Think aloud protocols in the context of translator's Discourse Analysis

Elena GHEORGHIȚĂ
State University of Moldova

Abstract: In den letzten Jahren das Studium der Übersetzung hat eine beträchtliche Verlagerung des Interesses von präskriptiven und eher anekdotischen Einstellungen, hin zu mehr beschreibend, wissenschaftliche Positionen durchlaufen. Eine der Folgen dieser Verschiebung des Interesses war die Zunahme in der empirischen Forschung in den Übersetzungsprozess. Dies wurde durch die Überzeugung, dass, was im Kopf der Übersetzer geht, während sie gegenüber dem, was Wissenschaftler hatte behauptet, könnte auf mindestens so entscheidend für das Verständnis der Übersetzung als einer vergleichenden Analyse des Endprodukts, der übersetzte Text gehen, ist die Übersetzung angetrieben, Bezug auf den Quelltext.

Keywords: Diskurs, Diskursanalyse, Übersetzers Diskurs, think aloud protocol, qualitative Forschung.

The terms *discourse* and *discourse analysis* are highly contested in literature. To claim that one's approach is discourse analytical one does not necessarily tell anybody much; it is not a simple definitional issue, but involves taking up a position in an extremely charged set of arguments. Although there are probably at least 57 varieties of discourse analysis, one way of making sense of the differences between them is to think about broad theoretical traditions.

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First, there is the variety of positions known as critical linguistics, social semiotics or critical language studies[1]. Compared with many types of discourse analysis this tradition has a close association with the discipline of linguistics, but its clearest debt is to semiotics and structuralist analysis. The central semiological idea that a term's sense derives not from the inherent feature of the relationship between the signifier and signified, but from the system of oppositions in which it is embedded, posed a fundamental challenge to "word – object" accounts of language, which viewed it as a process of naming. This has been developed in recent critical linguistic work which has an explicit concern with the relationship between language and politics. The tradition is well represented in media studies, particularly in research on the press, and has highlighted – among other things – the ways in which particular linguistic forms (such as agent deletion, passivization or nominalization) can have dramatic effects upon how an event of phenomenon is understood.

A second broad tradition is that influenced by speech-act theory, ethnomethodology and conversation analysis[2]. These perspectives stress the functional or action orientation of discourse. Rather than looking at how accounts relate to the world, they have been interested in what accounts are designed to accomplish, and in looking in detail at the organization of social interaction.

The third body of work, which sometimes identifies itself as discourse analysis is that associated with poststructuralism. Poststructuralists have broken with realist views of language, and have rejected the notion of the unified coherent subject that has long been at the heart of Western philosophy. Among poststructuralists, Michel Foucault[3] is notable for characterizing his genealogies of discipline and sexuality as discourse analysis.

It is useful to think of discourse analysis as having four main themes:

[1] For details, see for example Fowler et al. (1979); Fairclough (1989).

[2] See for example Sacks et al. (1974).

[3] See for example Foucault, M. (1981), *The History of Sexuality*, Pelican, London.

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– A concern with discourse itself;
– A view of language as constructive and constructed;
– An emphasis upon discourse as a form of action; and
– A conviction in the rhetorical organization of discourse.

Thus, the discourse itself may be taken as a topic. The term is used to refer to all forms of talks and texts, be it natural conversations, interview material or written text of any kind. At this point it is quite necessary to draw attention to the ideas, expressed by E. Coseriu with regard to language in general and discourse in particular. Coseriu considers discourse an individual activity of using language[4]. I support the idea of the Romanian linguist and believe that the discipline mostly does text analysis, but as the term "discourse analysis" is a common label already, we shall use it further. Discourse analysts are interested in texts in their own right, rather than seeing them as a means of getting at some reality which is deemed to lie behind the discourse – whether social, psychological or material. This focus clearly marks discourse analysts out from some other social scientists, whose concerns with language is generally limited to finding out what really happened or what an individual's attitude to a particular event or object is. Instead of seeing discourse as a pathway to some other reality, discourse analysts are interested in the content and organization of texts.

The second theme of discourse analysis is that language is constructive. Potter and Wetherell argue that the metaphor of *construction* highlights three facets of the approach. First, it draws attention to the fact that discourse is built or manufactured out of pre-existing linguistic resources: "language and linguistic practices offer a sediment of systems of terms, narrative forms, metaphors and commonplaces from which a particular account can be assembled. Secondly, the metaphor illuminates the fact that the assembly of an account involves choice or selection from a number of different possibilities. It is possible to describe even the

[4] Coşeriu, E. (2000), *Lecţii de lingvistică generală*, translated from Spanish by E. Bojoga, ARC, Chişinău, p. 237.

