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## Text analysis model for enhancing translation memory outcome

### *Abstract*

Translation Memory (TM) and new technologies in general have revolutionized the practice of translation in recent years. In many professional circles, it is believed that a lot of tedious work is alleviated by the use of TMs and “terminology consistency is maintained” by integrating termbases with them. However, some sceptics argue that these optimistic views tend to overlook the side effects of the new tools. They assume that target texts’ quality may be at stake since translators seek equivalence at the sentence level at best, thus, neglecting the research findings of text linguistics that stress the importance of co(n)textual factors in the textual choices. The question is, therefore, how an appropriate model of text analysis can help overcome the shortcomings of TM tools. I draw on the Hallidayan Systemic Functional Linguistics (SFL) and Reiß’s text typology to provide a model of textual analysis that is vital in striving for equivalence at the textual level. In this paper, I do not propose an alternative to TM’s current functioning but suggest a model of identifying the text’s profile that can guide translators in using TMs judiciously and critically.

## 1 Introduction

It is not enough for the translator to take care of the words and phrases in a BOTTOM-UP manner, hoping that the larger discourse units, and ultimately the genre-fidelity will thereby automatically take care of themselves: this will not happen, and the result will be genre-infelicities which read like weak parodies. (James 1989: 36)

New technologies have become part and parcel of our daily lives. They have become as necessary as eating one’s meals or doing one’s chores. With technologies, humans are much better performers in a wide range of fields. As early as the 1960s, the Canadian media theorist, McLuhan (1966), perceived their developments as extensions of human capacities. In translation, technological tools have undeniably shaken the way this human activity is perceived and practised, in the digital age. The translation industry has undergone major shifts in its organization and environment with the advent of Translation Environment Tools (TEntTs). Translation Memories (TMs) and Terminology Management Systems (TMSs), being the focal components of these TEntTs, have been seen by many translation providers and clients with optimism in regard with their speed and productivity gains. TM vendors claim that the future looks quite promising with TM, which is designed so that “the translator need never translate the same sentence twice” (Macklovitch/

Russell 2000: 138). This statement is, however, seen by some as a simplistic assertion based on the assumption that meaning can be traced at the sentence level, unproblematically. For the sceptics, such affirmations naively overlook the strong relationship between the surface structure of a sentence and its context, as Systemic Functional Linguistics has come to teach us (see Halliday 1985). Many scholars have expressed their reservations as to the ability of TMs to cater for the complexity of language and texts. The concerns were mainly directed to TMs' translation quality and language standards (Bowker 2005; Pym 2011).

Academics' concerns arise from the findings of research about text and textuality. TMs are, after all, built on the reductionist assumption that any two sentences with the same wordings have exactly the same semantic and pragmatic load. Research in textuality and pragmatics, however, has proved that the sentence as a linguistic entity is dependent on its co-text, i. e., it acquires its full meaning from its neighbouring sentences in a text. In other words, a sentence gets its context from the other sentences in the same text and from the context of the text, at large (see De Beaugrande/Dressler 1981; Baker 1992; Hatim/Mason 1997; Gutt 2000; House 2015). Also, neither the text's generic structure, nor its function is guaranteed by translating its segments independently and separately (see Hatim/Mason 1990, 1997; Hatim/Munday 2004). Therefore, text has been considered as the minimal translation unit since the text linguistic turn in linguistics in the 1970s (see Reiß 1971/2000; House 1977).

With the increasing use of TM, Bowker (2005, 2006) was among the first researchers who raised the issues of quality and textuality, overlooked by TM developers and potentially by end-users. She contends that since co(n)textual factors are neglected in TM design and use, translation quality cannot be guaranteed unless there is high awareness from the translator of the importance of these factors.

In the current paper, it is argued that TM can still be useful and beneficial to the translation industry, provided that the translator is trained to translate 'textually'. In other words, for TMs' use to be successful, there should be awareness of the importance of the text's textuality. Therefore, the question is: what aspects of textuality should be taken into account during and after the translation process? The objective of this article is to suggest a text analysis model that can help translators overcome TMs' weaknesses.

Section 2 of this paper will state the proclaimed benefits of TMs and the reasons for their popularity. Section 3 will tackle the incompatibilities between the understanding of 'translation as text' and TM design. Some reservations will be stated, in this regard. In section 4, a detailed analysis of different text analysis models will be introduced, followed by a suggested eclectic model for TM translations assessment (section 5). The article will be concluded by some remarks and further research suggestions (section 6).

## **2 Why is TM trendy in the translation industry?**

TM is a database that stores bi-texts, i. e., texts and their translations, usually segmented into short linguistic units or sentences that are retrievable whenever needed in the future. It was first developed by the IT industry to achieve terminology consistency and cater for the repetitive specialized content in its texts (O'Brien 2012). In the localization industry, it is assumed that technological tools in general, and TMs in particular, save a great deal of time, money and effort. These tools "theoretically speed up the process because a sentence does not need to be retranslated" (O'Brien 2012: 7–8). In other words, repetitive texts will never have to be translated from scratch. All they need is some amendments in the additions they contain in the newer versions.

