An-Najah National University
Faculty of Graduate Studies

Machine Translation
Limits of Accuracy and Fidelity

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الإقرار

أنا الموقعة أدناه، مقدمة الرسالة التي تحمل العنوان:

Machine Translation Limits of Accuracy and Fidelity

الترجمة الآلية: حدود الدقة والولاء للنص

أقر بأن ما اشتملت عليه هذه الرسالة إنما هو نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيثما ورد، وأن هذه الرسالة كاملة، أو أي جزء منها لم يقدم من قبل لنيل أي درجة أو لقب علمي أو بحثي لدى أي مؤسسة تعليمية أو بحثية أخرى.

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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Machine Translation: Limits of Accuracy and Fidelity

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Abstract

While we grow to be more dependent on machines in all our walks of life, using machines in translation has become a remarkable challenge. In this study, the researcher has analyzed some texts and their translations which are produced by Google Translate. The researcher has categorized the translations according to a group of markers and indicators: the implied vs literal meaning, capturing the different senses, everyday language and culture, fixed and context free expressions, grammatical structure and unit of translation. The researcher has reached a number of recommendations on how to enhance the use of machine translation. The translation movement is moving towards utilizing the use of machine programs in translation effectively; there is no turning back even though the human intervention in translation is still fundamental.

Chapter One

Introduction

Chapter One

Introduction

When one is sitting before his/her computer and wants to translate a letter from one of his/her friends from another continent or perhaps one is assigned a homework to translate a long text or maybe one works as a professional translator; one is commissioned to translate an article or a report of many pages, the first thing that occurs to one's mind if s/he is in any of these situations is to use Google Translate. Of course, it would be absurd to use a dictionary in these situations because one will be wasting minutes, perhaps hours, to find the proper word especially since wasting those minutes is considered something one cannot really afford to lose in this age of unstoppable force of speed.

Statement of the Problem

The thesis addresses the problem of the mistranslation of expressions especially idiomatic expressions from English to Arabic while using online machine translation programs such as Google Translate. While the work of the machine is still far from being adequately accurate, the task of translators is to find ways to boost the role of the machine in translation by giving certain recommendations on the procedural aspects since the technical side is not within the domain of translators. By highlighting their needs and expectations, translators can alert programmers to such needs so that they can be improved.

Questions of the Study

The thesis tackles and answers three main questions. First, what are the main errors that occur while using machine translation to translate cultural expressions from English to Arabic? Second, what are the factors that lead to these errors? Third, what solutions or strategies can be used to help solve these problems? Finally, how can the use of machines in translation be optimized on the side of the translator?

Significance of the Study

The topic of this thesis is important for many reasons. First, it would give an insight on the most common errors that occur when we as translators use machine translation to translate cultural expressions. Second, it would shed a light on the important suggestions or advice on how to deal with such errors. Third, it would enhance the translators' skills and abilities on how to deal with machine translation, by doing so, it would also enhance their translations, as well.

Limitations of the Study

The thesis has certain limitations and one of those limitations is the focus on Google Translate since it fits the purpose of the thesis which is to help benefit not only novice translators but also professionals. Both of them use machine translation especially Google Translate; the reason why it is used a lot is because it is an easily accessed webpage; it doesn’t cost a thing and it is always available and under the disposal of translators 24 hours. It

is probably the most widely used tool for it’s the first thing that crosses the translator's mind when s/he wants to know the meaning of a word quickly especially if s/he is reluctant to use other means or if s/he is in a hurry. By doing this research and reaching the answers to the research questions, the researcher hopes to guide the translators on how to deal with machine translation and what to do in cases where there are errors in the translation of idiomatic expressions while using machine translation. This study is limited to the translation between Arabic and English.

Methodology

The method follows a descriptive and analytical method of the source text (English cultural expressions) and the target text (the translated expressions into Arabic on online machine translation by using Google Translate). The method includes human intervention; when the human translator interferes in cases where machine translation can be useless in producing certain translations or the wanted effects that could help locate errors, and predict their reasons.

Chapter Two

Literature review

Chapter Two
Literature review

We as translators like to deceive ourselves into thinking that we no longer need dictionaries or machines in our work but in fact we should never forget that we use these every once in a while especially Google Translate even though we don’t like to admit it sometimes. We shouldn’t deny the fact that Google Translate is our pal when it comes to translation; this pal of ours is a machine that collects data and stores them like an attic that stocks things over each other. We shouldn't rely on it so much especially concerning cultural expressions. Sometimes there are so many cases where some of its translations don not add up or make any sense and they are even incomprehensible since the machine does not have what humans have, a sense of judgment.

