Text Comprehension and Implications for Translation

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Abstract

A thorough understanding of how translators (as goal-directed readers) understand written texts and how they reconstruct the meaning of the text in the Target Language is a prerequisite for translation theory and practice.

The traditional conception of translation, which emphasizes knowledge assimilation, does not seem to have developed translation studies to an extent, which could be a reliable theory. Therefore, we believe that particular insights from text-comprehension theories are likely to be influential in building a reliable theory of translation. For instance, constructivist theories conceive of translation or any act of learning as a process of reconstruction of meaning of a Source Text through a number of conceptual processes: inference making, problem solving, decision-making and many other metacognitive processes.Therefore, in this sense, translation is not only a matter of extracting meaning from a text, but also of constructing knowledge (about the text).

1. Introduction

No doubt, translation involves a deep level of comprehension—an 'explanatory adequacy', to use Nida's term (1964:9). This, in turn, requires employing an approach that could account for the minute details of the process of translation, especially in the comprehension phase. That is, translation requires a comprehension model in the first place; this model needs to be incorporated in a translation model.

Comprehension in a translation task involves, in addition to mapping one's background knowledge onto the position depicted by the Source Text (ST) and assigning global structures to the linguistic input (van Dijk, 1980: 202), a cognitive awareness or a cognitive effort of how to communicate one's understanding of the message through appropriate linguistic forms in the Target Language (TL). This cognitive effort relies on how to make inferences when the text does not reveal things explicitly; what strategies should be used; and what linguistic and /or contextual cues are available, etc.

Section 2 briefly surveys and critically reviews some influential models of comprehension process. Section 3 tackles comprehension in a translation task emphasizing the role of knowledge structures and coherence relations; it also comments on some conceptual /

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meta-cognitive processes: problem-solving, decision-making and strategies. Section 4 discusses some comprehension difficulties in a translation task. Finally, section 5 provides some conclusions and suggestion for future research.

2.   *Models of Text Comprehension*

Many text processing models have been proposed since the late 1970's (Kintsch's Construction-Integration Model 1988, Gernsbacher's Structure Building Framework 1991, Mckoon and Ratcliffs Minimalist Theory 1992, and Sanford and Garrod's Scenario-Mapping and Focus Model 1998 among many others). All of these models, as the relevant literature reveals (see Frazier and Rayner 1982, Kintsch 1994), are competitive; they build on each others conclusions. They differ only in the criteria they propose for attaining their goals.

This paper draws on the findings and conclusions of these models, subsuming and integrating some of their basic insights into a general translation model.

2.1 Kintsch's Construction-Integration Model (CIM)

our understanding of text comprehension owes much to the successive models proposed by van Dijk and Kintsch (Kintsch and van Dijk Text Comprehension Model 1978; van Dijk and Kintsch Strategic Model 1983; and Kintsch Construction-Integration Model

1988). Due to the limitation of space, we will provide the reader with the summary of the most developed model, viz Kintsch's (1988)CIM.

The model gives special attention to the cognitive states (or thoughts) as being the building blocks in the process of comprehension. The sequence of these cognitive states forms what is known as 'cognition'. The CIM provides an interpretation framework for comprehension. The core issue on which it is built is the propositional representation from the text being interpreted. In CIM, Knowledge is represented as an interrelated and associative network of propositions, which comprises three levels of representation: surface structure, database and situational model. The text-(or data-) base refers to the construction of text-based propositional relations; that is, relations that are directly cued from syntactic and / or semantic knowledge. The product of the text-base construction is usually an incoherent network of propositions which needs to be supplemented by more relations from the reader's world knowledge and experience. That is, constructing a mental model of the situation in a text.

In order to represent the text coherently in the mind, two processing phases are involved: Constructing concepts from the text and the world knowledge through the process of concept activation, and integrating only the highly contextually relevant concepts in the

text into the structure of the previously read text in the Long Term Memory (LTM).

The model also distinguishes between micro-and macro structures to refer to the local text properties and the global organization of the text respectively. The former is generally constructed either by the text elements or by the reader's knowledge (or schemas); the latter is cued in the text via titles, topic sentences or leading ideas.

Among the basic ideas proposed by CIM is that propositions cannot capture meaning unless being given an appropriate interpretation. This can be achieved through the integration of the text-based and knowledge-based propositions to from a model of situation described in the text.