Because of the current use of TMs, some argue that creativity is sacrificed as a result of the translated texts' uniformity. But as O'Brien (2012) points out, creativity is not something clients always want. They usually prefer consistency instead. Other benefits advanced by TMs' vendors and some clients are quality and cost. But quality again is a very controversial issue. This paper will argue how the quality argument may not hold water as Bowker already demonstrated empirically (2005). High quality translations, however, are not always required in the industry. Just "good enough" translations can do the job (O'Brien 2012: 14).

As regards terminology consistency purposes, Terminology Management Systems (TMSs) have been added into the TEnTs in recent years. This terminology tool stores terms in a termbase that is integrated with the TM and works in an automated way. Equivalent term matches are automatically generated from the termbase (see Bowker/Fisher 2010). Although this can help terminology consistency when dealing with the same client or text genre, it can, however, be counterproductive if a mosaic of text types, genres and different domains' terms are stored in the same termbase. Also, termbases and term banks need to be updated continuously as terminology changes. As Bowker rightly points out, "specialized subject fields and the language used to describe these fields are constantly expanding and changing, so no term bank can provide exhaustive up-to-date coverage" (Bowker 2011: 227). Therefore, taking for granted what is suggested by an outdated termbase can be misleading.

On the other hand, terminology variation within the same domain is neither always undesirable, nor avoidable. As socio-terminologists have taught us, terminology is subject to negotiations (Gaudin 2005: 87). Thus, variation is a fact that reflects the use of terminology in different social settings. In this respect, Rogers and Ahmad (1994: 842) argue that the domain's expertise can vary among its members, a fact which can generate extensive terminological synonymy. Therefore, the same domain texts and terminology can have different degrees of specialization. Hence, judicious choices need to be made as to the proposed terms by even TMs and TMSs that are fed with the same specialized domain texts and terms, taking into account the translated text's level of specialization and its audience's expertise.

Therefore, the translated text's new context, function and its audience design play a determining role in the selection of its terminology. Popularized scientific articles, i. e. translations of scientific texts for lay people, may even require shifts in terminology. Magalhães (2000), for instance, identified generic and terminological shifts in some scientific texts translated from English to Portuguese, and published in a Brazilian newspaper for non-specialized audience. Hence, less specialized synonyms of very specialized terms may be desirable in some translations depending on the Target Text's (TT) new function, context of situation and audience.

Overall, TM has gained a remarkable popularity among many translation providers and clients. Productivity gains, speed and consistency have been the main arguments advanced by its developers and embraced by its adopters. However, its design based on sentence-by-sentence segmentation has been the source of dissatisfaction of many textually oriented analysts.

### 3 TM and text

The shift from the sentence as the basic unit of analysis to the text as the minimal unit of enquiry in linguistics in the 1970s unveiled many of the weaknesses of the traditional approaches. It has been convincingly argued that sentences in isolation have little meaning unless they are related to their co(n)text (see Halliday/Hasan 1976; Halliday 1978). In this respect, Enkvist argues that

a sentence is *not autonomous*, it does not exist for its own sake but as part of a situation and part of a text. And one of the most important functions of information dynamics is precisely to link a sentence to its environment in a manner which allows the information to flow through the text in the desired manner. (Enkvist 1978: 178, emphasis added)

In line with this approach, House (2015: 22) defines text as

any stretch of language in which the *individual components relate to one another and form a coherent whole*. A text is thus a linkage of sentences into a larger unit. Various relations of *co-textual reference* take place in the process of text constitution. (House 2015: 22, emphasis added)

This affirmation that stresses the fact that sentences are not independent entities in a text is one of the main voiced concerns about TMs' design. While the stated aims of TMs designers are productivity increase and terminology consistency, among others, it is clear, however, that the TMs current functioning is at odds with the findings of text linguistics, for which the text is "the basic unit of meaning in language" (Halliday/Hasan 1976: 25). Text linguists not only stress the dependence of sentences on each other in a text but also underline the insufficiency of textual material (wordings) for the exact transmission of ideas. It is only the contextual factors, i. e., the text's cultural and situational context at large that supplement the remaining meanings residing outside the text (see House 2015). In this respect, De Beaugrande and Dressler argue that a text is

a naturally occurring manifestation of language, i. e., as a communicative language event in a context. The surface text is the set of expressions actually used; these expressions make some knowledge explicit while *other knowledge remains implicit*, though still applied during processing. (De Beaugrande/Dressler 1981: 63, emphasis added)

These arguments about the role of the text's context in the construction of meaning are of paramount importance in the translation process. The implicit/implied meanings in a text may be easy to infer by the source text readers but that may not be true for the target readers who may need explicitation, as they lack the source text's cultural frame and world view (see Hatim/Mason 1997).