Craciunescu, Gerding-Salas and Stringer-O'Keeffe (2004) define machine translation by referring to its aims of collecting necessary information for translation and putting it in one program that translates a text without any kind of "human intervention". It takes advantage of the computer's capability of making calculations for the sake of analyzing the structure of a sentence, breaking it down into "easily translatable elements" and creating a sentence with an equivalent content in the target language. Machine translation makes use of multilingual dictionaries or as they are called "plurilingual dictionaries" and "corpora of texts" which have been translated. (Retrieved from http://translationjournal.net/journal/ 29computers.htm on5 October 2015).

But in the end, machine translation can't really work without some kind of intervention from a human; especially since the translator produces his/her own final touches or makes his/her adjustment on the translated (target) text which is translated by a machine to make it more comprehensible or acceptable for the reader. Ultimately, Johnson (2004: 67) states that automatic translation relies on the implications created by the human translator in the "pre-editing" of the source text into a "sublanguage" and based on that the translating program can function successfully, and also "in the subsequent 'post-editing' of the text" the program produces. That explains why the accomplishments of machine translation have been remarkable in analyzing and processing technical and scientific texts where the chances of "linguistic ambiguity" are at the lowest level. These programs have improved due to the level of "reflexivity" in processing the linguistic information, and the "feedback mechanism" of' "critiquing systems" such programs have the advantage of indicating whether the text shifted or changed from "normal language use" and therefore decreases the need of post editing.

According to Sofer (2009), machine translation is part of the field of artificial intelligence which is a branch of computer science that specializes in using computer to "simulate human thinking" (69). Its aim is to invent programs that creatively solve problems instead of just following orders so that it functions like a human brain. Even though machine translation imitates human thinking, it is only a sidekick or the right hand of the translator; it can't be complete without the presence of the translator who

truly understands or comprehends the human complexity and that is why machine translation is no match for what human translators can offer. Sofer (2009) also mentions that for 50 years the Air Force and other institutions have spent millions of dollars in pursuing their ambition to replace human translation with computers; however the results have been limited for two main reasons. First, even though computers are famous for their infinite capability of processing data, they can't think creatively like humans. Second, language is not a bunch of signs and symbols that can be programmed," manipulated, and computerized" (69). Language always expresses complicated thoughts in poetry and philosophy even in technical texts. In other words; machine translation can handle the parole part of language but it can never master the langue part (Saussure: 1959) and this can be explained by referring to the idea of differance by Derrida (Bressler: 2003). Only human beings can comprehend the complexity of differance of signs of language which is based on both differences of meanings and deferred ones. Signs can be distinguished from each other by either seeing the differences of meanings between them or by finding out what they could possibly mean since these signs can always acquire new meanings through time.

One of our many worries as translators is that there is a possibility that we are going to be replaced by a tireless and heartless machine. Well, history proves that scientists could not invent a machine that could do what a human being can do so easily which is creativity which is an asset of human beings that comes through imagination.

Sofer (2009) suggests that we will always need human translators since language communicates more than the literal meaning and there are shades of meaning that keep changing and not to mention the value judgments that people have to make about the " meaning and the intent" of a text (70). Human beings have what the researcher likes to call a sense of judgment or creating impressions or values whether they are negative or positive towards things and this sense is only a privilege for human beings who attain this ability by getting familiar with a lot of cultures including one's own culture. Familiarity with other cultures doesn't just mean knowledge or information but it also means being able to develop a sense of judgment; it is almost as having a seventh sense which enables you to tell what these words or expressions mean or implicate in a particular culture. In other words, after knowing a culture for a long time you will have the advantage of judging whether an expression is acceptable to that culture or not. You can say that translation is like acting; an actor needs to know everything about the role s/he is acting so s/he can predict the behavior of the character something which helps him/her in judging if a certain kind of behavior is suitable for his/her character or not, and even if one has to improvise things, s/he has to suit the occasion.

Translators according to Tennent (2005) need to have these basic skills while dealing with computer assisted translation. First, the arrangement of the user's workstation. Second, managing files. Third, the production of digital texts or "word processing". Finally, knowing the basics of internet use. (102)

Sofer (2009) states that translators don’t favor "post-editing machine translation" and they don’t get paid enough for that job (71). Post editing is hard and it consumes more time than translating from the source text directly. The reason that post-editing is not fun and harder than it looks is that it's like an endless puzzle where one has to spend so many hours trying to bring the pieces together; imagine the same scenario but with words and phrases for countless hours.

Hutchins (1995) mentions that machine translation is inappropriate for translators since they don’t like to submit to a machine by revising its errors. What they truly need are tools such as a work station in order to assist them by allowing them to solve translation problems or challenges by themselves like dictionaries, word processing, and glossaries.

