1. Introduction

READING FOR TRANSLATION: INVESTIGATING THE PROCESS OF FOREIGN LANGUAGE TEXT COMPREHENSION FROM AN INFORMATION PROCESSING PERSPECTIVE

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ABSTRACT

The purpose of this article is to look at foreign language text comprehension from a translator's perspective. Contrary to traditional translation theory interpreting the meaning of the text to be translated is not taken for granted but attention is being drawn to the fact that many problems which occur in the process of translation stem from insufficient or incorrect understanding of the source text. In order to retrace the complex task of information processing that is carried out by a translator the research data was collected in the form of Think Aloud Protocols and on the basis of a translation task-based questionnaire. Having such a complementary set of data allows to look at reading for the purpose of translation as a challenging information processing activity which requires a text analysis on a macro and micro level. Tentative conclusions that can be drawn show that the process of foreign language text comprehension is only superficially highly focused on detailed meaning interpretation prior to the onset of meaning transfer. It allows the translator to gain a general insight and sketch out an approximated vision of the target text while many comprehension problems will become apparent only when they hinder the transfer of meaning.

Traditional translation theory did not display much interest in comprehension processes and took successful and sufficient understanding of a source language (hence SL) text for granted. It is in the descriptive approach to translation that the process of comprehension responsible for interpreting the SL text meaning received more attention. Studies conducted by Dancette (1992), House (1986) Krings (1986), Lörscher (1986, 1991, 1997), Thelen (1992) and Tirkkonnen-Condit (1992) show that successful comprehension is a necessary prerequisite for adequate translation and point out that interpreting the meaning of the SL text is not a problem-free process even for professional translators. Thus, it is

possible to put forward a hypothesis that many transfer problems in translation from a foreign language into a native language which put the translator in the position of a decision maker do not have their roots in the semantic/lexical differences between languages but are due to difficulties in the interpretation of meaning conveyed by the source language text. Consequently many mistranslations are likely to be misinterpretations of the SL text meaning.

To test the above hypothesis it is necessary to take a closer look at the actual process of foriegn language (here English) text comprehension for the purpose of translating it into the translator's native language (here Polish). In this article I intend to share the results of my own research (see Whyatt 2000) in which I investigated the process of the SL text comprehension by student-translators in the hope that the conclusions I arrived at will contribute to our understanding of the complex process of text comprehension (cf. Hönig 1991).

2. Some assumptions about the interpretation of meaning in translation

According to the model adopted from Larson (1984:17) the first step in the process of translation lies in 'discovering' the meaning of the SL text as intended by the original author. The term 'discover' already suggests that the meaning is not directly and objectively available to the reader-translator. Meaning is not statically contained in the text "but is rather a function of the interactive process of negotiation into which it has to be reconverted (...) from the only evidence he (the translator) has got: the linguistic tokens and their distinctive arrangement" (House, 1986:181-182). In this sense a text is a frame (Fillmore's 1977) which refers to a given scene or in other words a text is an object that needs to be interpreted (Pym 1993) as showing a 'picture of reality' (Levý 1967) even if this reality is fictional or imaginary.

Since meaning is not directly given by signs but has to be derived from signs, the translator's cognitive effort aimed at comprehending the meaning encoded in a foreign language text involves complex mental operations that are set off by reading and the ensuing processing of linguistic forms and information they carry. It is agreed among translation scholars (cf. Krings, 1986) interested in comprehension processes that reading for the purpose of translation aims at total comprehension which is more intense and deeper than in reading for information (Clark and Clark 1977). To quote Steiner (1975: 5), "comprehensive reading [is] in the heart of the interpretative process" and itself involves an act of manifold interpretation. The translator approaches the text with the aim of transferring its meaning and therefore has to account for every sign and determine its meaning with respect to the linguistic and extralinguistic context it is found in and in view of the way it contributes to the text as a whole (Halliday, 1976:293). According to Sinclair (1980) and Widdowson (1980) although the reader/translator is not able to negotiate meanings by direct confrontation, the reader enters

into an imaginary interaction between the author and himself/herself. "From the re-creation of such an interaction, the reader derives *meanings*, which are of course, always mere approximations as there can never be a one-to-one correspondence between any writer's intention and any reader's (or potential translator's) interpretations" (House, 1986:181). To achieve this aim the reader has to carry out an analysis on two levels:

- a macro-level constituting its broad context where the translator considers information like general idea/message of the text, topic or subject matter, the attitude and purpose of its author, potential addressees, time and place of writing, its sociocultural implications and any other relevant facts;
- and a micro-level which will take into account the immediate neighbourhood of a text item being it a collocation, a phrase, a word group, a sentence or a paraghaph.

Both levels of the analysis are complementary in the sense that they both may contribute to the interpretation of a text item meaning. It is the macro-level of the SL text meaning analysis, however, that is mostly overlooked or not successfully utilized especially by inexperienced translators. A possible explanation for not utilizing macro-contextual information in the process of SL text meaning interpretation might lie in the fact that it is the reader who in order to use the macro-context first has to recreate it drawing insights from information contained in the text and matching it against his/her cultural and general world knowledge. Although this implies that an additional amount of analysis is needed, failing to perform it on the part of the reader/translator may lead to inadequate meaning interpretation of the SL text and its constituent items.

Interpretation, however is a creative process and it has to be admitted that if the translator attempts to deduce the communicative intention that is the meaning intended by the author of the SL text (cf. Kussmaul 1995) there may always be a degree of doubt involved in whether or not the right meaning is comprehended. This uncertainty is more likely to increase when the translator works from a foreign language text into a native one that is in a situation when his/her linguistic and cultural competence may not be sufficient enough to 'discover' the meaning from a not sufficiently known or completely unknown sign (or Fillmore's frame). Yet, no matter how uncertain the reader-translator (or 'transreader' as suggested by Doyle (1991)) might be about the meaning intended by the original author that is conveyed, for example, by a problem word or phrase, he or she will strive to overcome this uncertainty in order to reach the overriding aim which is the transfer into TL forms. Below I would like to share the results of a study I conducted with student-translators in which the process of foreign language text meaning interpretation prior to the onset of meaning transfer was investigated.

3. Experiment design

Since the process of translation is not directly accessible for analysis I decided to make use of Think Aloud Protocols. The method of collecting data in the form of Think Aloud Protocols (hence TAPs) aims at externalizing mental operations that take place in the process of translation (for more details see Borsch 1986). Ten advanced learners of English as a second language were asked to translate a text from English into Polish orally and at the same time verbalize as much as possible their thoughts, problems, doubts and dilemmas. Having completed their oral translations the subjects were asked to put their translations in writing. All the oral translations together with concurrent verbalizations were tape recorded and transcribed and constituted 'think-aloud, talk-aloud protocols' (TAPs) which together with the written translations formed the main body of data. Since the reliability of the think aloud technique is often questioned by some translation scholars the data was further supplemented by a translational task-based questionnaire that was completed by forty students in the School of English, Adam Mickiewicz University, Poznañ. The partcipants of the questionnaire were divided into three groups according to the level of their translational competence: beginners (2nd year students after their first semester of attending a translation course), intermediate (3rd year students in their second year of attending a translation course) and advanced (translation seminar students in their final year of intensive training to become professional translators). All the data were thorougly analysed and allowed to gain some insight into the invisible and inaudible process of SL text comprehension for the purpose of translation.