TMs are “most effective with documents – such as manuals or catalogues – with a high degree of internal repetition or of external repetition relative to previous releases of the same document”, as Hartley (2009: 117) points out, but far from being useful for general language texts, let alone literary texts. Therefore, feeding specialized TMs with controlled domain-specific language can be helpful for translators provided that they are highly trained in textuality and pragmatics issues. As Pym has rightly argued, “anyone working with TM/MT will need tons of these suprasentential text producing skills, probably to an extent even greater than is the case in fully human translation” (Pym 2013: 491). Not surprisingly, many empirical studies have confirmed the TM's inability to serve the text's textuality and its coherence. Dragsted found out that the segmentation of a text in TM has “a negative impact on the coherence of text” (Dragsted 2004, cited by O'Brien 2012: 18). She also observed that translators “tend to revise each segment as they go along, allowing little time for a final revision of the whole text at the end” (Dragsted 2004, cited by Pym 2013: 496). Along similar lines, Jiménez-Crespo's (2009: 223) research found that TM's sentence-based processing leads to the replication of the source-text structures in the target text. From a cognitive perspective, O'Brien (2012) affirms that the fact that translators prefer larger textual units processing whereas TMs designers generally opt for segmentation could lead to translators' cognitive friction.

The echoes of the academics' concerns have certainly reached the TM developers' ears. The latter have already been trying paragraph segmentation for a few years now in order to help the end-users make good use of the tool. Nevertheless, the segmentation at the paragraph or text-level does not seem to be very efficient as exact matches decrease to an extent that makes the use of TM even useless. Another innovation within TM is its use in conjunction with Machine Translation (MT) in what is now called MT-assisted TM. In this combination, segments that are below the user's defined TM match threshold are forwarded to the MT and back to the translator who edits them and feeds them back to the TM.

Some translators' zeal for TMs may blind them to these macro-considerations of text and context and therefore, lead to the sacrifice of the text's readability and language standards. Yet, awareness of these issues, and critical judgment about what is provided by a TM, can make the latter a real aid, rather than a hindrance. Taking into account the proposed segments' co-text and relating them to the text's situational context can, to some extent, reconcile TMs with the conceptualization of text. In the following, I turn to

text analysis (text genres, types, functions) and translation types; all of which are important factors that can help translators use TMs judiciously.

## 4 Text analysis and translation types

### 4.1 Text genre, type and register

#### 4.1.1 Genre

According to Swales,

a genre comprises a class of communicative events, the members of which share some set of communicative purposes. The purposes [...] constitute the rationale for the genre. The rationale *shapes the schematic structure of the discourse and influences and constrains choice of content and style.* (Swales 1990: 58, emphasis added)

Following Swales, Hatim and Munday define genre as “a conventionalized form of speaking or writing which we associate with particular ‘**communicative events**’” (Hatim/Munday 2004: 88, emphasis in original). Text genre has a crucial role in moulding not only the content and the terminology but also the structure of the text (e. g., business letter’s structure is very different from a scholarly article).

Text genres and their conventions differ from one culture to another (Tymoczko 2006). The translator’s non-awareness of these differences and/or the interference of his/her mother tongue’s genre conventions in the TT can lead to serious errors. Even more complicated, errors are most likely to occur with TMs that store segments from different genres. Text genre, however, is not the only determining variable of the text’s structure. Text type, another important factor, collaborates with genre to create the text’s texture. At this point, one has to note that “a single genre may be associated with more than one text type” (Paltridge 1996: 239). A political speech genre, for example, can be an informative or argumentative text.

#### 4.1.2 Text types

Most Translation Studies’ (TS) scholars agree on the importance of text type identification in adopting the right translation strategies. Hatim and Munday argue that

text types are seen as ‘guidelines’ which text users instinctively refer to in adopting a given translation strategy with an eye on both sides of the translation divide – the S[ource] T[ext] and the TT. (Hatim/Munday 2004: 74)

Yet, text typology has been a controversial issue in TS literature. Different scholars have advanced different text types depending on their points of focus and their backgrounds. Hatim and Mason (1990), with a focus on the rhetorical purposes of texts and their contexts distinguish three types: expository, argumentative and instructive texts. By the *expository* type, they refer to any kind of narrative and descriptive texts in which “detached account, i. e. a monitoring of the situation” (Hatim/Mason 1990: 154–155) is predominant. *Argumentative* texts, on the other hand, seek to “manage or steer the

situation in a manner favourable to the text producer's goals" (Hatim/Mason 1990: 155). As for the *instructive* type, the text producer aims at regulating "through instruction the way people act or think" (Hatim /Mason 1990: 156). While Hatim and Mason's typology is very insightful, it remains, however, language bound, i. e., their taxonomy is English language-oriented as these types differ substantially from one language to another. Hatim and Mason (1990, 1997) themselves admit that argumentative texts, for instance, have very different structures in Arabic and English. For translation purposes, this text typology, though helpful, may not be as practical as other available taxonomies.

