

# The Intricacies of Translation Memory Tools: With Particular Reference to Arabic-English Translation

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## Abstract

Translation Memory (TM) technology has been enjoying a good deal of popularity among translation theorists and practitioners since it came onto the market in the 1990s. A theoretical framework for TM *vis-à-vis* Machine Translation (MT) is first discussed. The paper then examines the applicability of a TM tool, namely Translator's Workbench (TWB), to Arabic, and the ensuing problems as illustrated by the translation output of ten postgraduate translation students at Al-Quds University for the academic year 2012/2013. The paper reveals that beyond the translation problems with which translation is usually replete, particularly between languages of little cultural and linguistic affinity, e.g., Arabic and English, the students encounter several problems arising from the inherent structure of TWB. The study concludes by assessing some of the pedagogical implications of these difficulties, in a way that will hopefully help Computer-Assisted Translation (CAT) trainers deal with the problems in future.

**Keywords:** *Translation memories; machine translation; computer-assisted translation; technical problems; Translator's Workbench*

## 1. Introduction

In its essence, translation is an act of interlingual communication across languages and cultures. It includes the Source Language (SL), the language from which we translate, and the Target Language (TL), the language into which we translate. For the past few decades, translation has had echoes further afield in a panoply of disciplines such as film studies, semiotics, sociology, conflict studies, technology, narrative theory etc., thus viewed as eclectic in nature. Perhaps the most important innovation for translators today is the introduction of technology such as corpus-analysis tools, terminology managers and machine translation (MT) among many others. (For more details on the tools available to translators, see Esselink 2000; Austerlühl 2001; Bowker 2002; Gil & Pym 2006 and Pym 2012).

Defined as "the process that utilises computer software to translate text from one natural language to another" (Systran 2004, as cited in Zughoul & Abu-Alshaar 2005: 1023), MT is the Translation Technology (TT) "with the most sway over the popular imagination" (Gil & Pym 2006: 16). Since its inception in the late 1940s, MT has given translation activity a new lease on life. But, no sooner had the translators counted their chickens in the use of MT, hoping that "the intelligent use of machine translation

should mean that our best human efforts are focused where they are most needed" than they concluded that it is full of fiendish difficulties in view of the fact that the "technology is not perfect, and translators must be very aware of those imperfections" (Gil & Pym 2006: 18).

It ensues, therefore, that much effort should be exerted in a search for more developed tools that would assist in the translation process. The technology of Translation Memory (TM), which originated in the 1970s, came to the fore in the 1980s, "but only since the late 1990s has [it] developed into a significant commercial entity" (Melby 1995: 187 as cited in Bowker 2002: 92). Wallis (2008: 623) argues that TM computer programmes such as SDL Trados, Déjà vu, SDLX, Transit, etc. are "the most popular tools today [...] which contain an aligned database of previous translations that can be searched to find solutions for new translations." TMs<sup>1</sup> are "specifically designed to recycle previously created translations as much as possible" (Esselink 2000: 362), and are also considered "invaluable aids for the translation of any text that has a high degree of repeated terms and phrases, as is the case with user manuals, computer products and versions of the same document (website updates)" (Gil & Pym 2006: 8). TMs are labour-saving translation tools with a view to providing high translation quality, seeking

increased productivity, preserving the consistency of translation quality and expediting large amounts of information in a split second (see also Esselink 2000; Bowker 2002; Zughoul & Abu-Alshaar 2005; García 2006; Gil & Pym 2006; Elimam 2007). In brief, TMs are a family of Computer-Assisted Translation (CAT) tools (Austermühl 2001: 11), and have contributed to the welfare of translation in a job market in which translating must take place at a competitive price and with consistent terminology, “not to mention quality service, tight time frames, and so many other things the translators are learning to deliver along with their work [which] would be enough to justify, in the technical area, the use of translation memory and terminology management software” (Azzam 2004: 87-88).

It is noticeable that there is a dichotomy between MT and TM systems. Simard and Langlais (2001) claim that the constraints are much less stringent in the context of CAT than in MT. Whilst the former emphasises partiality (i.e., proposing partial translations to the translator) the latter focuses on entirety, i.e., covering the whole of the source text. Likewise, García (2009: 29-30) states that “it could categorically be said that MT was language-specific while TM was not; that MT came with sets of language specific-rules and vocabularies while TM came as a kind of empty receptacle into which translators poured sentences and terms.” A distinction between TM and MT is made by Smith (2012, *The difference between TM and MT*). The former takes its point of departure from breaking down a source text into segments.

A segment is a manageable bite sized chunks. As these source segments are translated, they are saved to the TM. At the same time segments are being saved for new translations, the TM is also being used to leverage previously translated content. When you move to a new segment for translation, the software checks in the TM if there is an identical or similar translation and automatically enters the result which is most appropriate into the new target. Any match with the TM is given a percentage score depending on how accurate it is.