4. Discussion of the results

The pre-translation stage is marked by the first encounter with the SL text with the prevailing aim being gathering general information about the text as a whole. All the protocol subjects and questionnaire participants approached the same SL text (in English) with the intention of translating it into the TL text (in Polish). The ten protocols were analyzed with respect to the number of readings prior to the onset of meaning transfer, mode of reading (aloud, whispering or quietly), reading strategy (scanning, careful slow reading) and revealed the following results which are presented in Table 1:

Table 1. The quality and quantity of reading prior to transfer for the protocol subjects

SUBJECT	NUMBER OF	MODE OF	READING STRATEGY
	READINGS	READING	
1.	1	Quietly	Quick scanning
2.	1	Whispering	Slow reading without stopping
3.	0		
4.	1	Aloud	Slow reading with stopping at difficult points
5.	2	1 st quietly	Quick scanning Slow reading without
		2 nd aloud	stopping
6.	0		
7.	1	Quietly	Quick scanning
8.	1	Whispering	Slow reading with stopping at difficult points
9.	2	1st quietly	Quick scanning Slow reading without
		2 nd aloud	stopping
10.	1	Quietly	Quick scanning

As demonstrated in Table 1, 80% of the protocol subjects read the text at least once before the onset of transfer. Three out of ten subjects who read the text once chose the mode of reading aloud (one subject) or whispering (two subjects) and similarily to the subjects whose second reading was also aloud chose the strategy of slow reading either with or without stopping at difficult points in the text. The choice of the vocal mode exhibited by 62.5% of the subjects can have a potentially facilitating effect on the subject's understanding of the SL text. The two subjects who expressed their lack of satisfaction with their SL text comprehension after the initial quick silent scanning chose a vocal mode and the three subjects who decided to choose the vocal mode in the first place felt they had achieved satisfactory comprehension when reading aloud or whispering. It is possible that the vocal mode has a direct influence on the speed of reading and consequently on the reading strategy. When reading aloud or whispering the subjects tend to read slowly with better understanding revealed by their intonation pattern. It is also possible to hypothesize that having access to the SL text in

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two modes, that is visual and vocal can facilitate the process of comprehension. Clearly though, the majority of the 62.5% aimed at careful total comprehension of the SL text meaning. In order to maximize their chances for total comprehension, they read the SL text slowly to give themselves sufficient time to process the information.

In view of the fact that the TAPs yield a wealth of data on the process of meaning transfer but they do not reveal adequate data on the decisions taken by the translator prior to transfer it is necessary to use complementary findings provided by the task-based questionnaire. The participants of the questionnaire were asked to give information on the number of readings prior to transfer, mode of reading and they were asked to specify what they were doing during the first reading in order to elicit the type of reading strategy.

The questionnaire results show that 95% of the participants read the SL text at least once before they started to work on its translation which correlates with the 80% established for the protocol subjects.

Table 2. Number of readings for the questionnaire participants

Number of readings	Participants in percentages		
Once	15%		
Twice	55%		
More than twice	25%		
None	5%		

Further results are revealed when we consider the number of readings preferred by the three groups classified on the basis of the level of their translational competence presented in Table 3.

Table 3. Distribution of the number of readings according to the level of competence

Level of translational competence	One reading	Two readings	More than two readings	No reading
Beginners	14%	48%	33%	5%
Intermediate	18%	54%	18%	10%
Advanced	12.5%	75%	12.5%	0%

Two readings prior to the onset of translation were preferred by each group - 75% of the advanced student-translators read the text twice, 54% of the intermediate and 48% of the beginners. On the other hand the group which read the text

more than twice was dominated by the beginners (33%) which could be due to their lower level of linguistic competence in English.

As for the mode of reading, 82% of the participants chose to read the text quietly which is significantly more than 50% of the protocol subjects with the remaining 18% opting for the vocal mode (see Table 4). There were no significant differences between the three levels of translational competence in the choice of the mode of reading.