Arguing for Kintsch's Model, Ericcon (1988: 301) confirms that extraction of the meaning from a text is accomplished by bottom-up processes resembling perception more than problem-solving. The meaning, hence, emerges directly to attention without any intermediate reportable states (e. g. thinking-aloud protocols).

2.2 Gernsbacher's Structure Building Framework (SBF)

According to SBF, the goal of comprehension is to build coherent mental representation or structures which represent all the meaningful units in a text (e. g. sentences, paragraphs, etc.). As a

foundations for their mental structures, and then develop their mental structures by mapping on information when that incoming information coheres or relates to the first step. Gernsbacher (1991) points out that comprehenders first lay previous information. However, if the incoming information is less coherent, comprehenders employ a different process: they shift and initiate a new substructure and so on.

This model gives special attention to the role of interference (or interfering information) during the process of comprehension. Such interference could be reduced by the mechanism of suppression (Gernsbacher and Shlesinger, 1977: 119). The more efficient suppressing the interference is, the more skilled the reader / translator is at comprehension.

2.3 Mckoon and Ratcliff's Minimalist Theory (MT)

This theory, as Sanford and Garrod (1998: 160) point out, opposes the idea that the mental representation of a text is rich in the products of inference making. For the inferences that are drawn when a text is read may be greatly exaggerated. The MT also contrasts the constructivist view of text comprehension with its own minimalist view of inference. According to MT only   two classes of inferences are encoded during reading: those   based on easily available information and those required for   local coherence

(Mckoon and Ratcliff 1992: 2, cited in Garnham 1994: 1134). Garnham (1994: 1135) criticizes this position in   that it misunderstands the notion "constructivism" and "mental models".

The idea of local coherence, central to the minimalists, depends on the notion of propositional representation of the text   be comprehended, and only when the local coherence cannot   be attained through the text-derived propositions, one tends to   use the general knowledge to create bridging inferences. Yet   this view as Sanford and Garrod (1998: 170) point out, "runs   into difficulties in cases which the semantics of words, in   sentences underspecify the situation the sentence is   denoting".

2.4 Sanford and Garrod Scenario-Mapping and Focus (SMF)

Unlike Kintsch's CIM, which emphasizes the propositional interpretation of a text, the SMF is based on the mapping of text onto background knowledge. According to this model, a complete interpretation cannot be achieved unless whatever is written (or said) be related to the background assumption and knowledge of the producer at the earliest opportunity.

The model proposes that the process of mapping (termed 'primary processing') "comes to be represented as a set of mappings from tokens held in some kind of working memory that denote things mentioned in the text to representations in Long-Term Memory (scenarios or situation-specific knowledge)...writers and speakers

typically try, through their productions, to assist readers and listeners in finding appropriate scenarios." (Sanford and Garrod, 1998: 161).

The main objective of the model is to determine the background situation in which additional acts of interpretation might be set (ibid.: 169). In other word, if an appropriate mapping between the input text and the background knowledge is realized, futher representations (e. g. proposititional) could be easily developed.

The problem with this model, at least in the context of translation, is how writers are able to estimate what background assumption and knowledge their prospective readers / translators might have in their minds.

The models presented above do not name definitely the principles or criteria that direct which inferences to be selected from the large number of inferences that could be activated. They also do not clearly identify the textual causal relations and how events are interrelated into a network of representation of the text. There is also no reference in the models to what the reader / translator might add or delete what s/he believes could realize a more coherent mental representation.

3. Comprehension in a Translation

To comprehend means to extract information from the text and to represent it mentally, i. e. to integrate the textual new information with what one already knows (cf. Clark and Clark, 1977: 154) about.

Therefore, comprehension of a certain text does not require only a linguistic level, but (more importantly) a complex interaction with cognition. Such an interaction yields a coherent and meaningful representation of the text world or the conceptual context of the actual text. In this regard, Dancette (1997: 78) points out that comprehension does not operate only at the semantic level but also at the conceptual level where all informational input is integrated.

Text comprehension, in this sense, is not a matter of knowing language structure but a matter of global, informational understanding (Richardson, 1989: 83). That is text comprehension is not only a product of the knowledge of grammar but also the product of many cognitive processes, systems and strategies operating on pragmatic information.

3.1 The Role of the Pre-existing Knowledge Structures

Whatever procedures are performed in order to reach a certain level of comprehension (e. g. using strategies, using linguistic and / or contextual cues, making inferences or drawing implications), the essential role of knowledge and knowledge structures cannot be sidestepped. For comprehension is, first and foremost, a function of

knowledge of the language and of the world, i. e. the experiential knowledge (Schank and Abelson, 1975).