The latter, however, highlights using a computer at the expense of a human translator in transferring a text from one language into another. Smith (2012, *Machine translation*) further explains: “Untrained MT does not provide you with a match percentage for each translated segment, so it relies on the translator or reviewer to judge how accurate the suggested translation is. The quality of translations can vary significantly, and sometimes the results provided by machine translation can be quite amusing.”

## 2. SDL Trados<sup>2</sup>

It is perhaps true that one of the omnipresent leading technologies in translation industry is SDL Trados (with its different versions) which is now synonymous with the concept of a TM environment (Hutchins 1998). More than twenty years ago, Trados began as “a language service provider, and only later, from 1989 onwards, did it special[ise] in software development –with the first product in the Trados stable, MultiTerm, hitting the market in 1990” (García 2005: 19).

It appears reasonable to assume that, other things being equal, SDL Trados has given the translation profession technological impetus. The stereotypical image of a translator as an “overworked, slightly grey woman or balding man nailed to a desk under a heap of dictionaries and encyclopaedias, leading a rather solitary life” (Vintar 2008: 40; see also Austermühl 2001: 11) is beginning to fade away. Vintar (*ibid*) further argues that “a more realistic picture of a translator at work would inevitably feature a computer with an internet browser minimised on the task bar and the heap of dictionaries similarly replaced by an array of desktop icons” (see also García 2006: 89). SDL Trados is a case in point. It “can be used to translate any kind of document that can be opened by Microsoft Word. TWB generates a statistical overview of the number of the internal repetitions, and fuzzy or exact matches in the translation memory” (Esselink 2000: 368). Exact match refers to the process in which the TM programme “pairs text segments in a revised source text that match the original source text exactly; however, any text in the document that does not exactly match the original will not be translated” (Webb 1998: 9). On the other hand, fuzzy match is the process by which the TM programme “pairs text segments in a revised source text with similar text segments from a previously stored translation based on the original source text. Fuzzy matching will find segments that are very similar to the original and

suggest the original translation” (ibid).

### 3. Research on the Technology of TMs

Technology has gained momentum and weight in different translation activities. Since there are many potential problems in the use of technology, TM-oriented research should then be carried out to keep abreast of the difficulties the translator is likely to face in translating from one language into another, and to work out suitable solutions. It is perhaps true that research on TMs in relation to translation is embryonic. Translators have only recently begun using TM tools on a wide scale, so “there has not yet been a substantial amount of research into the impact that they have on translators or their work” (Wallis 2008: 623). This explains the very few works published treating the subject in scholarly translation journals or books. A search in BITRA<sup>3</sup> (a prestigious bibliography of interpreting and translation studies) returns only 94 entries on TMs, with the abbreviation ‘TMs’ in the title, and no article on TMs with Arabic as an object of study. A similar search in Translation Studies Bibliography<sup>4</sup> returns only 20 hits on TMs, and of these nothing with the word ‘Arabic’ in the title. Research on TMs seems to be nothing to write home about.

### 4. TMs and the Arabic Translator

TT seems to be esoteric in the Arabic-speaking World, and only recently has it begun to fight for the recognition of its own place within Arab translation studies. It is also safe to argue that even MT is at an early stage in the Arabic-speaking World. For more details on the MT-related studies, see Homeidan 1998; Zantout and Guessoum 2000; Gaber 2002; Guidère 2002; Zughoul and Abu-Alshaar 2005; Diab, Ghoneim *et al.* 2007; and Hammadah 2008. The Pan-Arab Translation Centre in Beirut, as Raddawi and Al-Assadi (2005: 66) state, “does not have a record for any machine translation program[me]s or applications available in the Arab countries.” By the same token, few attempts to address TMs are made in the Arabic-speaking World (see Elimam 2007, Fatani 2009 and Thawabteh 2009).

The principles of the process of MT and TMs are quite different, but they have grown together in the last few years. Compared to MT, TM is a relatively new technology whose presentation is likely to befuddle its users in doing translation tasks. However, no sooner has a user-unfriendly system come out than it becomes user-friendly with the

passage of time and with the proper training. The use of SDL Trados is no exception. The better versed the translator is in the technology of SDL Trados, the more s/he seems to stand in awe of it. For instance, introducing TT into translator training at Al-Quds University usually stirs up unnecessary panic among the students, but it eventually turns out to be a blessing in disguise.