Sofer (2009) makes a point recently that the ones who profit from machine translations are not the consumers who buy these services but the companies who produce and manufacture these programs and the translators who develop machine translation projects or edit the texts which are translated by a machine. Machine translation didn’t make translation cheaper for consumers and for that reason it isn’t considered a threat to translators. That's why it is not in the best interest of companies to rely on machine translation software instead of paying human translators to do the translation in order to save themselves a lot of money; eventually clients or the commissioners would rather deal with human translators since they can give them the translations they needed or wanted for much cheaper or

satisfying prices. However, there are cases where companies require only the core of the message and not the style or the minor details. In these cases, machine translation can be of great help even though it could give inaccurate translation but at least it conveys the message.

According to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe: (2004), there are three main strategies that machine translation follows or is programmed to follow. The first one is the "direct strategy" which focuses on the "predefined source language-target language binomial" where each word of the source language "syntagm" is connected or related directly to a corresponding unit in the target language in undirected relation like English to Spanish but not vise versa. For example, the "Georgetown system" like any other system applies the direct approach processes lexical units. The procedures for morphological analysis are enhanced and the dictionaries are complicated; however, because of the limited "syntactical analysis and disambiguation" processes, human translation is needed as a second stage or step. (Retrieved from http://translationjournal.net/journal/29computers. htm on 5 October 2015)

The second approach according to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) is the "transfer strategy" which concentrates on the "level of representation" and it consists of three stages. First, the analysis stage that analyzes the source text linguistically and makes use of a source language dictionary. Second comes the transfer stage which changes the results of the previous stage and builds the "linguistic and structural equivalents" between two languages. A bilingual dictionary from

the source language and the target language is used. The last stage is the "generation stage" where a document in the target language is produced and is based on the linguistic data of the source language by using a target language dictionary. (Retrieved from http://translationjournal.net/journal/29computers.htm on 5 October 2015)

According to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004), the third approach is the "pivot language strategy" which focuses on the idea of making a "representation" of the text which is independent from any language. The representation works as a "neutral, universal, central" entity which can be distinguished from both the target language and the source language. Theoretically, this approach narrows the machine translation process into two stages, analysis and generation stages. The analysis of the original text results in a "conceptual representation " where the different elements or components are given their match of equivalents in the target language during the generation stage (Retrieved from http://translationjournal.net/journal/29computers.htm on 5 October 2015). Artificial intelligence and the representation of knowledge are related subjects to making a research on this strategy or approach. However, this kind of system which is based on a pivot language does not aim at straight or direct translation but it instead reshapes or reformulates the source text from basic information.

It is really crucial to understand how the system works in order to predict the reasons for the flaws or the errors that translators keep detecting while using machine translation. It can be noticed that all these strategies

are based on dictionary knowledge but not real life knowledge. That is why machine translation will most likely create a very literal translation of the text or as the researcher likes to call a 'bookish translation'.

When we talk about machine translation we have to at least refer to a much related topic which is translation memory. Translation memory "is a database in which a translator stores translations for future re-use, either in the same text or other texts. Basically the program records bilingual pairs: a source-language segment (usually a sentence) combined with a target-language segment. If an identical or similar source-language segment comes up later, the translation memory program will find the previously-translated segment and automatically suggest it for the new translation. The translator is free to accept it without change, edit it to fit the current context, or reject it altogether." (Craciunescu, Gerding-Salas, Stringer-O'Keeffe: 2004). It is used to process three main characteristics: terminological homogeneity, phraseological homogeneity, and short, simple sentences. "Terminological homogeneity" which means the "meaning of terms does not vary". "Phraseological homogeneity" which means ideas or "actions are expressed or described with the same words". "Short, simple sentences" "increase the probability of repetition and reduce ambiguity." (Retrieved from http://translationjournal.net/journal/29 computers.htm on 5 October 2015).

According to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004), the translation memory is "based on the accumulation and storing

of knowledge that is recycled according to need, automating the use of terminology and access to dictionaries. When translation tasks are repeated, memories save the translator valuable time and even physical effort: for example, keyboard use can be reduced by as much as 70% with some texts. Memories also simplify project management and team translation by ensuring consistency." (Retrieved from http://translationjournal.net/journal/29computers.htm on 5 October 2015)

There are certain disadvantages to translation memories. Translation memories according to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) can deal with the "linguistic segments"; however, they do not have the privilege of having a vision of the whole text when it comes to "ideas and concepts or overall message" as a human translator has since the translator has a choice to reorganize the information in the original text in case the target language and culture requires "a different content relationship to create coherence or facilitate comprehension." Another one is that it needs training time for using it efficiently and that it takes a long time to establish a huge database so that is why they do not really save time. Finally, it is true that translation memory programs are devised to "increase the quality and efficiency of the translation process" especially when it concerns "specialized texts with non-figurative language and fixed grammatical constructions"; however, that doesn't mean that they are made to "replace the human translator". (Retrieved from http://translationjournal.net/journal/29computers.htm on5 October 2015)