Differently from Hatim and Mason (1990, 1997), Katharina Reiß (1981/2000), with translation purpose in mind, suggests three different text types; informative, expressive and operative texts. By *informative* texts, she refers to texts that communicate plain facts. In this type, the language used is mainly referential, and the text's content (information) is the main intake. This overlaps with Hatim and Mason's (1990) expository type. As for the *expressive* type, she refers to "the communication of artistically organized content" (Reiß 1981/2000: 163). It is the aesthetic quality and the interpersonal dimension (between the addressor and the addressee) of the text that are predominant in this text type. Regarding the *operative* texts, she means "the communication of content with a persuasive character" (Reiß 1981/2000: 163). Hatim and Mason's (1990) instructive and argumentative texts can fit under the umbrella of operative texts. Reiß (1981/2000) adds a fourth type to encompass visual and spoken texts such as films and advertisements. She calls it *audio-medial* text type.

#### 4.1.3 Meta-functions of language and text register

From a different perspective than Reiß's text typology, House (1977, 1997, 2015) suggests what she calls the establishment of a 'textual profile' of the text. Like Hatim and Mason (1990, 1997), she imports the Hallidayan Systemic Functional Linguistics model that gives language three meta-functions: the ideational, the interpersonal and the textual functions. The *ideational* function relates to the topic and the information conveyed in a text.

Through its ideational function, language manages to convey and interpret experience of the world, in other words, it expresses content. (House 2015: 25)

The *interpersonal* function reflects the author/speaker's attitude and his/her relationship with the addressees. As for the *textual* function, it refers to the linguistic component of what we call 'text'. This requires interlinguistic links between the different stretches of the text; it is a sort of "internal organization of linguistic items" (House 2015: 25). These three functions are realized through linguistic means (lexis and grammar) that should 'hang together' in a systematic way to make a text cohesive and coherent (Hatim/Mason 1997).

The meta-functions of language are associated with the text's *register*; in turn, made up of three variables, namely field, tenor and mode. The *field* is related to the content or the subject of the text, thus linked with the ideational function. The *tenor* is about the interlocutors in the communicative event, and this is related to the interpersonal function of language. And the *mode* is about the form of communication, i. e., whether it is spoken

or written, and thus relates to the textual function. The text register, in turn, is shaped by the text genre and type that stand at a higher level in this hierarchy and thus shape the text's structure and content.

In the current analysis, Reiß's text typology will be adopted for its practicality for translation purposes. As Hatim and Munday themselves admit, "in the text classification proposed [by Reiß], the overriding criterion relates not so much to the *text purpose* [...] as to the crucial aspect of *translation purpose*" (Hatim and Munday 2004: 181, emphasis in original). Reiß (1981/2000), like House (2015), being aware of the hybridity of texts, called for the maintaining of the main text function in the TT before revising her model in her Skopos theory, along with Vermeer in 1984. Under the Skopos theory, she argued for the possibility of adopting a different function in the TT regardless of what the function of the ST is, in case that is part of the translation brief (see Nord 1997; Vermeer 2000).

The meta-functions and register, proposed by House (1977, 1997, 2015) and Hatim and Mason (1990, 1997) will complement the analysis at the micro-level once the text type and genre are identified. Thereby, an eclectic approach will be adopted in this paper. But before getting there, let us complete the picture of the proposed framework by discussing translation types.

## 4.2 Typology of translations

For the purpose of the current study, a translation will be defined as a text

that is a (comparable) reproduction of something originally produced in another language [...] Translations are texts which are doubly constrained: on the one hand to their source text and on the other hand to the (potential) recipient's communicative conditions. (House 2015: 21)

From House's (1977, 1997, 2015) perspective, equivalence is sought at the semantic, pragmatic and textual levels. For this ultimate purpose to be achieved, it is essential for the translator to identify the various contextual factors surrounding the ST as well as the TT and decide about the type of translation he/she will adopt.

Nord (1988/1991/2005, 1997) asserts that there are two types of translations; 'documentary' and 'instrumental'. By *documentary*, she refers to the 'foreignized' or 'exoticized' translations that maintain one or many cultural aspects of the source text without maintaining its communicative function. "The target text, in this case is a text about a text, or about one or more particular aspects of a text," Nord (1997: 47) explains. As for the *instrumental* type, the target reader receives the translation as if it was an original text. Nord asserts that

in the reception of an instrumental translation, readers are not supposed to be aware they are reading a translation at all. The form of the text is thus usually adapted to the target culture norms. (Nord 1997: 52)

In this case, the function of the target and source texts remains the same. A good example of this translation type is pragmatic texts like instruction manuals or tourist information texts.



