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create some textual effects in the TT different from those of the ST, introducing alternative forms for textual elements that cannot be matched with normally accepted translation equivalences and hence to assure the integrity of the message, etc. (cf. Sager, 1994: 202 and 232).

6.3. DECISION-MAKING WITHIN THE FRAMEWORK OF PROBLEM-SOLVING PROCESS

Translation as a problem solving activity tries to reconstruct choices that might account for some problems appropriately. This implies, among other things, that translation decisions are built on various sources of information as well as on a constant process of forming and testing of working hypotheses (not necessarily correct) about what contributes to the communicative event that the text embodies: meanings, causal relations, consequences, etc. However, decision-making in translation is, to a certain extent, individualistic and intuitive (but not in the sense to being arbitrary), motivated by individual preferences (whether structural or functional) and affected by general personal psychological conditions.

This implies that any text cannot be accounted for unless the translator is well-equipped with translation competence which might comprise grammatical (or linguistic), pragmatic (or communicative), and strategic competencies. The first two competencies refer to knowledge of form and meaning, and

6.2.2. Communicative / Pragmatic Strategies

Pragmatics, taken in its broadest perspective sense, refers to the various contextual aspects of language use. Hence, the pragmatics of translation is assumed to link the properties of the structural / textual information with the translational pragmatic context into a coherent whole (cf. Van Dijk and Kinstch, 1983: 84). Therefore, to realize such a link (and to avoid pragmatic or cultural failure and, hence, to achieve pragmatic equivalence) (Cf. Nida's Dynamic Equivalence) a set of communicative and contextual strategies are required (Cf. Van Dijk and Kintsch, 1983:84).This complex task cannot be accounted for unless a set of adaptive strategies are implemented to adjust the ST world to the TT world. This adjustment involves, among other things, reducing the ST to its central message (cf. Jekat and Klein, 1996: 9).

Therefore, to account for (and counteract)some translation limitations (e. g. whenever one-to-one correspondence between ST and TT does not exist, loss of meaning)lack of matching in the unity of the TT does not exist, loss of meaning, lack of matching in the unity of the ST and its rendering), translators develop different conceptual (and highly individualized) compensatory strategies (cf. Wilss, 1997) which aim at maximizing one's assumptions across the text to be translated. In this they depend on their selections from their own background knowledge and experience to

representation of the optimal manner to reach a certain goal, and / or
to their own judgments of which aspects of the translation context
involve more attention and to what extent (cf. Zammuner, 1987:
258,262). The aim of the CPA, therefore, is neither to suggest ideal
solution to translation problems nor to prescribe typical strategies,
but to investigate the likely restricted / unrestricted set of strategies
adopted by our subjects in their Protocols (See Naoum, 2001:
124-131).

6.2.1. Variability in the Individual Strategies

Are strategies stable all the way through the text comprehension
and / or production, or do they differ at any given time? It is not
always possible to describe whether a certain procedure taken by a
translator is to be considered a strategy. However, the main criterion
is that of deliberateness. Even here, one is not quite sure whether the
researcher's observation of a certain translation behavior was made
deliberately, unless the translator him-or herself determines it.
A major source of variability in the individual translating, as
Seguinot (1997: 109) points out, is the number of strategies
(a variety of choices) available to the translator for performing the
translation task. A set of factors play a role in determining the
translator's choices: skill, the nature of the assignment, the functions
of the text, the pragmatics of the translating situation, etc.

thorough memory-search for background knowledge, activating relevant schemas, producing tentative solutions, and finally equating and optimizing those solutions with the translator's expectation structures (cf. Krings 1987). Therefore, problem solving in a translation task is the outcome of a complex set of cognitive and / or pragmatic processes, e.g. inferencing, decision-making, determining the function(s) of the text to be translated, etc.

6.2. TRANSLATION STRATEGIES

Unlike the instruction-based strategies prescribed by the translational approaches to translation, our CPA emphasizes the translator-based strategies. To carry out a translation task analytically and systematically, translators make use of all possible communicative resources at their disposal (e.g. textual information, contextual cues, prior knowledge); these resources are actualized through constant use and working out of strategies which represent translators' choices or preferences.

The necessity of the use of strategies, hence, lies in the fact that translators (as language users) have a limited STM capacity, and that the processing of information is divergent due to the different kinds of information necessary for comprehension and production, linguistic and non-linguistic or cognitive. Furthermore, the use of strategies is individualistic and, to a large extent, relative process. Translators use strategies according to their own cognitive

Since no specific problem-solving procedures with prescribed sequence of instructions could be applied to every translation problem, translators usually develop problem-solving methods appropriate to the texts they work on. (cf. Wilss, 1990: 28). However, what facilitates developing such procedures is the constant access to relevant knowledge stored in LTM.

It is worthy of note that if a micro-and macro-contextual plan is well-built and the relevant knowledge is available, then, a lot of possibilities concerning how to proceed through the textual problems could be attempted by translators. The most important procedure, however, could be the one which adopts a step-by-step monitoring of translational performance at each transfer cycle until the goal is realized. In other words, solutions to translation problems can be provided by means of round-about ways, since the shortest and the most direct way to solve a problem is not available (cf. Wilss 1990: 28).