The present paper argues that the stereotypical image of the translator described by Vintar (2008), still pervades the Arabic-speaking World. Apparently, translation in its old sense is the be-all and end-all to many Arabic translators. Such images can be understood in terms of an underdeveloped translation industry<sup>5</sup> and university translation programme curricula that are mostly linguistic-oriented. In Saudi Arabia, Egypt, Jordan and the Occupied Palestinian Territories, to mention only a few, TT receives scant attention at both industrial and academic levels. In the translation industry in Saudi Arabia, “[n]o translation software is used, and in many cases translators are still searching for terms in a dictionary instead of having online access to a term bank” (Fatani 2009, Conclusion and major implications). Fatani concludes that out of 40 companies surveyed, none “were contemplating teaming up with a global translation supplier such as Trados since they were satisfied with outsourcing their work” (2009, Common practices). Taking Aramco as a case in point, Fatani (2009, Aramco) notes that MT contributes to the reinforcement of translation quality:

The changeover to MT did indeed increase the speed, consistency and overall quality of translation. Despite the laying off of employees, Aramco translators report a high job satisfaction since the Trados system succeeded in eliminating all the tedious and repetitive aspects of translation. When probed, informants exhibited no aversion to MT, nor did they believe that computers had taken over their jobs. [...] The presence of a large multinational staff made it imperative for the company to search for a translation solution that would facilitate communication among company employees, cut down on costs and speed up the

translation process.

In Arabic third level educational institutions, TT is as yet not a recognised field of study. Hammadah claims that “although TMs are precise, they are a neglected area of study in the Arab World” (2008, MTs in International World Market; researcher’s translation). Gaber (2002, Prerequisites for translation instructors) states how little used TT in Egypt is, and further stresses that “translation teachers should be acquainted with the latest developments in information technology and electronic tools for translators.” Similarly, the Occupied Palestinian Territories, are no exception as ‘technologising’ translation goes slowly. Many translation instructors at Palestinian universities have never had any exposure to technical software applications such as Déjà vu, Wordfast, SDL Trados etc. However, four graduate-level CAT courses are taught as part of the curriculum at Al-Quds University (see Thawabteh 2009: 166). In Jordan, a new CAT course is housed in the Department of Translation<sup>6</sup> at Yarmouk University.

There is still one caveat about introducing TT academically. The academic and industrial worlds diverge. Thus, translating in its traditional sense as envisaged by Vintar (2008) and Fatini (2009) is still shaping the overall translation industry in the Occupied Palestinian Territories (see Thawabteh 2009) and probably many (if not all) Arab countries. In a study conducted by Li (2002: 521), “nearly two-thirds of the respondents thought that [translation programmes] did not reflect the market very well.” This might be true in the Occupied Palestinian Territories, especially at Al-Quds University. Even with such training savvy, only a few postgraduate students with an MA in Translation from Al-Quds University use TMs in their translation activities, and many jettison them. They have come full circle and ‘traditional’ translation methods are once again employed in translation tasks. This gloomy picture should not, however, be an obstacle in the way of using technology, which has become a determining factor in today’s translation world.

In a nutshell, the Arabic translators appear to dislike the use of technology in connection with translation. Arguably, a lack of technical knowledge may be one reason. Another reason is that technology suffers unpredictable and annoying behaviours—manipulating PDF formats, scanning texts, or dealing with peculiarities in the encoding. Furthermore, the Arabic-speaking World lies among the low-rate-low-cost countries, which means that the Arabic

translators are scraping by, and investing in relatively expensive TM systems is not feasible.

## 5. Methodology

### 5.1 Design of the study

This paper aims to investigate the problems encountered by ten MA Arab translation students using TWB. The data are derived from an Arabic-English task at the Comprehensive Examination in the first semester of the scholastic year 2012/2013. The task involved translating a highly repetitive text, designed for the purpose of the study (see Appendix 1), from Arabic into English. A carefully designed exam consisting of 69 words was used to examine the difficulties the students are likely to encounter in the course of using TWB. To ensure maximum reliability and validity, an Arabic professor checked the exam before the students sat it. The criterion for choosing the subjects was their prior experience.

The MA translation programme at Al-Quds University offers a combination of core and elective courses<sup>7</sup> amounting to 39 credit hours, with two options: a thesis option and a comprehensive examination option. Therefore, the students had received considerable training for at least two years in special TT courses, which aim at furnishing students with knowledge of electronic tools including some TM systems (e.g., Wordfast, Trados). For the sake of the present study, only TWB was used by the students, whereas other wide-ranging SDL Trados components e.g., WinAlign, TagEditor, T-Window for Clipboard, etc. are beyond the scope of the study. The figures of screenshots represent the students’ actual translations. The examples are used to further explain the linguistic and/or technical difficulties the students were faced with in the translation exam.

## 6. Significance of the Study

Perhaps it would be safe to assume that TT seems to be of little interest in the Arabic-speaking World where linguistic-oriented approaches to translation are still seen as the academic norm. TT has only recently begun to gain significance as Thawabteh (2009: 165) points out: “TT has shifted somewhat towards lifelong training on account of the rapid expansion in market demand for qualified translators.” Therefore, in view of a lack of interest in TT, and the dearth of basic and up-to-date Arab literature on TT, the present paper may be deemed significant because it addresses itself to the applicability of TWB to Arabic. Hopefully, this paper

will increase translators’ awareness of the technology of TMs as a growing discipline in TS, offer an insight into the complexities of employing TWB in an Arabic-English context and delineate a path for further research in Arabic and other languages.