Not radically different from Nord's typology, House (1977, 1997, 2015) makes a distinction between 'overt' and 'covert' translations. *Overt translation*, like documentary translation, "is not a second original" (House 2015: 54). It is more like a "quotation" in which the translator is fully visible. Texts that are deeply rooted in a historical context or a cultural frame require this type of translation. This makes the TT receivers conscious of their foreignness. The function of the TT, in this case, is different from the function of the source. House argues that "any *direct* match of the original function of the source text is not possible in *overt* translation" (House 2015: 55, emphasis in original). An operative political speech of a foreign leader, for instance, will have a mere informative function in the target culture. *Covert translation*, on the other hand, is "a translation which enjoys the status of an original source text in the target culture" (House 2015: 56). It is a translation that does not take the reader to the cultural framework of the source text. The translator in this type remains invisible. The kinds of texts that require covert translation are not directed to a specific audience in a specific culture. They are rather directed to *everyone*. House (2015) calls for cultural filtering in these translations since the cultural frames are inherently present in all texts. Localization is an excellent representative of this type of translation that requires cultural adaptation of products and contents to specific locales.

House's translation typology will be adopted in the following analysis as it is more encompassing. Nord's (1988/1991/2005) model, though close to House's typology, runs the risk of excluding texts that can be neither documentary nor instrumental. A good example can be literary texts.

In what follows, a text analysis model will be proposed. This model consists of identifying the text genre and type and translation type depending on the situational and cultural contexts. At the micro-level of analysis, the Systemic Functional Linguistics model will be used in analyzing the meta-functions of language, with a focus on the textual function, namely the elements of cohesion and information dynamics in a text. A complementary sub-section that deals with pragmatics issues will be added to this model.

## 5 Proposed text analysis model

In the face of the complexities that surround text production, and even more its translation, as discussed in the foregoing analysis, it is undeniably true that the mechanical use of TMs without critical thinking and judicious considerations can harm the textual production, to different extents. The variety of text genres and their rhetorical purposes that may be stored in some TMs will generate sentences that can have quite different semantic and pragmatic loads in the new translations. Accepting these sentences, originating from different contexts, may result in a text that is "a stylistic hodgepodge", as Bowker (2006: 181) calls it. Bowker and Fisher warn us that

translators may be tempted to stay close to the structure of the source text, and individual segments may bear the differing styles of their authors, leading to poor readability of the resulting target text. (Bowker/Fisher 2010: 63)

Even with TMs that are restricted to the same genre, uniqueness of individual texts and their composing sentences make the assumption of the equivalence of two sentences with the same wordings still implausible, as has been demonstrated above. The pragmatic load resides beyond the visible textual items (see Gutt 2000; House 2015). Although, many translators adopt, more or less, a critical stance as to the acceptance or rejection of fuzzy matches, exact matches can be tempting to accept automatically without taking the c(o)ntextual factors into account, especially by inexperienced or untrained translators.

To transcend TM's limitations, the translator ought to move beyond the sentence-by-sentence translation in order to convey the text's message adequately. As Bowker points out, "to translate the overall message of the text, translators often need to work outside the official boundaries of sentences" (Bowker 2006: 180). In order to translate the text, instead of the text's sentences in isolation, a text analysis model is needed. Even a simple basic model that examines the texts' generic structures, types, functions, audience and context of situation can do the job. In what follows, a model will be proposed without claiming to be exhaustive or complete. Many other variations on this model can be practical when working with TMs.

### **5.1 Text types, genres and translation types**

As already pointed out, when Reiß first proposed her text typology (1971), she argued that the same text function should be maintained in the translation. Yet, she revised her position in her Skopos theory along with Vermeer in 1984 and called for functional equivalence only when it is required by the initiator or translation brief (see Vermeer 2000; Nord 1997). As clarified by Vermeer, "it is the skopos of the translation that [...] determines the appropriate text variety" (Vermeer 2000: 232). Thus, texts may have different functions in the target culture, according to the new approach. From here, it follows that the identification of the translated text's new function in the target culture is an important step in the translation process as it informs the translation type to be adopted. Thus, overt translation, for instance, will allow the translator to keep the cultural conventions of the source culture, whereas in covert translation, he/she should strive for stylistic fluency in the target text.

Besides the text's function, the textual analysis model needs to identify the text genre and its type, along with other contextual dimensions, in order to overcome TMs' weaknesses. Recognizing the different genre structures and rhetorical conventions of different text genres and types is a key competency that translators using TM need to be equipped with. For example, the rhetorical conventions of an informative text may be skewed if the segments retrieved from a TM belong originally to other different text types. Likewise, the stylistic features and structure of a business letter, for instance, may not be respected if the segments generated by a TM belong originally to a mosaic of other different genres.

With more focus on text types and functions, Reiß argues that

since form and function of language signs do not show a relation of 1:1, the same S[source] L[anguage] sequence may be represented in the T[target] L[anguage] by any other language sequence depending in which text type and text variety they appear and which function they may have to fulfill there. (Reiß 1981/2000: 168)

Following Reiß's affirmation, the segment or sentence takes its meaning only in its co(n)text. The text's type colours the segment/sentence with a specific semantic load only when put in its c(o)ntext. From here, it is mandatory for the translator using TM to keep in mind the text type he/she is translating, for different types require different cohesive devices, different syntactic structures and specific lexis. An operative text, for instance, may require more repetition (for persuasion purposes) than an informative or expressive type. Metaphors and allegories are more frequent in an expressive text than in an informative one. TM cannot take care of all that.