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simplest of phenomena in a multiplicity of different ways. Any particular description will depend upon the orientation of the speaker or writer"[5].

Finally, the notion of construction emphasizes the fact that we deal with the world in terms of constructions, not in somehow unmediated way; in a very real sense, texts of various kinds construct our world. The constructive use of language is a taken-for-granted aspect of social life.

The notion of construction, then clearly marks a break with traditional realist models of language, in which it is taken to be a transparent medium – a relatively straightforward path to real beliefs or events, or a reflection of the way things really are.

Another feature of discourse analysis that I want to stress here is its concern with function orientation of discourse, as R. Gill puts it[6]. That is, discourse analysts see all discourse as *social practice.* Language, then, is not viewed as an epiphenomenon, but as a practice in its own right. People use discourse to *do* things. To highlight this is to underline the fact that discourse does not occur in a social vacuum. As social actors, we are continuously orienting to the *interpretive context* in which we find ourselves, and constructing our discourse to fit that context. This is very obvious in relatively formal contexts, such as courtrooms, but it is equally true of other contexts too. That is why very often nowadays we speak not of translation, but of localization, or even transcreation.

Discourse analysis is not an approach that can be used "off the shelf"[7] as a substitute for a more traditional form of analysis. The decision to use discourse analysis entails a radical epistemological shift. Faced with a transcript of a discussion among vegetarians, for example, the discourse analyst would not seek to discover from this why the people involved gave up eating meat and fish, but instead might be interested in analyzing how the decision

[5] *Apud* Gill, R. (2000), *Discourse Analysis*, in Bauer, M. and Gaskell, G., *Qualitative Researching with Text, Image and Sound*, Sage, London, p.175.

[6] *Ibidem*.

[7] *Idem*, p.177.

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to become vegetarian is warranted by the speakers, or how they react to potential criticism, Or how they establish a positive self-identity[8].

In recent years the study of translation has undergone a considerable shift of interest away from prescriptive and rather anecdotal attitudes, towards more descriptive, scientific positions. One of the consequences of this shift of interest has been the increase in empirical research into the translation process. This was driven by the belief that what goes on in the translator's head while she is translating versus what scholars had claimed might go on is at least as crucial to the understanding of translation as a comparative analysis of the final product, the translated text, in relation to the source text. For a number of reasons that will be discussed below, the translated text provides a very incomplete and often misleading way into the translation process, hiding both successful strategies and problems.

Insofar as it is not possible to directly observe the human mind at work, a number of attempts have been made at *indirectly* accessing the translator's mind. One such attempt, which is steadily gaining ground in translation research, is to ask the translators themselves to reveal their mental processes in real time while carrying out a translation task. Such a method of data collection, known as «thinking aloud», is not new to scholars working in psychology and cognitive science. However, insofar as its use in translation studies has only recently begun, its specific implications are still relatively understudied, and the research methodology employed somewhat lax.

The theoretical framework for TAP experiments is provided mainly by the work of Ericsson and Simon[9]. According to their model, information is kept in different memory stores, with varying access and storage capabilities: whereas short-term memory is characterized by easy access and extremely limited storage space, long-term memory is characterized by more difficult access and

[8] Gill, R., *op. cit.*, p.177.

[9] Ericsson, K.A. and Simon, H.A., 1993 (1984), *Protocol analysis–Verbal reports as data*, MIT Press, Cambridge (MA).

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larger storage space. Only information present in short-term memory, that is static and conscious «knowledge states» rather than dynamic and unconscious cognitive processes, can be directly accessed and reported. This distinction is crucial because the cognitive processes to which these knowledge states are inputs and outputs, as well as information that is not currently being heeded, cannot be reported but must be inferred by the analyst on the basis of the verbalisations. A further assumption of this model is that, for verbally encoded information, which can be reported in the same form as the one in which it was heeded, the verbalisation does not interfere with the cognitive process, the only effect of thinking-aloud being to slow down the performance. The implications of this model are multiple, but in our article we shall only consider those relevant to our discussion.