**7. Discussion and Analysis**

With the theoretical framework sketched, we now have an approximate idea about TM tools, particularly TWB which is superseded by something newer, thanks to the rapid pace of technology development. We shall examine some examples in order to corroborate and diversify our argument. To facilitate the analysis of the data collected in the experiment, a taxonomy of TWB-related problems was elaborated. It has been found that three major problems permeate the translations of the students, namely (1) linguistic problems, i.e., orthography and gemination; (2) discourse problems; and (3) human-computer interface.

**7.1 Orthography**

Orthography refers to the conventional spelling system used by a language to map phonology to or from the language script (Habash 2010). It is an oft-quoted truism that letter combinations that represent sounds in one language are different from those in another. This is quite true in (un)related languages e.g., Arabic and English. Whilst the former belongs to the Semitic language family, the latter is an Indo-European language. Orthographic disparity between Arabic and English may include capitalization, word breaks, emphasis, punctuation, graphemes and diacritics. These differences may bring about orthographic ambiguity, which, according to Habash and Sadat (2006: 2), may arise because the “form of certain letters in Arabic script allows suboptimal orthographic variants of the same word to coexist in the same text.”

To see how this operates in practice in relation to students choices, let us indulge in a few illustrative examples:

Example 1

1a وأنجبت القدس العديد من الكتاب والشعراء.  
*wa 'anjabat al-Quds al-'adīd min al-kuttāb wash-shu'arā.*

(‘Several writers and poets were born in Jerusalem!’)

1b وأنجبت القدس العديد من الكتاب والشعراء.  
*wa 'anjabat al-Quds al-'adīd min al-kuttāb wash-shu'arā.*

(‘Several writers and poets were born in Jerusalem!’)

Example 1 shows orthographic variation between *وانجبت* *wa 'anjabat* ‘begets’ whereby the omission of *hamza* is noticeable and *وانجبت* *wa 'anjabat* ‘begets’ in which the glottal stop (i.e., *hamza*) is observed. Figure 1 illustrates the point:

In Figure 1, the omission or writing of *hamza* in stem-initial position is clear, luckily with no semantic differences. This can result in translation errors. Nevertheless, the writing or omission of diacritics is important in Arabic and may have a deleterious effect on meaning. Observe the following example:

Example 2

2a ما أجمل القدس!  
*mā 'ajmal al-Quds!*

(‘How beautiful Jerusalem is!’)

2b ما أجمل القدس!  
*mā 'ajmala l-Quds!*

(‘How beautiful Jerusalem is!’)

2c ما أجملُ القدس؟

أسوارها وحاراتها القديمة وقبة الصخرة وكنيسة القيامة.

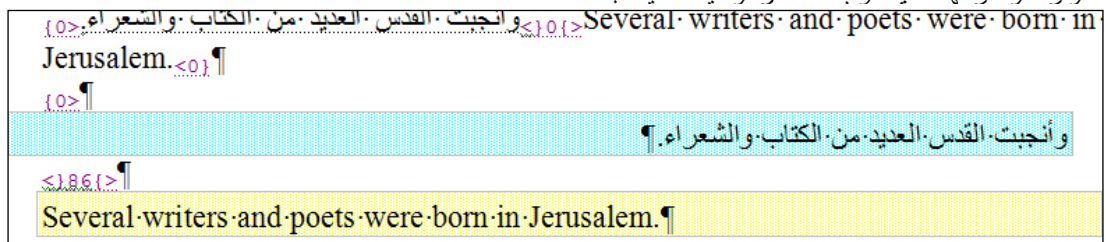


Figure 1: Screenshot of mismatching between segments caused by glottal stop

*mā 'ajmalu l-Qudsi? 'aswāruha, wa ḥārātuha l-qadīmah, wa Qubbatu ṣ-Ṣaxrah wa Kanīsatu l-Qiyāmah.*

(‘How beautiful Jerusalem is? Its walls, old quarters, the Dome of the Rock and the Church of Sepulchre.’)

It is necessary to account for the highlighted items in Example 2b and Example 2c. These are orthographically more or less the same, but syntactically different, thus bringing about different semantic meanings. In Example 2b, an exclamatory particle **مَا** *mā* ‘what’ with the elative form of the adjective **أَجْمَلُ** ‘*ajmala*’ ‘the most beautiful’ is used with a diacritical mark *fatha* - [a] attached to the ending of the adjective to create an exclamation. In contrast, the diacritical mark *damma* - [ū] attached to **أَجْمَلُ** ‘*ajmalu*’ ‘the most beautiful’ in Example 2c in the subjective case is used to express a question (for more details on case in Arabic, see Aziz 1989: 128). Therefore, diacritics are notable features in Arabic. This kind of difference leads to a semantic gap, clearly observed in Example 2b and 2c.