In other words, it is just an endless storage of knowledge and information; it's basically what every novice translator ever wants to have, an amazing memory that can store every bit of knowledge of dictionaries. But is it really enough to have memory only? Translation is not about how many words or expressions one can memorize or remember but it is how one combines everything in his/her disposal to create an acceptable and comprehensible text for the target readers. One uses knowledge from the text, context, real life knowledge, and his/her experiences. There is also what the researcher calls 'one's positive impressions or value judgments'. No matter how many dictionaries the machine translation uses; it can never imitate our impressions of things because human beings are the only ones that can sense and judge whether an idea is truly meant or implicated in a given way in that particular culture.

Champollion (2001) mentions that machine translation can store lots of knowledge and descriptions of them but it can never harbor feelings for such knowledge. Interpreting basic knowledge by a clueless machine means that it would lead to a nonsensical translation. It is true that machine translation can translate but it can't understand and translation without understanding is useless; that's why a human translator would function as proof-sensing for the pre-translated text translated by a machine.

Hutchins and Somers (1992 cited in Fiederer and O'Brien 2009) introduce the three known tests for testing the quality of a translation. First is fidelity or accuracy which means the extent to which the target text

contains the same information as the source text. Second is intelligibility which focuses on the ease of understanding a certain translation by a reader. Finally, style which is the extent to which a translation uses appropriate use of language to "its content and intention". (54)

According to Hutchins (2010), the quality of machine translation is poor especially concerning colloquial language used in many source texts such as the language of the internet which is colloquial, incoherent and ungrammatical and filled with puns, allusions, acronyms and abbreviations. Machine translation is usually used to provide its users with rough translations for the purpose of getting information and to translate scientific and technical texts.

Ellender (2012) says that Google Translate emerged as the best appropriate choice of a "free online translation package" for the non-specialized "end-users" who want to translate, and understand a text that consists of more than 150 words, "from French, German or Swedish into English".(Retrieved from. http://www.translationjournal.net/journal/61freexlation.htm on 18 November 2015)

Aiken and Balan (2011) stated that since Google Translate offers translations to so many languages, it led to variance in accuracy. The translations between European languages are good but it is really poor between Asian languages. Even though it can never reach the level of expertise of professionals; it can still offer cheap and quick translations for "unusual language pairs". (Retrieved from

http://www.translationjournal.net/journal/56google.htm on 18 November 2015)

Guidère (2002) states that in order to know whether a certain system performs successfully, there are certain requirements that need to be met. First is the quality and the size of the bilingual dictionaries which include not only grammatical words but also unknown terms. Second is the type of data used; for example, when the bilingual texts "may pose a problem if the quality of the corpus is poor or if it has not been subjected to strict control by a human expert". Third is "the accuracy of the system and the quality of the translation depend on the volume of training data available and the accuracy of corpus synchronization". (Retrieved from. http://www.translationjournal.net/journal/19mt.htm on 18 November 2015)

Many researchers have discovered plenty of errors in machine translation. First, the problem of accuracy which is mentioned by Raley (2003) who stated that although no real efforts have been done to use machine translation for literary texts, it is already apparent if one uses Google Translate for translating Dante, it will produce a basic, strange and "inaccurate" "fractured" translation (292). Second, according to Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) there are errors "that change the meaning of the lexeme" which means words or "phrases that are apparently correct but which do not translate the meaning in context" and "words without meaning". There are also errors "in usage" which means the "translation is understandable in that the MT produces the

meaning but does not respect usage". (Retrieved from http://translationjournal.net/journal/29computers.htm on5 October 2015)

Third, according to Parkish (2012) there are some intricacies of machine translation like violating the use of language, language pair with different word orders, single word with multiple meanings, group of words for a single word, lack of one-to-one correspondence of parts of speech between two languages, simulation of human language behavior by automatic means, rules of the grammar and vocabulary, and sentence framing varies from language to language.

Fourth, Wisniewski, Kubler, and Yvon (2014) state that there are six different types of errors made by machine translation: "lexical errors", "morphological errors", "syntax errors", "semantic errors", "format errors (e.g.: error caused by a problem in the tokenization of the source sentence)", and "errors without a clear explanation".(Retrieved from http://transread.limsi.fr/lrec_Wisniewskietal.pdf on 18 November 2015)

Fifth, the Automatic Language Processing Advisory Committee, the National Academy of Sciences, and the National Research Council (1966) classified common errors made by machine translation in the following categories: transliterated words, multiple meanings and ambiguities, word order rearranged, and miscellaneous insertions and correction.