The type of knowledge a translator has and how it is structured is far more important than the graphic representation of the textual information. In fact, only this could account for how to actualize links between linguistic and non-linguistic (i. e. what we know of the world and the pragmatic situation) elements of information. An utterance cannot be adequately understood by merely depending on its linear or its hierarchical representation. Comprehension takes place when the translator (or a language user in general) adds part or all of his/her own knowledge to the information provided by the text, and/or when s/he makes use of the situational context (cf. Weisberg, 1980: 53). Therefore, given what one knows   about certain conditions, situations, etc., one could infer the intended meanings though these are not explicitly stated.   If however, one knows nothing or a little (or even when one has unsystematic representation of certain knowledge) about such conditions, one would be at loss concerning the movement of events configured in the text and their implications (cf. Bransford and Johnson, 1972).

In sum, the knowledge pulled out and actualized from one's memory store provides a framework for the text being read (cf. van Dijk and Kintsch, 1983: 46); and that the translator's ability to match

this knowledge and the textual information (or descriptions) leads to a successful comprehension.

3.2 The Central Role of Coherence

Understanding of the text becomes possible when all relevant coherence relationships (e. g. referential, causal / logical, etc.) have been made. Then, the translator reconstructs the bit-by-bit mental coherence he or she has mutually built in order to produce (or with the intention of producing) an equally coherent text in the TL. That is, decomposition of the assumed comprehended text follows from 'coherence'. Coherence can be seen as something like decomposing the parts of a car and instead of assembling the same parts, spare parts are used, not necessarily in an exact manner as originally fixed, to fulfil a similar function with an assumed coherence; else the notion of 'text' would be inapplicable. Moreover, the attained representation itself could not be an outcome of only the textual events (and connection among the events). The translator might add or delete what s/he believes could realize a more coherent mental representation and this is, to a certain extent, related to the translator's intuitions about what causes what in the text.

3.3 Problem-Solving Procedures

One cannot prescribe ideal solutions in the comprehension phase; translators (like any other readers) have their own procedures

for representing the world depending on how they perceive or identify the problem and how they conceptualize it. Perception and conceptualization, in turn, are based on how the translator invest all resources of information available to him/her (e.g. background knowledge, the current problem in Short-Term Memory, and other linguistic / textual and contextual elements in the text) in order to come up with a solution that conform to what is actually meant or intended by the writer.

Solutions can be reached either by providing the text with extra information or instructions or by modifying one's understanding again and again. The former can be realized by means of instructions or external search strategies (e. g. dictionaries); the latter, which is more likely, is guided by hypothesis making and determining the most likely ones. This of course, is done by means of operating successful procedures (e. g. means-end analysis) and working out strategies to reach a decision concerning a translation problem at the level of comprehension. Procedures and/or strategies are always translator-based and goal-directed. That is, they are based on the translator's understanding (or cognitive representation) of the ST.

3.4 Translation Strategies

Due to the various constraints imposed on comprehension (e.g. time factors, lack of relevant knowledge), translators develop

strategies that could efficiently account for the content (and probably the style) of the ST. Inferencing strategies, paraphrasing and dictionary-search strategies are basic strategies in ST comprehension. Inferencing comes into work when a certain item is totally unknown to the translator, or the meaning cannot be attained for some reasons' or what is known is not helpful, or when dictionary srearch fails to provide an appropriate equivalent. On the other hand, Paraphrasing facilitates understanding the meaning by means of the semantic processing of the ST. It links the abstracted meaning of the text with both textual knowledge and the stored semantic, episodic and procedural knowledge in the mind of the translater, i. e. with the translator's interpretation of the text (cf. Kussmaul, 1989:374).

In sum, comprehension problems can be managed by applying one of the following problem-solving procedures: simplifying the ST by means of rephrasing; compensating the missing portions of information by means of questioning the text; rereading the preceding portions of the ST; paraphrasing the ST by means of approximations, circumlocutions or descriptions; retrieval strategies, i. e. making use of some words in the ST as retrieval cues to find out whether associative relations to the given cue and/or relevant information in LTM do exist.

4. Comprehension Difficulties in a Translation Task

Comprehension difficulties in any translation task are, in one way or another, related to the following questions : How the previously stored knowledge and experience (or cognitive resources) of the translator interact with the integration of new material? To what extent the mutual knowledge of the writer and the translator (as a reader) on the one hand, and the translator (as knowledge processor) and TL readers on the other hand, facilitate the translation process? Comprehension difficulties could be also related to the limitation of STM and inefficient processing.