On the other hand, Example 2a aims at examining the applicability of TWB to undiacritized text, a phenomenon that is typical of Arabic; diacritics are almost always absent in running text in written Arabic situations (Habash and Sadat 2006: 2). Reliance on our linguistic competence on the one hand and the context of a situation on the other may help us understand the acute differences in an exchange. The undiacritised utterance in Example 2a also poses a great challenge as it can either mean what Example 2b or Example 2c is intended to mean. Though semantically different, TWB, as Figure 2 shows, could orthographically recognise a high fuzzy match between segments in question: 2a and 2b (75% similarity) and 2b and 2c (84% similarity).

In Figure 2, the lexis **أَجْمَلُ** in segment no. 2 has no

full diacritics, thus rendering the word a homograph. Put simply, the segment **مَا أَجْمَلُ الْقُدْسُ!** has a multiplicity of meanings— either ‘How beautiful Jerusalem is!’ or ‘What is the most beautiful place in Jerusalem?’. It is only the former that is intended in this situation. The bracketed number next to segment no. 2 shows zero matching as the source segment is sent to a built-in database, i.e., the TM did not contain this segment previously. For the subsequent segment (i.e., segment no. 3), the memory has proposed “How beautiful Jerusalem is!” as a translation, based on the translation of the previous segment, with a 75% match. The memory has suggested for segment no. 4 a similar translation to the previous one i.e., ‘How beautiful Jerusalem is!’, now with an exact match of 100%. Most importantly, the problem arises in segment no. 6, **مَا أَجْمَلُ الْقُدْسُ؟** ‘What is the most beautiful place in Jerusalem?’ because TWB recognised an 84% match. In terms of meaning, segments no. 2, 3 and 4 are semantically different from segment no. 6.

The student translator seems to take a leap of faith and trust the TM system and/or is encouraged to work fast and uncritically with the translated segments, thus killing the spirit of the SL text. The TM is a false friend as the erroneous translation in segment no. 6 shows, for instance. We may also argue that the student decided to accept the 84% fuzzy match translation so one of the deficiencies of the TWB insofar as Arabic is concerned is its inability to handle diacritics on the one hand and student carelessness on the other. Webb (1998: 11) explains that although “fuzzy matching is quite useful, the user must also be aware of problems that may arise during post-editing of matched text segments”. It is obvious that consistency in TMs is questionable (see also Moorkens 2012). For more elaboration, take Example 3:

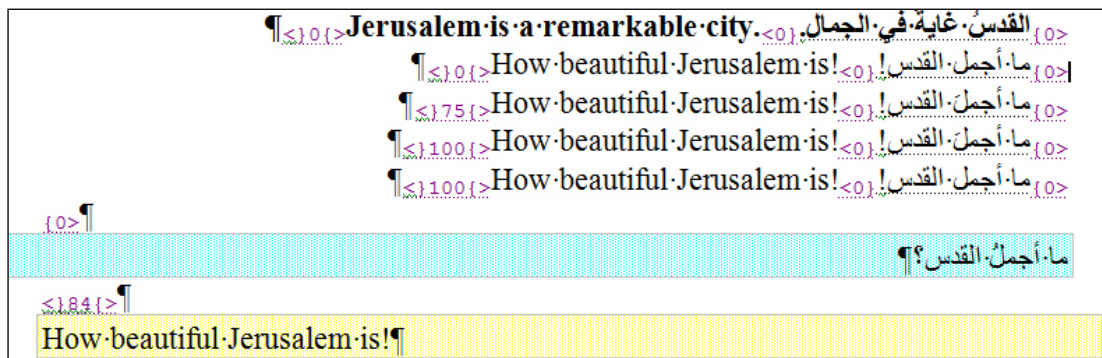


Figure 2: Screenshot of fuzzy match between segments

Example 3

3a أَحِبُّ الْقُدْسَ وَخَاصَّةً أُسْوَارَهَا.

'uhibu l-Qudsa wa xāṣatan 'aswāraha.

(‘I love Jerusalem, especially its walls’)

3b أَحِبُّ الْقُدْسَ خَاصَّةً أُسْوَارَهَا.

'uhibu l-Qudsa xāṣatan 'aswāraha.

(‘I love Jerusalem, especially its walls’)

3c أَحِبُّ الْقُدْسَ وَبِخَاصَّةٍ أُسْوَارَهَا.

'uhibu al-Qudsa wabi-xāṣatin 'aswāruha.

(‘I love Jerusalem, especially its walls’)

3d أَحِبُّ الْقُدْسَ وَخُصُوصًا أُسْوَارَهَا.

'uhibu l-Qudsa wa-xuṣūṣan 'aswāraha.

(‘I love Jerusalem, especially its walls’)

In Example 3, segments 3a *وَخَاصَّةً wa xāṣatan* ‘and especially’, 3b *خَاصَّةً xāṣatan* ‘especially’, 3c *وَبِخَاصَّةٍ wabi-xāṣatin* ‘and especially’ and 3d *وَخُصُوصًا wa-xuṣūṣan* ‘and especially’ are synonymous and all have more or less the same meaning in Arabic, but with different orthographies. However, Figure 3 indicates a 70 percent fuzzy match for *خَاصَّةً xāṣatan* (segment no. 2), an 80 percent matching for *وَبِخَاصَّةٍ wabi-xāṣatin* (segment no. 3) and *وَخُصُوصًا wa-xuṣūṣan* for (segment no. 2).