Most importantly, text types' structures are different from one language to another. Operative texts (argumentative in Hatim and Mason's 1990 taxonomy) in Arabic, for example, do not contain counter arguments whereas in English or French, they sometimes do (Hatim/Mason 1997). A translator working on an English argumentative text that contains counter-arguments and is not aware of this difference may produce an alien text to Arabic readers, if he/she adopts a sentence-by-sentence approach provided by a TM. It might be safe to argue that operative (argumentative) texts are the most problematic texts for TMs. This is due to the fact that these texts "require the translator to heed the extralinguistic effect which the text is intended to achieve, even if this has to be undertaken at the expense of both form and content" (Hatim 2009: 44–45). Thus, this type of texts may require explicitations, deletions or structural modification depending on the language pair.

These variables, i. e., text type, genre and translation type, will inform the text register and thus its ideational, interpersonal and textual components. All these will be realized at the lexico-grammar level that includes also the information dynamics (theme-rheme unfolding) and cohesive devices.

## 5.2 Register analysis and lexico-grammar

As already explained, text register contains three variables; field, tenor and mode. The *field* is about the subject matter of the text. It is realized through ideational resources, which are textual (e. g. the use of transitive or intransitive verbs, active or passive voice, nominalization) (see Hatim/Mason 1990, 1997; Hatim/Munday 2004; House 2015). The field is an important element where TM can miss out critical information. For instance, a translator may be offered a passive voice sentence from previous translations by TM instead of an active voice; which can make a big difference in terms of agency. In political or ideological texts, sentence structures and thereby agency can have serious implications.

The *tenor* caters for the text's formality or informality, and the relationships of power or solidarity between the pronouncing individual and/or institution and their audience. It

is realized through interpersonal resources (e. g. modals, adverbs, pronouns; see Hatim/Munday 2004; Hatim/Mason 1990, 1997; House 2015). Translators need to be especially careful with modality. Past translations in TMs should never be taken for granted as they might change the whole tenor of a text. For example, English has no marked form for formality while Arabic and French do. Addressing someone formally in French requires the use of the second person plural 'vous' while English uses the same second person (singular/plural) in both formal and informal situations. Hence, their retrieval from a TM requires consideration of the context. Also, the choice between the modals "must" and "should" can make a big difference in the tone of the speaker, and hence his/her relationship with his/her addressees. A suggested sentence taken from an instruction manual that uses the modal "must" or direct commands cannot be accepted in an Arabic translation of, say, instructions to scholars about the use of an academic writing style.

*Mode*, the third variable in register, covers the information dynamics as well as the text's cohesion. It is through the mode that the ideational and interpersonal elements acquire cohesion and coherence in a given textual environment (Hatim/Munday 2004; Hatim/Mason 1990, 1997; House 2015). The information dynamics is revealed through what is known as 'theme-rheme' unfolding of the sentence. The theme is the known information and the rheme is the new information in a sentence (see Hatim/Mason 1997; Baker 1992; House 2015). In English and other languages with Subject-Verb-Object (SVO) structure, the theme is usually (but not always) in the initial subject position whereas the rheme unfolds in the rest of the sentence. In some other languages that have a VSO structure, the theme (mostly the sentence subject) is not in the initial position (e. g. Arabic) (see Baker 1992). Hence, translators should be careful before accepting TMs' suggested sentences from English to Arabic, for instance. One can easily notice serious errors in the Arabic media translations of news reports from English/French news agencies. Arabic media language is starting to erroneously adopt the English/French SVO structure because of the repetition of this syntactic error that has become the norm. TM can only 'naturalize' the distortion as some translators are starting to take the new 'mediatic' sentence structure (SVO) for granted, and hence potentially feed TMs with it. This is only exacerbating the problem.

Another element in the mode, which is probably the most important aspect of a text's textuality, is cohesion. *Cohesion* alone was the subject of a ground-breaking work by Halliday and Hasan (1976) entitled, *Cohesion in English*. It is of paramount importance for a text in order to be called 'a text'. Cohesive devices, like pronouns, ellipsis, collocations, and repetitions make the text lexically hang together (Hatim/Mason 1990, 1997). These devices are again different from one language to another and from one text type to another. Arabic, for example, prefers lexical repetition to variation (Baker 1992: 207). For Baker, "Arabic tolerates a far higher level of lexical repetition than English" (Baker 1992: 210). As far as text types are concerned, it might be argued that operative texts (argumentative) prefer lexical repetition over anaphoric references. Again, a blind dependence on TMs' suggestions for a translation from Arabic to English or vice versa, or

accepting sentences from different text types without judicious consideration, will mislead the translator if he/she is not aware of these differences.