Table 4. Mode of reading for the questionnaire subjects

Mode of reading	Participants in percentages		
Quiet	82%		
Vocal	18%		
(whispering or aloud)			

In order to elicit reading strategies, the participants of the questionnaire were asked to choose any of the 6 activities that they performed when reading the text prior to translation. All the activities and results in percentages are demonstrated in Table 5:

Table 5. Reading strategies for the questionnaire participants

Activity	Partipants in percentages	
Quick reading for main idea	17.5%	
Slow reading for total comprehension	55%	
Stopping at difficult points	52.5%	
Underlining unknown words	20%	
Using a dictionary	2.5%	
Thinking about translation problems	57.5%	

The results yielded by the questionnaire participants show that the majority of 82.5% read the SL text with the aim of careful complete comprehension which compares with 62.5% of the protocol subjects. More or less even numbers of the representatives of each of the groups opted for slow reading for total comprehension and stopping at difficult points. However, some significant differences were revealed with respect to the level of translational competence in the three last activities, that is underlining unknown words, using a dictionary and thinking about translation problems. The results calculated for each group are demonstrated in Table 6.

Table 6. Distribution of reading strategies according to the level of competence

Level of translational competence	Underlining unknown words	Using a dictionary	Thinking about translation problems
Beginners	33%	9%	48%
Intermediate	9%	0%	64%
Advanced	0%	0%	75%

As indicated by the data, it is apparent that when reading for translation, students tend to aim at total comprehension of the SL text prior to the onset of transfer. The table above suggests that the more experienced the students are the less they concentrate on linguistic items they do not know when analyzing the meaning conveyed by the whole text (the advanced group did not underline unknown words or use a dictionary as did the beginners). Furthermore, the higher the level of competence in translation the greater the tendency to predict or think about the potential translation problems. The fact that when reading for translation students are highly focused on their goal of translating the text and tend to quickly spot or reflect upon specific problems with the transfer of meaning is also demonstrated in the protocols. This suggests that the stage of SL text comprehension overlaps to a certain degree with the stage of meaning transfer. The extent of the overlap becomes more apparent when we evaluate how successful the questionnaire participants felt they were in SL text comprehension prior to transfer.

To elicit information about the quality of SL text comprehension the 40 questionnaire participants were asked to report on the way they comprehended the SL text before they started translating it. The results shown in Table 7 below suggest that the majority of 62.5% understood the SL text more or less but not completely and 40% admitted that they started translating the text although they were uncertain about the meaning of some parts of the SL text.

Table 7. The quality of the SL text comprehension for the questinnaire subjects

How did you understand the text before you started translating it?	Participants in percentages	
Thoroughly	15%	
More or less but not completely	62.5%	
I started translating although I wasn't sure about some parts of the text	40%	
I had serious problems	0%	

This finding suggests that the stage of meaning transfer starts with incomplete understanding of the SL text which further suggests that the two stages in the process of translation will have to overlap. Thus, not only are there some translation problems predicted when reading with the aim of SL text comprehension, but there are also some comprehension problems left out to be dealt with at the stage of meaning transfer. If the stage of SL text meaning interpretation is uncompleted before the stage of meaning transfer in the sense that the meaning of some SL text items will have to be interpreted as it is being transferred then it becomes apparent that the process of meaning transfer begins without the SL text meaning being clearly constrained. This hypothesis has been confirmed by the analysis of TAPs as well as by the participants of the questionnaire who were asked to report whether their understanding of the SL text changed during translation. As shown in Table 8, 72.5% of the participants said that their understanding changed during the process of translating the text as they realized that in fact the meaning of some parts of the text was unclear and called for further effort to be constrained enough for the process of meaning transfer to be possile.

Table 8. Changeability of the initial SL text comprehension after the onset of meaning transfer

Did your understanding of the text change during translation?	Total number of participants in percentages	Beginners	Inter- mediate	Advanced
Yes, I became aware that I misunderstood some parts of the text.	7.5%	4%	18%	0%
Yes, I realized that the meaning of some parts of the text was unclear.	72.5%	65%	81%	75%
No, it did not change at all.	27.5%	38%	9%	25%

Clearly, the majority of participants at all levels of translational competence reported that their initial comprehension of the SL text had to be verified when the process of transfer began. Whereas a minority said that their comprehension did not change at all (27.5%) or changed so dramatically that they became aware that they in fact misunderstood the meaning of some parts of the text (7.5%).