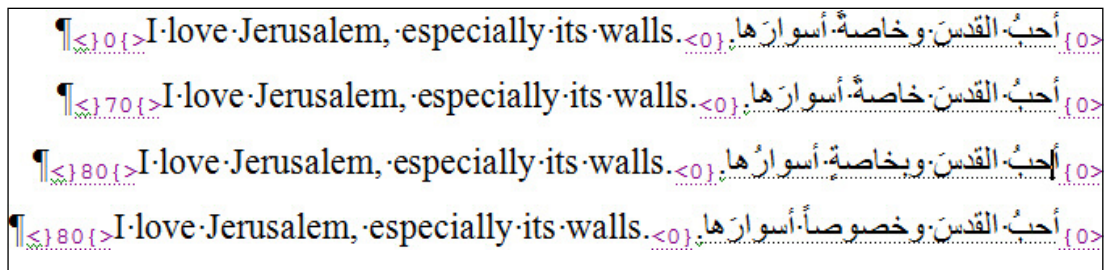


Figure 3: Screenshot of fuzzy match between synonymous items

## 7.2 Gemination

Gemination is orthographically “signalled in Arabic by a symbol called *shadda* above the sound in question [...] Absence of such symbols leads to confusing the different parts of speech of words” (Al-Jabr 2008: 112, emphasis in original). Consider Example 4:

4a ودرّس السكاكيني العربية في مدارس القدس.  
*wa darasa as-Sakakīniyy al-'arabiyyata fī madāris il-Quds.*

as-Sakakini learned Arabic in Jerusalem schools.

4b ودرّس السكاكيني العربية في مدارس القدس.

*wa darrasa as-Sakakīniyy al-'arabiyyata fī madāris il-Quds.*

as-Sakakini taught Arabic in Jerusalem schools.

In Example 4, gemination is observed in the highlighted items in 4b by the reiteration of [r] resulting in a totally different meaning from that in 4a. However, as the software matches strings based on characters and sentence length, TWB does not recognise the acute differences between 4a and 4b, giving a 93% match as Figure 4 shows. The students seem to have been misled by a higher match percentage.

It should be noted that the absence of gemination in *wa darasa* ‘and he learned’ (segment no. 1) and presence of gemination in *wa darrasa* (segment no. 2) are not treated appropriately by TWB. Actually, it reinforces a malapropism: “the mistaken use of a word in place of a similar-sounding one” (Concise Oxford English Dictionary 2004). Character-based indexing poses one of the pitfalls of TWB, which obviously affects the translation retrieval performance. As Figure 3 shows, it would be indeed bizarre for the translation students to accept the suggested translation without editing it. The translation in Example 3 is then fraught with peculiar

perils. This is due to the fact that meaning is posited to be both the point of departure and end product of translation.

## 7.3 Discourse-related problems

Preserving meaning(s) expressed in an SL when translating into a TL is the ultimate goal of translation. A semiotic interaction of various signs within the boundaries of a text should be given due attention by the translator. Hatim and Mason (1997:

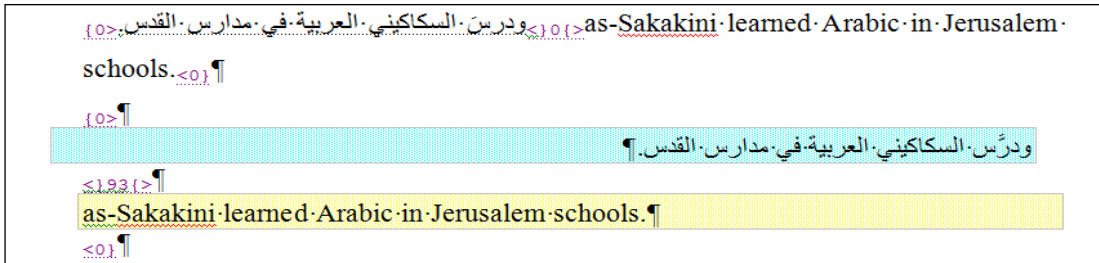


Figure 4: Screenshot of matching between geminated segments

223) point out that such an interaction paves the way for “a dimension of context which regulates the relationship of texts or parts of texts to each other as signs.” Failure to abide by such a relationship gives rise to a breakdown in communication in the TL text. To illustrate problems in discourse, take Example 5 in which the coherence of the text is not well respected in the student’s translation.

Example 5

- 5a How beautiful Jerusalem is!
- 5b Its walls, old quarters, the Dome of the Rock and the Church of Sepulchre.