Another important element to be taken into account in cohesion when using TM is punctuation. Once more, the problem with the punctuation system is that it differs from one language to another. For instance, Arabic tends to put a lot of information into very long and complex sentences. In Arabic, it is not surprising to find a whole paragraph consisting of one sentence (Baker 1992: 193). Retrieving sentences from a TM that was fed with English/Arabic texts that did not take account of these structural and cohesion differences can be misleading. This can, therefore, result in unconventional texts in the target language, if TM suggestions are not judiciously filtered.

While cohesion between the different textual units is important in conveying meaning, it is, however, only through connecting the textual with the receiver's extra-linguistic conceptual world that a text can be a text and thus make sense. This is where the field of pragmatics, and especially coherence, comes to the fore.

### 5.3 Pragmatics, coherence and TM

Pragmatics refers to “meaning in speech situations as it is manifest in social acts ‘outside’ sentences” (House 2015: 22). For House, pragmatic meaning is negotiated in the communicative situation and depends mostly on shared world views outside the linguistic surface structures. In a similar vein, Baker defines pragmatics as “the study of language in use. It is the study of meaning, not as generated by the linguistics system but as conveyed and manipulated by participants in a communicative situation” (Baker 1992: 217). Of paramount importance in pragmatics is the notion of coherence. It is one of the main sources of difficulty in cross-cultural communication (Baker 1992: 218). Baker defines *Coherence* as “the network of conceptual relations which underlie the surface text” (Baker 1992: 217). While cohesion takes care of the surface structure of the text and links its different sentences and clauses, coherence, on the other hand, relates to the interaction between the text's discursive frame and the receiver's world view. It is about the connection between the two cultural frames of reference. A text can be coherent only if its frame of reference makes sense to its reader/listener. In other words, it is the shared socio-discursive world between the speaker/author and his/her audience that makes the coherence of a text possible (see Fairclough 1992). The receivers make inferences from the textual elements in front of them starting from their “assumptions about the world” as Gutt (2000: 27) puts it.

TM *does not store* the text's world view and its frame of reference. Its isolated segments do not have the interactional element with the reader within them. They can acquire this interactional element and *colour themselves* with a certain cultural contextual frame only in a complete text that meets the standards of textuality (see De Beaugrand/ Dressler 1981). Hence, the pragmatic colouring remains the task of the human translator. And this cultural contextual framing may need different textual elements depending on the communicative situation and the audience. The same sentence with the same wordings can mean very different things. ‘It's cold in here!’ can imply anything, from ‘I need

you to close the window' to 'I hate it here' to 'I feel cold.' It is the context of the utterance that decides its exact meaning. Hence its translation will definitely depend less on the TM's suggestions and more on the communicative situation and the readers' conceptual frame, and thus on the human translator's intervention. As O'Brien (2012: 16–17) has rightly argued, humans' intervention is indispensable as the machine is doomed to failure when it comes to preserving the text's cohesion and coherence. "Context and perception are clearly imperative and machines are not good at that but humans are", says O'Brien (2012: 16).

This paper's suggested model of text analysis is summarized in Figure 1 (inspired by Munday 2001/2008: 90). As seen in the foregoing discussion of this model, the translator should consider the text's cultural context besides its context of situation, in a sort of macro-analysis. This allows him/her to identify the text type and genre. Thereafter, he can decide on the translation type (whether overt or covert) depending on the TT function as determined by the translation brief and the target audience's design. Hence, the function of the ST can be either preserved or changed. During the translation process, the text's genre and type and its rhetorical conventions in the new target context should be kept in mind and decisions should be made, accordingly. This should be realized at the register level, ideationally, interpersonally and textually through specific lexicogrammatical choices that serve the text's function. Cohesion and theme-rheme unfolding of the textual units will then constitute the text's skeleton that will be complemented by its coherence, i. e., its receivers' world view. For this complementarity to be attained, the textual elements need to be structured in a way that will make sense to their readers. TMs give the translator only parts of the skeleton (isolated sentences). He/she is required to put the parts together (sentences) and envelop them with the flesh and the soul (coherence) while keeping the picture of the whole body in mind throughout the process. Much of this assembling is done at the editing phase which is the most important stage and thus should be done thoroughly, with this textual perspective in mind. Only by adopting this approach can TMs be aiding tools, rather than curbing ones. As Bowker rightly points out, "TM tools are designed to help, not to replace translators" (Bowker 2006: 185).