The last point worth mentioning when analyzing the student-translators' approach towards the SL text prior to transfer is their own perception of the meaning of the SL text. Table 9 demonstrates the opinions expressed by the questionnaire participants on which meaning they consider the object of translation.

Table 9. Varying opinions on what constitutes the meaning that is being transferred

When translating a text you translate:	Total number of participants in percentages	Beginners	Inter- mediate	Advanced
The meaning intended by the author of the text	25%	33%	9%	25%
The meaning conveyed by the text	37.5%	28%	64%	25%
The meaning that you have understood from the text	50%	43%	36%	87.5%

The distribution of answers as well as the fact that some student-translators marked either all three 'meanings' or chose two answers which they considered equally valid while others opted for only one shows that indeed in translation one deals with indeterminacy of meaning as noted by Pym (1993). That is to say in each case the meaning is not passively given but its dynamic value has to be constrained via interpretation by every reader-translator. In an ideal situation all three meanings should show a complete overlap, that is the meaning intended by the author should be the same as the meaning conveyed by the text and identical to the meaning comprehended by the reader. In practice, however, the way the intended meaning is expressed in linguistic forms may deviate from the meaning conveyed by the forms as well as from the meaning interpreted by the reader given the forms. Considering the fact that the vast majority on the advanced level of translational competence is clearly convinced that the object of transfer is the meaning comprehended by the reader-translator (87.5%) implies that the more experienced the translator the more aware he or she is of the fact that SL text meaning is comprehended via interpretation. The meaning of the SL text is not objectively and passively given but it has to be determined by the reader. Thus, the process of meaning comprehension calls for active interaction between the text and the reader in which meaning is inferred, negotiated or interpreted. Indeed, the more advanced the students the more aware they are of their own creative involvement in the process of meaning interpretation. What is more as indicated by the data, the process of SL text comprehension is not completed before the onset of meaning transfer. This allows to conclude that there are in fact some comprehension gaps which will have to be dealt with as student-translators attempt to achieve their main goal that is the TL translation.

Oualitative analysis of the data collected in the form of TAPs reveals that many transfer problems especially those with a long processing time have their roots in difficulties with interpreting the SL text items meaning. Difficulties experienced at the stage of meaning transfer may indicate inadequate meaning interpretation of a SL text item therefore all comprehension problems delay the transfer of meaning. It is evident that students seem to concentrate their entire cognitive attention on the transfer of meaning into the target language text without first laying the necessary foundations in the form of SL text meaning analysis. In a way student-translators take the meaning of the entire text for granted and they seem to equate the text's meaning with the text itself, treat it as a static/passive property rather than a dynamic outcome of their own interaction with the text. The semantic analysis of meaning dominates over pragmatic analvsis at the stage of SL text comprehension. Most decisions as to the way meaning is interpreted seem to concentrate on the level of semantics with pragmatic considerations being of secondary importance. General knowledge of the world is rarely called upon to facilitate SL meaning comprehension. This often results in superficial meaning analysis which bears consequences for the way meaning will be transferred and re-expressed in the TL text. There is a visible lack of drawing information from the macro-context of the text. Students do not seem to make enough effort to recreate the situation offered by the text, or in Fillmore's terms the scene they create is vague, unclear and often imprecise. This deprives them of the benefits they could gain from their own store of general knowledge which they could use as back-up for interpreting the meaning of the text they are suppossed to translate. In this way an important constraint on the way the meaning of an SL text item can be 'determined' or inferred is missing or overlooked as the actual process of meaning transfer works on smaller units, such as words, phrases or sentences. If one agrees with Gorlée (1994) and compares translation to a jigsaw puzzle, it is possible to claim that students do not make use of the picture-pattern which they could create if they made more effort at the stage of SL text analysis and instead they are trying to put all the pieces together without keeping their 'mental eye' on the picture they are striving to re-create. This attitude leads to bottom-up processing being in clear dominance over top-down processing visible in overeliance on dictionaries which quite often are not considered helpful in making decisions (as shown in the protocols, as well as the