It seems plausible to argue that 5b, as Example 5 shows, is a response to the Arabic question ‘ما أجمل القدس؟’ ‘What are the most beautiful places in Jerusalem?’ The syntactical and contextual information supplied by أجمل indicates to the translator the interrogative mood. As can be noted, segment 5b is recalcitrant to 5a, that is, does not flow communicatively, thus leading to a discourse-related problem (i.e., an incoherent translation). The suggested translation by TWB as Figure 5 suggests may cause a TL audience to raise eyebrows. One might understand the translation in Example 5, but still not intuit the underlying relations between different signs of the text. This boils down to human error on the part of the translation student, and may be related to training issues and the use of TM tools at the university.

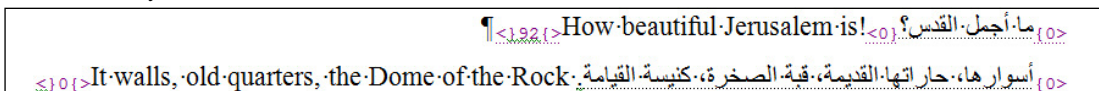


Figure 5: Screenshot of incoherent translation

7.4 The human-computer interface

The platform used by TWB is problematic for novice translators or even experienced ones on account of the user interface of TWB. Here we have Right-to-Left (RTL) SL text followed by Left-to-Right (LTR) TL text. As Esselink (2006: 25) puts it: “TM technology could only deal with text files. Hardly any technology [is] commercially available for the

localization of software user interfaces.” Dennett (2011: 29) further describes the user interface saying that TWB “not only has four windows of its own, but also adds a toolbar with a number of extra buttons to Word for Windows. This screen layout is a generic problem with all the program[me]s. The user interface is simply too cluttered for easy working.” Dennett (ibid) further adds that TM programmes “are typically attempting to display four windows on screen at once: source language, target language, dictionary and fuzzy match.” The window in Figure 2 is cluttered with several things: SL text in tandem with TL translation, bracketed numbers indicating match value, segmentation and alignment of the segments.

Alignment is an area of imbalance between Arabic and English by virtue of disparity in the writing systems. “Whereas the former is a [RTL] language, in which the letters of a single word can normally work with joined-up by ‘ligatures’ or cursive script, the latter is a [LTR] language” (Thawabteh 2007: 126; emphasis in original). TWB handles Arabic as a bi-directional language, which has special “reading order, visual appearance and alignment” (File Formats Reference Guide<sup>8</sup>, Glossary-2). TWB “allows you to input content in any language into translation memory text and attribute fields. It is possible to input any Unicode character into a translation unit” (Trados TWB User Guide<sup>9</sup>, 1-13).

Alignment poses a problem for Arabic- English translators using TMs, particularly Trados TWB. Figure 3, for instance, explains alignment complexities in which the text is full of clutters, with a likely problematic visual presentation of the SL and TL on the screen, and some of the translation problems may be attributed to issues with the human-



computer interface.

## 8. Conclusion and Pedagogical Implications

Technology has grown into an area of study worthy of research in its own right and provided the translator with several powerful communication tools, thus perhaps bringing about unparalleled prosperity in the translation industry. The image of the translator has changed from that of the past decades. Besides being an all-round person, the translator of today must be prepared to acquire technological skills which can support the translation process.

We should take cognisance of the fact that TT in the Arabic-speaking World should be streamlined. Attempts are being made to give TT a jump-start at some Arab universities; for instance, an initiative has been taken to teach TMs at the postgraduate level at Al-Quds University. It is no doubt an interesting initiative and, thus, sharing the experience of teaching and conducting this course would help other universities in Arab countries in outlining and updating their translation programmes.

TT is an under-researched area in Arab translation literature, but if Arab translation scholars began to address TT from a research point of view, this might pave the way for more development in the Arab translation industry. However, perhaps we should admit that the fact that TT is a lifeline to the job market in the Arabic-speaking World is questionable. It is therefore vital that translation programmes offering courses on CAT are responsive to industry demands. Perhaps it is futile to offer courses that are unrelated to the local job market as is the case with the Master's programme at Al-Quds University. However, the courses may be considered pioneering in that they qualify translation students to compete with peer translators all over the world. Equipped with sufficient technological savvy, students may enter the job market worldwide because, as Gil (2006: 90), explains: "customers and translators no longer need to be in the same geographical area, and members of the same translation team may live and work in different places."

We come to the conclusion that not all translation students are sufficiently equipped to employ TT in their future careers, and TT becomes a gruelling activity or a curse "based on a deep feeling of frustration in many translators [...] due to the

perceived steep learning curve needed to master TM" (García 2006: 98). The paper also reveals that the onus is on software developers to re-design TM tools to handle genetically remote languages against a backdrop of linguistically and culturally different systems. Example 4 is a case in point. The paper also shows that translating from morphologically-rich languages (e.g., Arabic) remains a challenging task.