Sixth, John Hutchins (2007) states the problems in machine translation. First, the inherent linguistic problems like bilingual lexical differences, bilingual structural ambiguity. Second, the non linguistic

problems of reality. Third, the stylistic problems. He also mentions some of the errors discovered in the post editing phase. For example, he mentions that misspelling is not recognized in the original, therefore not translated, also missing punctuation, complex syntax, preposition, verb phrases, inversions, and reflexive verbs with inversion.

Seventh, Irvine et al (2013) mention four error types. First, "SEEN" which means an attempt to translate a source term or phrase that has never been seen before. Second, "SENSE" which means an attempt to translate a source term or phrase previously seen but the correct target language sense has never been "observed". Third, "SCORE" which means an incorrect translation which the system could have provided the right answer but didn't since the "incorrect alternative outweighed" the correct one. Fourth, "SEARCH" which means "an error due to pruning in beam search". (431)

Vilar et al (2006) give a hierarchal structure of types of errors. The first level includes these main classes: "Missing Words", "Word Order", "Incorrect Words", "Unknown Words" and "Punctuation" errors. Incorrect words means that the system is "unable to find" correct translation (698,699) and this category consists of five subcategories and these are sense, incorrect form, extra words, style, and idioms. The subcategory of idioms is concerned with idiomatic expressions that the system doesn't recognize and translates them as a normal text which causes or leads to errors.

Moiron and Tiedemann (2006) define the idiomatic expression and discussed its features that it is a subset of multiword expressions which can

be differentiated from literal expressions through their derivation. Linguistic expressions are categorized according to a scale from "fully transparent to opaque". Literal expressions are highly predictable; however, the unpredictable meanings are due to the "fossilized and conventionalized" expressions and that the meanings of these idiomatic expressions cannot be derived from the combined meanings of their individual parts; unlike the literal expressions. How can a machine know the difference between literal and idiomatic expressions; not to mention, not being able to understand the subtleties of meanings of the idiomatic expressions? (33, 34)

Idiomatic expressions are part of a certain culture. Culture is defined by Newmark (1988: 94) as "the way of life and it's manifestations" that are particular to a community which uses a certain language to express a lot of things. Candlin (1990:ix: cited in Katan 1999) talks about how the translation process does not only care about selecting phrases but also cares about "signs of culture"(126), hence it asks the translators about their ideological and cultural assumptions on the matters which are uttered in speech or writing or even signs. How can a machine that has never experienced living with a community and the fact that it is not a living organism understand the implications of idiomatic expressions in that culture?

Finally, Martin Kay (1980/2003 cited in Hatim and Munday, 2004) discusses some of the obstacles to successful machine translation including "words with multiple meanings, sentences with multiple grammatical

structures, uncertainty about what a pronoun refers to, and other problems of grammer." (116)

There are reasons behind the errors of machine translation. First, according to Raley (2003) machine translation depends on the level of the complexity of the text; in other words, machine translation "only works to produce reasonably accurate and functional draft translations when the input is basic, and when both input and output are restricted with respect to style, vocabulary, figurative expression, and content; we are presented with a renewed utilitarianism; a renewed appreciation for the basic and easily translatable (the nonfigurative, the non-literary); and a new economics and pragmatics of language and informatic exchange."(293)

The second reason is that machine translation can't sense the context; in other words, Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) stated that since languages rely on contexts and denotations and connotations of words and combinations, machine translation is not capable of producing useable texts especially that users cannot provide the full context of the text. Machine translation is only for concrete situations and a way to save time instead of replacing humans, and in order to produce a good quality translation, it needs post editing. Raley (2003) quoted Weaver that a perfect translation is unattainable and added that a true translating machine would need artificial intelligence and computer's abilities to understand "not just vocabulary and syntax, but also rhetoric and context" and there are still some questions that need to be answered about what makes a perfect translation; "accuracy, quality, and meaning". (292)

Kelly (2014) notes that in some cases word-for-word translation is "impossible"; instead human beings think about the context to find the meaning by thinking how words interact with each other, how these combinations change and multiply and they are only limited by human creativity. That's why machine translation can't "keep up" with them. (Retrieved from http://www.smartling.com/blog/2014/01/09/machines-solve-worlds-translation-problem/ on 5 October 2015)

The third reason discussed by Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) is that machine translation focuses on the source language; however, human translation concentrates on the comprehension of the target language. The reason why machine translations are inaccurate is because they use dictionaries and follow "the situational limitations" (Retrieved from http://translationjournal.net/journal/29computers.htm on5 October 2015) made by the programmer.

Fourth, Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) also mention that "human translation concentrates on the target language, preferring to depart from the source language, if necessary, in order to reproduce meaning."(Retrieved from http://translationjournal.net/journal/29 computers.htm on5 October 2015). In other words, human translation looks for ways to make the translation sound natural in the target language even if it means to neglect the source language for the sake of giving a more suitable effect. However, machine translation analyzes the limited data that it is provided with instead of analyzing the situation and devise or suggest different plausible solutions for the problem based on these situations.