It is only *concurrent* verbalisation of thoughts that can be claimed to exhaustively reflect the mental states of a subject carrying out a relatively long task («which takes longer than ten seconds to complete», according to Ericsson and Simon). On completion of such «long» tasks, part of the information moves on to long-term memory, leaving behind retrieval cues only in short-term memory. In such cases, *post hoc* verbalisation has been found to be difficult and often incomplete[10]. Moreover, ruling out the possibility that a subject is interpreting her own thought processes or even generating them anew, instead of retrieving them from long-term memory, can be extremely problematic under these circumstances. Secondly, in order to make sure that the reports actually reflect mental states without distorting them, it is important that the subject does not feel s/he is taking part in social interaction: albeit obviously a much more natural situation, conversation involves reworking thoughts to make them conform to socially established norms, a process which might sensibly alter the information attended to. The interaction between subject and experimenter (or between subjects) should therefore be avoided or at least reduced to a minimum.

[10] Ericsson, K.A. and Simon, H.A., *op. cit*., p. XVI.

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Thirdly, practice and experience may affect the amount of processing carried out in short-term memory, so that fewer mental states will be available for verbalisation to subjects experienced in a task. This process, known as «automation», is explained thus: «…before overlearning has occurred, processes have to be interpreted, with substantial feedback from intermediate processing stages in short-term memory. Overlearning amounts to compiling these processes, so that fewer tests are performed when they are being executed, hence less information is stored at intermediate stages in short-term memory».[11]

Automatic processes are therefore faster and more efficient than processes which are under conscious control. However, they are also less flexible and more difficult to modify at need. Finally, this model takes into account the effects of personality and personal history over the data collected through TAPs. The amount of relevant information held in long-term memory cannot possibly be controlled for, as an experimental situation would require, nor is it possible to control for the amount of knowledge reported on in relation to the performance given. In other words, there exist individual differences in knowledge and capacity to verbalise thoughts that can heavily bias the data obtained. Clearly, the problem here is one of object of study rather than methodology: individual differences exist, and research should not conceal them. However, it seems advisable to try and limit the effects of individual differences as much as possible, and to take them into account during the analysis, in order to obtain more reliable data that are more easily subject to generalization.

Viewing translation mainly as a problem-solving process, some scholars have put forward the suggestion that it should be possible to study it by means of think-aloud method, and have set up experiments to test this hypothesis. The varying interests and backgrounds of those involved have resulted in a large variety of approaches, which can only briefly be surveyed here. In this subsection the achievements of the last two decades are considered.

[11] Ericsson, K.A. and Simon, H.A., *op. cit*., p.127.

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Most of early studies were conducted with foreign language learners or translator trainees. This was mainly due to the availability of subjects and to the pedagogic concerns of the experimenters. However, the hypothesis was also put forward that the verbalisations produced by professionals would be less informative than those produced by non-professionals, due to their more "automatised" processing style.

As the concept of translation strategy is highly controversial in linguistics, we shall only mention here in passing that the researchers whose work is surveyed below have either avoided a terminological discussion and used the term in a rather undefined, everyday sense, or endorsed the definition provided by Löscher (who, in turn, adapts a definition provided by Farch and Kasper, 1983), according to which a translation strategy is «…a potentially conscious procedure for the solution of a problem which an individual is faced with when translating a text segment from one language into another».[12]

Löscher himself (1986 and 1991) reported on a comparatively large study, in which 48 German learners of English as a foreign language produced 52 translations either into English or into German. They were asked to produce a spoken translation of a written text while thinking aloud and were not allowed to use dictionaries (this was meant to ensure a larger number of problem-solving processes would be present in the protocols). The transcripts of the sessions were then analysed and a number of «translation strategies» were recognised.

In the experiment reported in Krings (1986), eight German learners of French as a foreign language translated a text either into or out of the mother tongue. The main focus of attention here is the identification of translation problems and translation strategies on the basis of think-aloud protocols. With regards to the former, Krings offers the following list of «problem indicators»:

- The subjects» explicit statement of problems;

[12] Löscher, W. (1991), *Translation performance, translation process, and translation strategies*, Gunter Narr, Tübingen, p.76.

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- The use of reference books;
- The underlining of source-language text passages;
- The semantic analysis of source-language text items;
- Hesitation phenomena in the search for potential equivalents;
- Competing potential equivalents;
- The monitoring of potential equivalents;
- Specific translation principles;
- The modification of written target-language texts;
- The assessment of the quality of the chosen translation;
- Paralinguistic or non-linguistic features.[13]

Séguinot (1996) reports on another non-comparative study involving, this time, two professional translators working together at the same task. The underlying assumption in this case is that this everyday setting (the subjects are used to working as a team) would increase the environmental validity of the experiment, without limiting the experimental validity of the results obtained. As a result of this study four types of translation strategies are identified as being typical of «professional» translation.