Insofar as Arabic is concerned, the paper concludes that the use of TWB is associated with a number of complexities—problems with matching, recognition of spelling and diacritical variance and embedded morphological elements. Therefore, the issue of creditable performance of TMs is rather dubious, with respect to Arabic. It is perhaps true that TMs are buggy and unreliable. The translator should therefore aim for an acceptable compromise between usability and tractability. It is problematic to use TMs as "a translator will only see a few sentences, strings or one paragraph on the screen at a time during the translation process" (Elimam 2007, Parg. 6). Elimam further points out that the translator will only be able to work out of context. A corollary to this, the translator "may need to change some of his/her translations afterwards, which again means wasting some more time depending on how many corrections s/he needs to introduce in the translation" (Elimam 2007, Parg. 6).

It is safe to assume that MT is less efficient than TM tools. The former gives rise to many translation problems, especially in the translation of remote languages as is the case with Arabic and English. Unless it is meticulously used by the translators, MT may have disastrous consequences insofar as any translation activity is concerned. The latter, however, offer a gateway to success in translation profession if fastidious attention to technical details is paid.

## Notes

<sup>1</sup> This abbreviation stands for translation memory tools.

<sup>2</sup> SDL Trados 2006 freelance is used by the sample of the study. For the sake of the present study, the sample worked with TWB as other software devices, e.g., SDL Studio 11/12 environment has not been implemented by the MA translation programme yet.

<sup>3</sup> [https://aplicacionesua.cpd.ua.es/tra\\_int/usu/buscar.asp?idioma=en](https://aplicacionesua.cpd.ua.es/tra_int/usu/buscar.asp?idioma=en) [accessed on August 31, 201]

<sup>4</sup> <http://www.benjamins.com/online/tsb/> [accessed on August 31, 2012]

<sup>5</sup> Information on translation from and into Arabic is provided by Index Translationum: World Bibliography of Translation, available at: <http://databases.unesco.org/xtrans/xtra-form.shtml>, [accessed on September 13, 2012]

<sup>6</sup> [http://www.yu.edu.jo/index.php?option=com\\_docman&Itemid=332](http://www.yu.edu.jo/index.php?option=com_docman&Itemid=332) [accessed on May 20, 2011]

<sup>7</sup> Core Courses (totalling 24 credit hours) are: Advanced Linguistics for Translators; Translation History and Theory; Editing, Documentation and Publishing Methods; Introduction to Interpreting; Audiovisual Translation I; Translation Practice I; Translation Practice II; and Translation Technology and Term Management. Electives (totalling 15 credit hours) are: Conference Interpreting I; Conference Interpreting II; Audiovisual Translation II; Literary Translation I; Literary Translation II; Translation Practice III (for three-language candidates); Technical and Business Translation I; Technical and Business Translation II; Legal Translation; Translation and Arabization; Seminar in Translation and Thesis.

<sup>8</sup> Manual of SDL TRADOS7 Freelance.

<sup>9</sup> Manual of SDL TRADOS7 Freelance.

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## Appendix 1

Translate the following text by using Trados TWB.

القدسُ غايةً في الجمال.  
 ما أجملِ القدس!  
 ما أجملِ القدس!  
 ما أجملِ القدس!  
 ما أجملِ القدس!  
 ما أجملِ القدس؟

أسوارها وحصاراتها القديمة وقبة الصخرة وكنيسة القيامة.  
 وأنجبت القدس العديد من الكتاب والشعراء.  
 وأنجبت القدس العديد من الكتاب والشعراء.  
 أنجبت القدس السكاكيني.  
 ودرّس السكاكيني العربية في مدارس القدس.  
 ودرّس السكاكيني العربية في مدارس القدس.  
 أحبُّ القدسَ وخاصةً أسوارها.  
 أحبُّ القدسَ خاصةً أسوارها.  
 أحبُّ القدسَ وبخاصةً أسوارها.  
 أحبُّ القدسَ وخصوصاً أسوارها.

Free online translation from English into Arabic and back, English-Arabic dictionary with transcription, pronunciation, and examples of usage. Yandex.Translate works with words, texts, and webpages. Kitchen, London, Zoo. Now you can create and share themed collections of translations. Open collections. Not now. Log in. English-Arabic online translator and dictionary. Type text or a site address. 0 / 10000. Translate in. Select the text to see examples. Yandex.Translate is a mobile and web service that translates words, phrases, whole texts, and entire websites from English into Arabic. The meanings of individual words come complete with examples of usage, transcription, and the possibility to hear pronunciation. Localisation Focus The International Journal of Localisation Vol.12 Issue 1 The Intricacies of Translation Memory Tools:With Particular Reference to Arabic-English Translation Mohammad Ahmad Thawabteh English Department, Al-Quds University, PO Box 20002, Abu Dies, Jerusalem Occupied Palestinian Territories mthawabteh@arts.alquds.edu Abstract Translation Memory (TM) technology has been enjoying a good deal of popularity among translation theorists and practitioners since it. A theoretical framework for TM vis-à-vis Machine Translation (MT) is first discussed. The paper then examines the applicability of a TM tool, namely Translator's Workbench (TWB), to Arabic, and the ensuing problems as illustrated by the translation