Fifth, another reason according to Kelly (2014) is expressed by some translators who "totally reject machine translation because they associate it with the point of view that translation is merely one more marketable product based on a calculation of investment versus profits. They define translation as an art that possesses its own aesthetic criteria that have nothing to do with profit and loss, but are rather related to creativity and the power of the imagination.". (Retrieved from http://www.smartling.com/blog/2014/01/09/machines-solve-worlds-translation-problem/ on 5 October 2015)

Sixth, Kelly (2014) says that it's hard to get good translation even from **"**perfectly bilingual human beings**"** since translators aren't " walking dictionaries". They have the power to" recreate language, craft beautiful phrases and sentences to make them have the same impact as the source". They also create "brand-new ways of saying things" by drawing upon "a lifetime’s worth of knowledge derived from living in two cultures" (Retrieved from http://www.smartling.com/blog/2014/01/09/machines-solve-worlds-translation-problem/ on 5 October 2015). However, machines can't do that.

Seventh, Kelly (2014) notices that the quality of translation is "highly subjective". Although machines can "approximate human translation quality**",** it is not clear which version of human quality they could imitate. If you give a text to one hundred human translators, the result would be one hundred different translations. Which one of them is

the best quality? It is just like asking someone to pick the best version of a song performed by many singers. Machine translation tools offer limited options in their output which are simplistic for complicated "linguistic realities of most translation projects."(Retrieved from http://www.smartling.com/blog/2014/01/09/machines-solve-worlds-translation-problem/ on 5 October 2015)

Eighth, another reason Kelly (2014) also mentions is that our "taste or distaste for a particular term often relates to our upbringing, our culture, and even our past experiences. Humans cannot accurately predict which words will annoy or confuse even the people we know best. How can we expect a machine to fare any better?".(Retrieved from http://www.smartling.com/blog/2014/01/09/machines-solve-worlds-translation-problem/ on 5 October 2015)

Ninth, Rozmyslowicz (2014) translated the work of Erich Prunč (2004) where he mentions that intentionality is the main difference between machine translation and human translation and since communicative action is considered as part of the human category, it can only be left for humans as social creatures.

Tenth, Rozmyslowicz (2014) translated also the work of Arnold Gehlen (1961/1986) where he introduces the idea that “technical rationality” and its mathematical language are detached from all other languages and that its technical systems are also detached from the cultural environment (149). The technical rationality and modern technology can be

described as the opposite of what a translation ought to be since they both neglect the cultural and linguistic differences.

Finally, Hatim and Munday (2004) state that "Bar- Hillel considered that real-world knowledge was necessary for translation and that this was impossible for a machine to replicate. He felt that the goal of a fully mechanized translation on a par with that produced by a professional translator was unrealistic. In his opinion, it would be more realistic to attempt to produce machines that worked in conjunction with humans."(116). It is logical for human translators to work in coordination with machines especially when they deal with languages that are complicated to the point that they need human intervention to be comprehended and translated such as English

Bar-Hillel (1953) notes that a machine can never provide a satisfactory translation for idioms since a machine follows certain rules and dictionaries and the solution for this problem is to change the old rules by adding new ones. He suggests three methods. First, to enlarge the list of correlates in the target language to include more entries of the source language. Second, to add or supply the word or stem dictionary with a special phrase dictionary whose entries if translated word for word, it would produce unsatisfactory translation. The third approach is totally different from the first two since the reader of the translation would be informed that certain target phrases should or might be "replaced by other phrases". (221-223)

In the end, there are so many conflicting views when it comes to machine translation. The first extreme opinion by Craciunescu, Gerding-Salas, and Stringer-O'Keeffe (2004) believes that it is absurd to claim that a machine can produce a good translation quality like a human being. However, even human translators are rarely "capable of producing a polished translation at first attempt". In addition, the translation process consists of two phases. First stage is the production of a rough text in the target language where most of the problems are solved but it's not even close to being perfect. Second stage is the revision stage which varies from rereading the text while making adjustments to implementing radical changes. Machine translation performs the first stage automatically. That way the translator can focus on the second stage performing the "meticulous and demanding task of revision"(Retrieved from http://translationjournal.net/journal/29computers.htm on5 October 2015). The problem is that the translator has to face a translation done not by a human but by a machine which could affect the approach since the errors are different, so it's essential that the machine translation create harmony with the human thought processes, judgments and experiences. Machine translation is both an aid since it helps completing the first stage and a trap since it is not easy for the translator to have a huge distance from a text which is already primitively translated; so many mistakes can go unnoticed. That's why one shouldn't trust this pal all the time and should confirm what it says.