None of the studies described so far attempt to systematically compare strategies across two groups of subjects. However, finding out what it is that distinguishes professional from non-professional (student or layman) behaviour has always been a major concern of researchers in process-oriented translation studies. One way of investigating this issue has been to compare the performance of two groups on the same task.

In the study reported in Séguinot (1991), two similar texts were translated by students of translation at different levels of proficiency (at the beginning and at the end of their courses in specialised translation). French and English mother tongue speakers translated two advertisements from French into English. The main research focus was once again on the – rather loosely defined –

[13] Krings, H.P. (1986), *Translation problems and translation strategies of advanced German learners of French (L2)*, in House, J. and Blum-Kulka, S. (eds.), *Interlingual and intercultural communication*, Gunter Narr, Tübingen, p. 267.

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notion of strategies. The author suggests that native speakers of English (as well as better students, the two categories are unfortunately not distinguished clearly) translating into their mother tongue show more efficient monitoring and revising strategies, and work more at the textual level, whereas non-native speakers seem to rely more on learned principles and lexical-level processes. This appears to be one of the reasons why translation industry has adopted the rule that one can only translate into one»s mother tongue.

Insofar as automaticity of processing is believed to result from experience and proficiency in a task (Ericsson and Simon, 1993 (1984)), it is not surprising that researchers have tried to determine whether the performance of professionals is recognisably more automatic than that of non-professionals. In order to do so, they have analysed the amount of marked processing in the protocols of experiments where subjects were professionals and non-professionals. The most straightforward hypothesis (that professionals verbalise less than non-professionals) is not endorsed by Jääskeläinen and Tirkkonen-Condit (1991) and by Jääskeläinen (1996 and 1997), who make a distinction between routine and non-routine situations. In the former, professionals do tend to verbalise less than non-professionals, whereas in the latter the amount of verbalisation is not necessarily smaller. Besides, the nature of the verbalisations tends to differ as well. The explanation offered is that «…while some processes become automated, other processes are evoked into consciousness, i. e. the translator becomes sensitised to new kinds of problems».[14]

A further way into the translation process is offered by the evaluations (of self, task, source text, target text) verbalised by the subjects. As just mentioned, a major problem has been the lack of an established research paradigm, resulting in a rather loose treatment of methodological issues (research design, data

[14] Jaaskelainen, R. and Tirkkonen-Condit, S. (1991), *Automatised processes in professional vs. non-professional translation: A think-aloud protocol study*, in Tirkkonen-Condit, S. (ed.), *Empirical research in translation and intercultural studies*, Gunter Narr, Tübingen, p.105.

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analysis, research report) and in a host of studies setting their own categorisations in a theoretical void. Most of the research reports we have been concerned with so far describe the research design summarily, present findings in an anecdotal fashion, do not provide any statistical analysis of their data (and sometimes not even the data themselves) and leave central theoretical assumptions unexplained. The reader thus finds it difficult to assess the validity of the results obtained. Besides, the studies themselves sometimes seem to be loosely set up.

Another problem with most of the studies dealt with here is the excessive reliance on between-subject designs, used to compare the performance of professionals with that of semi-professionals and/or non-professionals This is a very controversial design, which is nonetheless normally posited without further discussion. Even if we had an uncontroversial way of determining what professionalism involves – and we do not, resorting to external measures such as years of experience and official certifications only partially solves the problem – we would still have to take into account individual differences in the ability or disposition to verbalise, interests, involvement with the task, variable effects of the experimental condition and so on. This preoccupation is shared, for instance, by Krings who claims that «individual differences between subjects with regard to their willingness to verbalise might be greater than Ericsson & Simon seem to assume»[15].

Lastly, it is necessary to mention a general methodological problem with the use of think-aloud protocols in translation research. As a method of data collection in cognitive science, think-aloud protocols are recognised as valid only if they have been collected under very rigorous experimental conditions. When think-aloud protocols are used in translation research, these conditions are very often relaxed. Although this is partly due to the justified need to preserve environmental validity, this ten-

[15] Krings, H.P. (1987), *The use of introspective data in translation*, in Farch, C. and Kasper, G. (eds.), *Introspection in second language research*, Multilingual Matters, Clevedon, p.167.

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dency should be checked, as it may result in the invalidation of the results obtained.