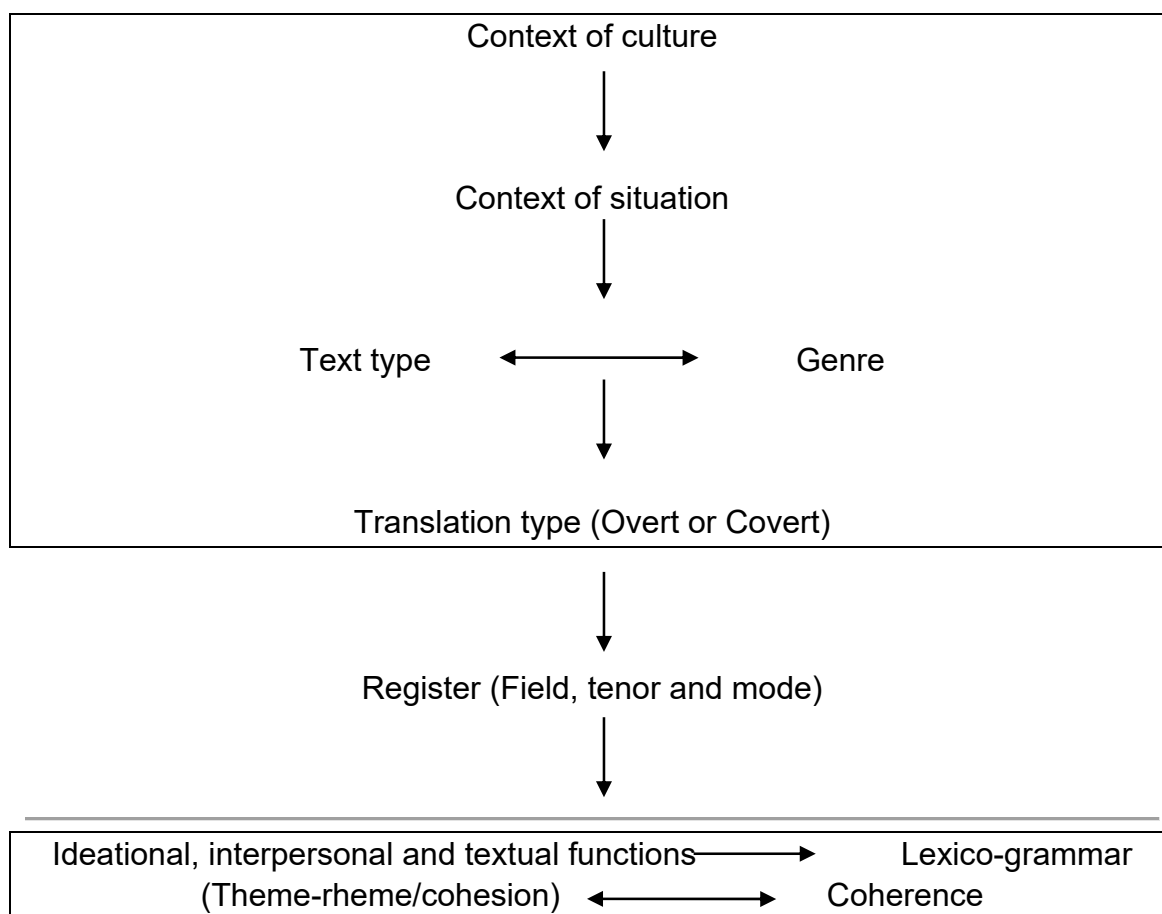


Fig. 1: Relations of influence between the different variables in the target text's production

## 6 Concluding remarks

In the foregoing analysis, it was argued that TMs' current design is theoretically at odds with text linguistics and pragmatics' findings. It was demonstrated that TMs performance can vary from one language pair to another. They might perform better (though not perfectly) for languages that are, more or less, close to each other in their rhetorical and textual conventions (e. g. English/French), but can be a lot less helpful for languages that are completely different in those aspects (e. g. Arabic/English). Also, TMs can be more useful for specialized texts, but can be of little value, if any, for general or literary texts. To overcome these limitations, the need to text linguistics findings is more important than ever before with the widespread use of TM in the translation industry. Hence, when using TM, special attention should be given to the textuality factors discussed above, and therefore the translator should strive for the regaining of the unpronounced and implied meaning in the ST into the TT. This can be achieved with a careful analysis of the text's textuality and its socio-cultural implications. Otherwise, the mechanical use

of TMs, with no textual awareness, can have serious consequences on language standards and texts' quality.

Based on these gained insights, it follows that in translation training programmes, focus should not be geared only towards teaching the practicalities of new technologies and tools, but a special focus should be on their repercussions, strengths, limitations and mainly their effects on textuality, pragmatics and also on the translators' cognition. The manipulations of these tools should not be the main objective but rather the fostering of critical reflection towards the use of any aiding tools and the ability of adaptation to any newer ones without losing sight of the textual, pragmatic and socio-cultural dimensions of languages, and therefore the act of translating.

In response to TM's limitations highlighted in the foregoing analysis, there was an attempt to provide a text analysis model that is inspired from Systemic Functional Linguistics along with text typology studies and translation types' insights. Despite the importance of the proposed model in this paper, one can easily identify the absence of empirical data that could confirm or invalidate the usefulness and practicality of this model. Therefore, future research can focus on the application of this text analysis model on TM's translation process. Also, pragmatics' approaches can be adopted to complement the text linguistics approach in providing more insights on TM translations. Relevance theory as advanced by Gutt (2000) can be an excellent candidate theory to do the job.

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