questionnaires which I have analyzed) but which extend the process of translation and make it a time-consuming and tedious activity. There is a clear lack of self-confidence in inferring meaning from context or interpreting meaning is superficious as many comprehension problems become apparent at the stage of meaning transfer, when the transfer is difficult or not possible because in fact the translator does not fully understand some passages. This, however, is not to be perceived entirely as the fault on the part of the translator-reader, but has to be considered together with the question of the communicative quality of the SL text itself where unclear wording does not make meaning easy to access, may lead to ambiguity or even misinterpretation of the author's intention (which as it was stressed is not directly available to any reader of any text) and consequently makes the task of meaning interpretation and meaning transfer difficult. Finally, the protocols show that the transfer of meaning is predominantly sense-oriented but if there is a severe difficulty in inferring the sense of a SL item, the transfer is often sign-orientated or use is made of semantic 'fillers' (for more details see Whyatt 2000).

5. Conclusions

The translator given the text reads it with the aim of thorough detailed comprehension which, however, is subordinate to the general purpose of meaning transfer. Doyle (1991) calls the task of reading comprehension 'an act of applied, inevitably idiosyncratic, critical reading'.

It is inter-idiomatic reading of and between two languages, a semiotic decoding of a given discourse, with the goal of active and felicitous recoding in a target or second language, the desired cross-idiomatic result. Thus one arrives at the strabismus so characteristic of the translator at work: one eye focused on the text-that-is, the other on the text-to-be" (Doyle, 1991:13).

As a result, some SL text items are immediately spotted as likely to cause transfer problems, some attract quick solutions and some are overlooked even if they later turn out to cause comprehension problems. After the first reading, which is believed to be a standard approach among translators (cf. Rose, 1991), the process of comprehension has not been completed but in fact has just started.

The results of this study suggest that the meaning of the text perceived as a semantic unit of meaning is not fully interpreted before the stage of meaning transfer, yet this is not hindering the onset of meaning transfer which, as is agreed by theoreticians and practicioners alike, is a process which works on smaller units and can be facilitated by the use of dictionaries. Thus the SL text meaning interpretation will have to be carried out parallel to the transfer of meaning. This, however implies that to use Fillmore's scenes-and-frames theory, subjects embark on the task of meaning transfer with the 'scene' (i.e., the meaning conveyed by the text) being quite vague and often imprecise within some

general boundaries sketched out during the first reading carried out by the majority of the subjects but not even so by all of them. Thus, the pre-translation stage cannot be qualified as providing a clear constraint that could be used as an important aid in decision making when choosing an equivalent TL frame. It is plausible, however, that the information gathered about the SL text from the first reading performed by the subjects is capable of providing the basis for top-down processes that can be utilized when searching for solutions to specific comprehension and production problems (Kurcz 1992; Kussmaul 1995). Thus, although the overall scene is blurred with unclear details it helps to constitute what is called by Lörscher (1991) an expectation structure (cf. Kade 1971) that is some sort of anticipated final state which may have a 'magnetic attraction' on constraining problem solving attempts (cf. Lörscher: 1991) and facilitating decisions. As the study I carried out showed, there might be a long time consuming and often treacherous journey before the SL text meaning with its constituting items is sufficiently and successfully iterpreted. Although from that point in the process of translation, the translator is only half way before his/her job is done, it might be the hardest and the most important stretch. For this reason it deserves more attention than this article can offer.

REFERENCES

Borsch, Susane

"Introspective methods in research on interlingual and intercultural communication", in: Juliane House – Shoshana Blum-Kulka (eds.), 195-209.

Clark, Eve - Henry Clark

1977 Psychology and language. An introduction to psycholinguistics. New York: Harcourt Brace Jovanovich.

Dancette, Jeanne

"Measurements of comprehension of the source text: Theory and practice", in: Barbara Lewandowska-Tomaszczyk – Marcel Thelen (eds.), 379-386.

