rightarrow$	
(9s)		OSL/OTL

der Versammlung		MTL
(3s)		OSL
der Universität Oxford		T
(3s)		OSL
Mrs Thatcher (1s)		Ti.
das vorgeschlagene	Tii.	
(5s)		CHECK
Nee	Tii.-	
den vorgeschlagenen (1s)	REPHR.TL(Tii.)	
Ehrengrad zu verweigern	T	
gibt es kein wie auch immer		
geartetes mögliches Argument		MTL T4#

The example presented above contains the fourth translation version of a complex text segment which consists of several clauses and phrases and which can only be rendered into TL by a transposition of its parts. Within the fourth translation version, a strategy is to be found. The subject realizes a translational problem, i.e. the transfer of the SL text segment 'on which the decision' into TL. After a phase of searching, the subject finds a solution and verbalizes it. The translation strategy thus consists of a type II structure.

II. Example of an *intrastrategic translation version* /S24/

Category of Text Analysis

ach, ‚mit wem' hab ich doch			→T3
vergessen (4s)			
they have to know (1s)	MTL		
when		MTL	
(7s)		RP/→SP	
to use (2s)			SPa = MTL
to whom, no, ah	SPb = Ø T3#		
(3s)		→SP	

,wann welches Deutsch mit wem	VP	
gesprochen wird'		
(2s)	OTL→T4	
they have to know	MTL	
(1s) when		MTL
(2s) they have (1s) to use	MTL T4#	
(10s)	→SP	
oder (1s)		→T5
when		MTL
(2s) ehm (4s)		→SP
to	SPai2	
when to talk		REPHR.TL
		= SPa2
(1s) with whom (1s) in which (1s)	T5#	
kind of German.	SPb	

The transcribed segment of translation transcribed contains a strategy which ranges from the realization of a translational problem to the solution of its last part (SPb). The strategy is complex in nature. It contains a type Va basic structure expanded by a phase of searching (→SP), two embedded elements (SPb = Ø, VP), as well as a fourth and fifth (intrastrategic) translation version of a previously verbalized problematic SL text segment (VP). Version 5 comprises a phase of monitoring of a TL text segment (MTL) and a type Va basic structure strategy which is thus an intraversional translation strategy (Va').

4. The hierarchical organization of the translation process

The discussion of the two examples of intraversional strategies and intrastrategic versions has revealed an aspect of the translation process which is probably of eminent importance for a comprehensive investigation comprising the strategic and

non-strategic dimension of the translation process: the hierarchical organization of the translation process. It manifests itself in two aspects, a *structural* and a *functional* one.

1. *Structural hierarchy* means the fact that certain elements and structures bear a relationship of super- and subordination. The model presented is organized on two hierarchical levels. It analyzes translation performance on the level of the elements of translation strategies and on the superordinate level of the translation strategies themselves. The structures of the superordinate level (i.e. translation strategies) consist of at least two elements of the subordinate level. *Rank shift*, i.e. the fact that one element of a hierarchically lower level can, at the same time, function as a unit on a hierarchically higher level, is thus not possible.

2. *Functional hierarchy* means the fact that the model can capture superordinate *goals*. The hierarchical organization of goals in translation becomes most obvious in *translation versions*. These are derived from a maxim which dominates an entire translation and according to which a translation should not merely convey the sense and/or function of the SL text into TL, but should be an adequate piece of discourse produced according to the TL norms of language use.

In example I., the subject's endeavour to conceive a new translation version ($\longrightarrow$ T4) is superordinate to the entire part of discourse which follows. All utterances between $\longrightarrow$ T4 and T4# are produced under the subject's superordinate aim. This also applies to the intraversional strategy. The subject's endeavour to conceive a further translation version can be considered to be a realization of her global aim which is superordinate to the entire translation, i.e. to produce a TL text which is as adequate as possible and which not only conveys the sense of the SL text, but which also corresponds to the TL norms of language use and its conventions of text production. This aim, which has the character of a maxim, is,

however, not pursued by all the subjects. Lack of knowledge and/ or inability may be the reason(s) for this.

Example II. reveals an even more complex structure of relations of super- and subordination. The transcribed segment of a translation starts with a subject conceiving a third translation version for an SL text segment. Within this version, a translation strategy is initiated by a problem which the subject is faced with when conceiving the version. The strategy continues after the version has been completed. It thus has a partly intraversional character and is dominated by the superordinate aim of the version ($\longrightarrow$T3). The translation strategy itself is superordinate to the versions 4 and 5.

They are dominated by the subject's aim of solving the translation problem which she has realized and verbalized.

5. Concluding remark

To finish this article I would like to point out that the two aspects of hierarchy described before are not merely model-inherent heurisms for a better, more adequate or more elegant organisation of the model, but they refer to characteristic features of the segment of reality under consideration. Any model for describing and analysing translation performance, and possibly performance in general, has to take these features into account.

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