The second opinion by Johnson (2004) is that the task or the role of the translator is to "negotiate the space" between sides. The interpreter's job

is to open a "channel of communication between two linguistic monads". However, s/he can also be the reason for the text's " perversion or its loss". If degradation of information passed through the channel or noise interfered with the message, then the risk of loss will be compounded or doubled. Those who practice a transaction between languages are aware that since the interpreter is a human, his or her capabilities and abilities such as "comprehension, concentration and communication" are "finite" or limited. There is also the psychological question that is concerned with the interpreter's intentions and whether his or her translation will be faithful to one side or another or to both of them equally. He adds that since interpreters are rare, this could affect their wages or the cost of interpretation. To Johnson, the interpreter is like "a parasite" "who profits from the lack of communication"; however, s/he is crucial to the "economy of the communication". The ideal machine translation whether it's textual or verbal is to eliminate the third party to save time, effort, the possibility of making human errors, "human malice", and "preserve us from the uncertainty of provision" since there will always be a shortage of human translators. The machine is considered as a universal translator since it is always available. In this other extreme opinion, it suggests that human translators are evil in nature and tend in most cases to manipulate translation to fulfill their bad intentions and that there is no such a thing as an honest mistake; however, translating machines do not have a heart or a brain so they could never corrupt their translations for hidden motives and that is why they are completely 100% honest. (68, 69)

So in the first and second extremes they both either do not trust human translators or do not trust machine translators. There is also a third middle ground opinion by Hatim and Munday (2004) which says a translation "process starts with providing the MT system with usable input." and "when a text can actually be submitted to an MT system, and the system produces a translation, the output is almost invariably deemed to be grammatically and translationally imperfect. Despite the increased complexity of MT system they will never – within the forseeable future – be able to handle all types of text reliably and accurately. This means that the translation will have to be corrected (post-edited) and usually the person best equipped to do this is a translator."(218). It suggests that machine translation complements human translators and vise versa and that they both work together as a team; it is like they are both couples finishing each other's sentences and they cannot function without the presence of the other.

In the end there is only one thing one has to pay attention to and remind him/herself of and that is, according to Parikh (2012):

When it comes to market-ready translation of a publishable quality, it should be grammatically flawless and able to capture the essence and the meaning of original content. Hence, it would be unlikely to expect a machine to perform and produce a target text matching the exact quality as that of a human translator. However, machine translation rarely reaches accuracy levels above 70%, while a human translation almost always

produces accuracy above 95%. (http://blogs.webdunia.net/can-machine-translation-for-cross-culture-be-a-good-choice/)

It is worth mentioning that there are plenty of machine translation systems but there are two systems which are known among the translators, TRADOS and Déjà vu. First, Nogueira (2002) talked about some of the features of TRADOS such as "MultiTerm" which is a 12 step software that lets the user add terms to a glossary. TRADOS has two different versions with different capabilities and prices, the "Freelancer" version and the "Team" version. Unlike the "Freelancer" version, "Team" version has extra advantages such as the "Extraterm" which is "terminology extraction tool" that you can only find within the "Team" version. (Retrieved from http://translationjournal.net/journal/19tm.htm on 20 November 2015)

Second, Déjà vu was described by Nogueira (2002) as the "powerhouse" and it is specifically designed for translators; it also has certain features such as "autoassemble" and the "lexicon". "Autoassemble" is a feature that gathers bits and pieces of information from different places and in the end suggests a suitable translation. The "lexicon" is like an accumulation of the frequently used terms. (Retrieved from http://translationjournal.net/journal/19tm.htm on 20 November 2015)

Chapter Three

Data analysis

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Errors and Reasons

In this age of technology where hundreds and millions of different publications whether they are reports or books need to be translated almost every week, every minute counts; that's when machine translation comes along and attracts everybody's attention with speed and low or free cost translation. One of the things that a lot of researchers, translators and users of machine translation noticed about machine translation is that it produces better results dealing with scientific language than with idiomatic language. Since idioms or idiomatic expressions have unpredictable meanings; these expressions can be hard to tell what they mean and their meanings can be different from one reader to another and from one situation or context to another.

There are so many examples of errors committed by machine translation and in this case by Google Translate and their reasons. Here are some sample examples and their analyses to support and give evidence for this thesis. The researcher used http://www.urbandictionary.com/ and Cambridge dictionary online to double check the meaning in English of some of the expressions to verify what they meant in the source language and culture.