From the above discussions, one might ask the following questions: Is problem solving a matter of reproducing (or duplicating) what one has previously learnt? Or solutions are formulated on the basis of acquiring new rules or principles that are applicable to a number of problems? We tend to believe that working out an optimal solution to a translation problem requires a series of basic steps to be implemented gradually, starting from a

predictions; paraphrasing, reaction and. interaction with certain cognitive systems, principles, and/or strategies, etc.) sometimes simultaneously with the comprehension phase especially in the case of more experienced translators.

6. A COGNITIVE FRAMEWORK FOR TRANSLATION REPRESENTATION: SOME OPERATIONAL CONCEPTS

No doubt, part of the comprehension processes becomes explorable when a problem of any type at whatever level arises through the course of text. We intend, then, to focus on the problem solving competence of the translator and the application of problem solving methods to translation.

6.1. PROBLEM SOLVING: METHODS AND TECHNIQUES

Translation is a problem-solving issue whereby the translator formulates hypotheses while reading and modifies those hypotheses as he proceeds. This means that translators are usually guided by hypotheses about what the probable solution is. Relevant to any on-line problem-solving procedures are the resources of information (e.g. textual, background knowledge), the linguistic and contextual cues, heuristics, and strategies that guide hypotheses in a problem-solving situation. The implementation of these goal-oriented procedures requires a series of stages ranging from identifying the problem, hypothesizing solutions, to determining the most likely one.

prior knowledge of the world and experience; secondly, to construct an overall meaning structure of the text – viz., a mental model. Building mental representations, however, is not always as easy as one may think; for on reading a text, the translator performs an overall search of memory for relevant entities (cf. Clark and Clark, 1977: 166). If such a search fails, decisions about meaning could be made by drawing inferences from whatever relevant information is available, including the contextual factors.

The translator's reading task, then, is not primarily a matter of linguistic decoding of meanings of the SLT and re-encoding them in the TL; rather it is a matter of constructing a mental representation (or internal reconstruction of the textual message, including the writer's intention), and then matching or testing it against his/her world knowledge or global assumptions. If the translator's mental representation conforms to his/her prior knowledge, accurate understanding will be reached; if not, inaccurate predications or misunderstanding. In the latter case, either the translator re-reads the text or leaves it for later processing.

After being processed lexically, syntactically and semantically, the text information is assigned a conceptual base through searching for and activating conceptual relations. (Moser, 1978: 375)

From this conceptual base operations involved in producing a text in the TL start (e. g. lexical, syntactic, semantic processing;

content of the text, and eventually to organize the subsequent content of the text.

To put such mode of thinking in a translational context, we can assume, at least, the following: First, equivalence in translation is a relative matter, since it is not always possible to attain the required matching between what the writer has intended to convey and what knowledge structures (i.e. schemas) a translator might hold. Therefore, the meaning intended by the writer will not be the meaning interpreted by the translator. Secondly, the same text could be understood differently by two translators (or even by the same translator at different times) due to what inferences have been made, when, why and how and, hence, attaining different mental models of the same text. Thirdly' we assume that comprehension in general and the interpretive ability of translators in particular are developmental. That is, they correlate with the level of expertise – the more expert translators, the better they are than the less expert translators at relating the internal elements of the textual structure to each other, and at mapping it to their prior knowledge.

5. STRATEGIC TEXT PROCESSING AT THE LEVEL OF READING / COMPREHENSION AND PRODUCTION

When the translator reads a text, s / he has two main objectives, whether s / he is aware of that or not: firstly, to represent the ST mentally by means of integrating text information with his / her

(Cf. Van Dijk and Kintch's functionality and pragmatic assumptions (1983: 7).

Finally, apart from lack of training and practical translational experience, and difficulties in the translator's linguistic knowledge, we assume that failure in carrying out a translation task is likely to be a result of processing difficiency whether at the level of the unit of analysis or at a more general cognitive processing. Failure could be also the result of differences in the use of strategies which, in turn, could be attributed to many other factors: text type (e.g. narrative, descriptive), familiarity with the genre of the text, individual preferences, etc.

In sum, our approach as a workable multifunctional approach to translation assumes that to translate a certain text in a certain way is not a matter of correspondence per se; it is a matter of decision-making and planning on higher levels of reasoning (mind and experience), and this involves complex mental processes, mechanisms and strategies.

4. INFORMATION PROCESSING MODEL OF THE TRANSLATOR'S COGNITIVE SYSTEM

The translator is conceptualized as a complex system of information processing having a set of memory systems and a controlling center. The memory systems consist of a Sensory Memory (SM) which register the input, a Short-term Memory

Building on these cognitive assumptions, a text as a complex set of information cannot be comprehended unless its local and global structures and other cognitive factors such as motivation, beliefs, attitudes, etc. are fully identified and analysed. Such identification and analysis cannot be performed by relying on the rigid linguistic code of the original text, but also on a constant process of making assumptions. To translate, then, is first to understand, which means that a translator should have a similar intellectual ability of the writer and similar expectations of the reader to whom the translation is directed.