Doyle, Michael

1991 "Translation and the space between: Operative parameters of an enterprise", in: Mildred Larson (ed.), 13-26.

Fillmore, Charles

1977 "Scenes-and-frames semantics", in: Antonio Zampolli (ed.), 55-81.

Gorlée, Dinda

1994 Semiotics and the problem of translation. Amsterdam: Atlanta.

Halliday, Michael - Rugaiya Hasan

1976 Cohesion in English. London: Longman. Hickey, Raymond - Stanisław Puppel (eds.).

1997 Language history and linguistic modelling. A Festschrift for Jacek Fisiak on His 60th birthday. Berlin/New York: Mouton de Gruyter.

Hönig, Hans

1991 "Holmes' 'mapping theory' and the landscape of mental translation process", in: Kitty van Leuven-Zwart – Ton Naaijkens (eds.), 77-86.

House, Juliane - Shoshana Blum-Kulka (eds.)

1986 Interlingual and intercultural communication. Tübingen: Narr.

Kade, Otto

"Some methodological aspects of simultaneous interpreting", Babel 17: 12-16.

Krings, Hans

Translation problems and translation strategies of advanced German learners of French (L2)", in: House Juliane – Shoshana Blum-Kulka (eds.), 263-276.

Kurcz, Ida

1992 Język a psychologia. Warszawa: Wydawnictwa Szkolne i Pedagogiczne.

Kussmaul, Paul

1995 Training the translator. Amsterdam: John Benjamins.

Larson, Mildred

Meaning-based translation: a guide to cross-language equivalence. Langham: University of America Press.

Larson, Mildred (ed.)

1991 Translation: Theory and practice, tension and interdependence. New York: Binghampton.

Leuven-Zwart van, Kitty - Ton Naaijkens (eds.)

1991 Translation studies: The state of the art. Amsterdam: Atlanta.

Lewandowska-Tomaszczyk, Barbara - Marcel Thelen (eds.)

1992 Translation and meaning. Part 2. Maastricht: Rijkshogeschool, Faculty of Translation and Interpreting.

Levý, Jiří

1967 "Translation as a decision making process", in: *To honour Roman Jakobson*. [No indication of editor]. Vol. 3: 1171-1182. The Hague: Mouton.

Lörscher, Wolfgang

1991 Translation performance, translation process and translation strategies. Tübingen:

1992 "Form- and sense-oriented approaches to translation", in: Barbara Lewandowska-Tomaszczyk – Marcel Thelen (eds.), 403-414.

"Translation process analysis and implications for translation teaching", in: Raymond Hickey – Stanisław Puppel (eds.), 2005-2018.

Pym, Anthony

1993 Epistemological problems in translation and its teaching. Spain: Edicions Caminade.

Rose, Marilyn

"Seeking synapses: Translators describe translating", in: Mildred Larson (ed.), 5-12.

Sinclair, John

1980 "Some implications of discourse analysis for ESP methodology", *Applied Linguistics* 1/3: 253-261.

Steiner, George

1975 After Babel. Aspects of language and translation. London: Oxford University Press.

Thelen, Marcel

"Stasis and dynamics of meaning: the lexicon in a two-cycle model of grammar", in: Barbara Lewandowska-Tomaszczyk – Marcel Thelen (eds.), 111-127.

Tirkkonen-Condit, Sonia

"The interaction of world knowledge and linguistic knowledge in the processes of translation. A think-aloud protocol study", in: Barbara Lewandowska-Tomaszczyk – Marcel Thelen (eds.), 433-440.

Whyatt, Bogusława

A psycholinguistic investigation into the processes of comprehension and production: A decision making approach towards the preservation of meaning in

translation. [Unpublished doctoral dissertation. Adam Mickiewicz University, Poznań].

Widdowson, Henry

"Conceptual and communicative functions in written discourse", *Applied Linguistics* 1/3: 234-243.

Zampolli, Antonio (ed.)

1977 Linguistic structures processing. Amsterdam: North-Holland.