Since background knowledge is mostly culture-specific, translators find it difficult to activate relevant knowledge from their mental store. Comprehension problems become more serious, especially when the translators do not have relevant background knowledge, or when there are differences in the background knowledge of the translator (as a reader of the ST) and the TL addresses. Such problem can be settled by applying further cognitive resources (e. g. making implicit information explicit). However, one might expect a certain amount of shared knowledge between the translator, the writer and the reader in the actual context of translation with that of the writer or the translator's readers   in the TL.

To reduce the cognitive cost that results from trying to unify the shared cognitive environment of the participants in the translation task, as Sager (1994:101) confirms, the knowledge content of the

message must be adjusted (or tuned) in order to narrow the gap between the knowledge configuration as expressed by the writer and that of the translator as the recipient of the message. If this is wittingly employed, it would serve as a criterion for a successful comprehension (and consequently) for an adequate act of translating.

Comprehension problems that stem from the limitations imposed on the processing capacity of STM, on the other hand, might result in the inability to recognize words automatically (i. e. decoding) and to synthesize the content of the ST. Excessive translation practice and the optimal use of strategies could manage reducing the cognitive load exerted on STM.

Another problem of comprehension could be related to the translator's inability to monitor his/her understanding of a text and other cognitive processes. This meta-cognitive skill includes "Keeping track of the success with which one's comprehension is proceeding and ensuring that the process continues smoothly by taking appropriate remedial action" (Baker, 1982: 282). Indications of such monitoring could be traced throughout the translation process, as when translators use some remedial strategies, e. g. posing question for themselves concerning the title, lexical items, coherence, or whether some ideas are consistent with one another.

5. Concluding Remark

No doubt, the translator's objective cannot be other than reconstructing the ST message in a way that better suits the expectations of the TL reader. To realize this goal-directed task, the translator should assume at least three basic roles: as an analyst of the language of the text and its culture; a processor of textual information; and a communicator of the situation of the text (Naoum, 2001, 70-73). Moreover, these roles are basically related to the translator's ability to figure out the linguistic context through constant reference to the physical, social and mental realities of the text. This act of mediation is constantly feedbacked by exploring different sources of information (e. g. the set of memories, the ST writer and the TL reader's expectations).

The actual interpretation and reconstruction acts (the two main process in the meditative role of the translator) depend on certain interpretation choices, decisions and strategies in order   to attain an adequate comprehension (and reconstruction) of the   ST message and, hence the translation product will be less   liable to error.

Our present programmes for teaching translation and / or translators training (as well as research in Translation Theory) are highly based on the linguistic dimensions of the text to be translated. Whereas other important dimensions (e.g. philosophical, psychological and pragmatic) are almost sidestepped. Therefore, to

promote translation studies (at the comprehension phase in particular), certain insights from psychology (cognitive psychology) and psycholinguistics should be incorporated in translation teaching programmes. If such programmes, which explore the underlying mental processes (as well as communicative and pragmatic conditions) are adopted, significant steps towards the development of translation theory and practice will be achieved.

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ملخص

معرفة وتضمين النص للترجمة

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إن عملية فهم المترجم للنص فهماً شاملاً (بوصفه قارئاً له هدف محدد) وكيفية إعادته لبناء النص في اللغة المترجم اليها تعد شرطاً أساسياً في نظرية الترجمة وتطبيقاتها العملية. ويبدو أن المفاهيم التقليدية للترجمة والتي تؤكد على استيعاب المعرفة لم تنهض بالدراسات الترجمة إلى مستوى يمكن عدها نظرية يعول عليها. لذا، نعتقد أن توظيف مفاهيم ورؤى معينة من النظريات التي تختص بالاستيعاب والفهم قد يكون لها أثراً فعالاً في بناء نظرية ترجمة هادفة. فعلى سبيل المثال، ترى النظريات البنائية الترجمة (او أية أساليب أخرى خاصة بالتعلم) عملية إعادة بناء معنى النص الأصلي من خلال عدة عمليات مفاهيمه أو ادراكية كالاستدلال وكيفية التعامل مع المشكلة واتخاذ القرار بشأنها وعمليات ادراكية صرفة أخرى. ولذا فإن الترجمة ليست فقط مسألة استخراج المعنى من النص الأصلي وإنما عملية بناء معرفي جديد للنص ذاته.

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