The study which makes the subject of this section is still in its infancy: analysis of the data collected has only just begun, and no conclusive results can as yet be presented. The concerns of this paper being primarily methodological, we shall be dealing here mainly with the design and set-up of the experiment. After describing the purposes of the study and the questions it addresses, we shall go on to discuss the methodology adopted, and finally point at some provisional suggestions with regard to experiment set-up.

Provisionally, the following hypothesis has been launched for the study: if we are able to deduce the algorithm of translation process, performed by humans, we should be able to design software that would be capable to produce translation of very specialized texts, without human post editing, paying greatest attention to attention units, automaticity of processing and affective factors.

Five undergraduate students in their last year of study and Master Degree students in their first year of study participated in the study so far. The study was discontinued for two reasons. One of them is to review the experiment design and methodology with the view to make it more strict. Another reason is more down-to-earth: the students are on vacation.

Participants initially were selected randomly, based on their willingness to participate and a brief discussion, which was performed to ensure that they are comfortable enough with the general topic of the text to be proposed. Students were asked to translate a recipe and verbalize everything they do. Texts of recipes were collected in cooking blogs in Russian, English, Romanian. Students were allowed to choose the language they felt most comfortable with (surprisingly, many have chosen to translate a Russian or Romanian text into English). The conversation was recorded and transcribed. Each session lasted around 60 minutes, approximately 40 minutes would go for preparatory stage.

After the first few sessions we decided to stop the experiment and review the methodology. The reasons were the following. First of all, students seemed to have a great difficulty over-

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coming the idea that they are actually being tested. It was also quite difficult to have them talk all the time while they were translating. Thus, the experience of previous research turns out to be quite controversial. Students indeed are quite available, but the preparatory stage of the experiment takes up to an hour. Should the use of students as subjects be dictated by the objectives of the study, it is very worth mentioning to them that they are not being tested and you are not interested in their final product. It is the process that you are looking for.

There is another important aspect worth mentioning. Think aloud method was borrowed from psychology. For their purposes it is indeed extremely important that the observer does not talk to the subject and allows her verbalize everything there is to verbalize. The study of translation, in our view, is quite different. Dialogical communication should not be excluded, but by no means should it be intrusive. At initial stages it is quite welcome to support the participant with short positive phrases, like: "You are doing quite fine!"

Even though some researchers suggest that professionals tend to verbalize less in the process of translation, they may and should be used as subjects. The only limitation is that the subject matter proposed to them should not be something they routinely translate. Professionals will not have the psychological barrier of the feeling of being tested and will require less preparation, as our tentative sessions showed.

The experience also proves that text suggested for the think aloud experiment should be brief. Up to a conventional page, which is 1800 characters. It is the process that is being studied, not the product.

As already suggested above, no final results from the study just described are at present available for discussion. However, the aim of this paper has been to discuss some methodological issues relating to the use of think-aloud protocols in process-oriented translation studies. This research methodology has been shown to provide a very promising framework for the investigation of the cognitive aspects of translation, a field of study that

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could so far only be tackled speculatively. In the last few years substantial effort has been put in this area of research, resulting in a large amount of very valuable insights about the cognitive and affective factors involved in translation. At this early stage of research, the data have been mainly used in a rather informal way, as a source of suggestions and examples about the behaviour of translators: their strategies, affective involvement, units of analysis, evaluations, translation maxims and so on. The ultimate goal of this work has obviously been to shed light on the characteristics of successful translation processes in terms of their underlying constituents. For this reason, the main focus of attention of researchers has been the comparison between producers of «good» and «bad» translation, on the assumption that the quality of the products might correlate with some features of the processes.

There is nothing inherently wrong with this approach. However, now that experience with empirical translation studies has started to pile up, and a substantial number of «informal» hypotheses have been made, it would seem to be time for researchers in the field to start questioning the methodological assumptions of their work more systematically. It is time, in other words, to check the validity of these informal hypotheses by means of more controlled experimental designs and methods of data analysis.

The experiment whose early stages (experimental design and data collection) are described in this paper constitutes a move in this direction, its aim being to address a number of concerns with the experimental validity of the studies discussed in its introductory sections. Apart from the obvious necessity to adopt a scientifically sounder methodology of data collection, the way ahead in process-oriented translation studies would appear to involve the development of a relatively uncontroversial classification of process indicators. Such a classification could limit the proliferation of terminological distinctions in the literature, and provide researchers with an instrument for the systematic analysis and description of think-aloud protocols. Presently, these seem to be necessary steps if the discipline is to proceed beyond the some-what rudimentary stages with which this paper has been concerned.

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