The second basic assumption is that translating is an event with two interactive dimensions: cognitive and communicative. That is, translators (as receivers of the ST) construct not only a mental representation of the text and assign it a meaning, but also the communicative context in which the text is embedded and the constraints imposed by the situation. Any text to be translated, then, represents an intended message produced and received by means of a communicative action. Therefore, translators, right from the beginning, are engaged in interpreting the textual elements (e.g. speech acts) and assigning them a function. Assigning pragmatic function to the textual elements is cognitively performed by matching the translator's interpretations with what the writer of the original text (probably) intended them (as readers) to understand

translation environment (cf. Bates and Macwhinney, 1987: 65). Cue validity, as Shreve (1997: 135) points out, is the product of cue availability and cue reliability. The former refers to how often the piece of information is made use of during a decision-making process, whereas the latter alludes to how often the cue leads to a correct conclusion or decision if it is used.

3. BASIC ASSUMPTIONS: COGNITIVE AND CONTEXTUAL

The basic theoretical framework and components (conceptual framework) of the CPA are based on two basic assumptions: cognitive and contextual (cf. Van Dijk and Kintsch, 1983: 4-8).

The CPA assumes that a translator (as a reader) constructs a mental representation of the text. As a prerequisite for the construction process, the translator should have knowledge about the text to be translated (e.g. previous experience of similar texts) and other cognitive information (e.g. beliefs, attitudes, motivations, goals). The mental representation of the text / context, we assume, does not have a specific order, rather one source of information is evoked automatically when necessary for understanding (or to facilitate understanding). We also assume that matching one's interpretation with the text itself dose not have a fixed order; rather matching could take place at any stage of processing depending on the strategies that a translator might adopt.

THE NATURE OF THE HUMAN MIND IS COGNITIVE;
THE NATURE OF THE HUMAN NATURE IS PRAGMATIC

These two dimensions represent the invariant and the variant elements of the translation process, respectively (Cf. Newmark, 1988: 43).

2. GENERAL GUIDING PRINCIPLES

The basic principles on which the CPA is based can be summarized as follows:

1. Selecting and developing whatever is needed for carrying out a translation task is a principle that should always be taken into account in any analysis of a translation task. This principle is naturally guided by the purpose of the task itself, and by several cognitive factors in the context of translation, in addition to knowledge, beliefs, values, norms, preferences, etc. These factors differ from one translator to another. Consequently, their comprehension, their use of strategies and reproduction of the ST and the TT are different.

2. The nature of the data and the active (vs. static) role of the translator in formulating and adapting the input text are crucial in determining the translation process and the translational knowledge that a translator has.

3. For carrying out a translation task, the translator (depending on his / her mental faculties) is constantly looking for cues from the

However, the two aspects of the translation process-viz., cognitive and pragmatic, are mostly interrelated in a way that is not usually clear.

Concerning the dynamism according to which the CPA works, we argue for a deeper level of processing of the incoming information to the mind of the translator, especially how it is represented and stored, and how it is retrieved when required. In other words, the CPA tries to account for what goes with what, when, where and how, focusing on translation strategies. The approach also makes many assumptions on the main components of the translation process - viz., reading / comprehension and reconstruction / production. Verifying these assumptions, which are based on the verbalized thoughts of the translators and the Information Processing Theory, might be useful in deducing insights to be manipulated in various fields of knowledge, including, of course, the theory of translation. Therefore, our theoretical account of the CPA tries to capture the notion 'translation' from cognitive and pragmatic perspectives, assuming that cognitive and pragmatic processes are always at work during the various stages of the translation process. This mode of thinking is philosophically grounded in the inherent features of the human mind and the human nature:

each stage in the translation process, a number of strategies is required to effectively account for a translation task.

The background for this partly theoretical and partly empirical approach is, by all means, non-linguistic; it is interdisciplinary in that it draws on the findings of linguistics, philosophy, pragmatics, psycholinguistics and cognitive psychology. This paradigm specifically relies on the conceptualization of the real communicative process between the text and the translator, as both reader and mediator; and the principles and methods of text deconstruction and reconstruction that the translator him-or herself discovers and finds adequate to account for in a translation task.

The CPA, with the cognitive aspect highlighted, indicates the greater influence of cognition on the translation task and how it determines or influences its pragmatic aspect. The cognitive aspect of the translation process deals with the structure of the mind (i.e. memory framework) which can be rationally materialized by means of reasoning and the linguistic behaviour (e.g. descriptions and explanations) that a translator might exhibit. A cognitive approach has, then, to do with decision-making, planning, etc. in order to attain certain goals. In this sense, the translation process is seen as a goal-directed activity which requires a set of plans or strategies concerning the cognitive, communicative (socio-cultural) and linguistic actions (cf. Costelfranchi and Poggi, 1987: 244).