1- Capturing the Different Senses

English (source text)	Machine translation
Holding Your Ground: Preparing for Defense if it All Falls Apart. HOLDING YOUR GROUND is an instructional guide and planning tool that addresses defensive preparation of a location. If the government can no longer protect your home, farm or property, HOLDING will teach you how.	عقد في الميدان الخاص بك: الاستعداد للدفاع إذا كان جميع تنهار. القابضة في الميدان الخاص بك هو دليل والتخطيط أداة تعليمية تتناول إعداد دفاعي لموقع مأهول. اذا كانت الحكومة لم تعد قادرة على حماية منزلك، مزرعة أو الممتلكات، وسوف HOLDING يعلمك كيف.

Source1:http://www.amazon.com/Holding-Your-Ground-Preparing-Defense/dp/0615497551

'Holding your ground' is an expression usually used in certain situations to motivate someone to stand up for what he/she believes in and defend his/her principles. In this case, it is to defend your right to protect your property. However, machine translation translated it literally as (عقد في الميدان الخاص بك) and as (القابضة في الميدان الخاص بك) which mean 'held in your own field', such meanings make no sense and do not contribute or express anything. The error is that the translation is a literal translation of the idiomatic expression. The reason for this error is that the machine translation does not have the basic necessary knowledge of the context like defending your own rights since it's a privilege that only humans can understand and practice; the knowledge about the source culture that this expression belongs could help provide the possible meanings of the expression. So in order for the machine translation to translate such

expressions correctly in the future, it needs to be fed with more cultural and contextual information such as similar situations where these expressions occur (simulation) in order to fill this gap by the designers; or else it still will not have sufficient knowledge and in return the human translator who uses it will also suffer.

English (source text)	**Machine translation**
Forget sending them to their room! Banning children from going online is the new version of ‘grounding’	ننسى إرسالهم إلى غرفهم! يحظر الأطفال من الذهاب على الانترنت هو النسخة الجديدة من "التأريض"
to ground a child	على أرض الواقع طفل

Source 2:http://www.dailymail.co.uk/news/article-2922652/Banning-children-going-online-using-tablets-new-version-grounding.html

This example shows that such a very known and frequently used expression 'ground' is also unfortunately mistranslated by machine translation as (التأريض) or (أرض) which means 'land or something related to land'. 'Ground' in this case means 'punishing the child in order to discipline him/her'. The consequences of this wrong translation could even reach the channels that broadcast movies. Since movies are depictions of real life situations and everyday language, it is weird to find such an expression to be mistranslated in the dialogues of the movies or even worst in novels and books.

The noticeable thing about this example and the previous one is that 'ground' was used in two different contexts producing two different

meanings; however, machine translation didn't capture the two senses or even their effects which means that machine translation lacks the necessary knowledge or information to distinguish between these two meanings even though these meanings can easily be found by using online dictionaries specialized in interpreting these expressions. So the suitable and suggested solution is to try and find a way to combine the online dictionaries and Google Translate by some linking mechanism so that Google Translate covers all the different senses of a certain expression and not just the basic senses.

The vocabulary item (التأريض) is not common among users of Arabic language. It is likely that it has been coined by someone who fed Google with this kind of translation. This kind of contribution that novice and inexperienced people feed Google Translate with is a major obstacle. It seems that some sort of filtering of added information to Google Translate is necessary

English (source text)	**Machine translation**
Oh, knock it off Alex, I'm really not in the mood for your jokes. Source:http://dictionary.cambridge.org/dictionary/english/knock-it-off	أوه، طرق تشغيله أليكس، أنا حقا لست في مزاج للنكات الخاصة بك.
She got knocked up	طرقت حتى
Knockoff\ knock-off goods	البضائع تدق قبالة\ البضائع knockoff
knock your socks off	ضرب الجوارب شخص قبالة
knock them/'em dead	ضرب عليهم الرصاص\ تدق م ميتة

These examples show that machine translation didn't provide the correct translation of the different senses of ' knock ' which is used in different contexts. The first expression ' knock it off ' was translated as (تدق تشغيله) which literally means 'knocking and operating'. 'Knock it off' means 'stop doing something that is annoying to other people'.

The second expression ' knocked up ' was translated as (طرقت حتـــى) which literally means 'knocking until'. 'knocked up' means 'made pregnant' but in slang.

The third expression ' knockoff\ knock-off ' was translated as (تـــدق) which literally means 'knocking' or kept as it is in English (knockoff). 'Knockoff\ knock-off ' means 'a cheap and low quality copy of original items or goods'.

The fourth expression ' knock your socks off ' was translated as (تدق قبالـــة الجـــوارب الخاصـــة بـــك) which literally means 'hitting socks across somebody'. 'knock your socks off ' means 'something amazing and surprising will happen'.

The fifth expression ' knock them/'em dead ' was translated as (ضرب عليهم الرصاص\ تدق م ميتة) which literally means 'hitting them with bullets or knock dead'. 'knock them/'em dead ' means 'do the best you can and succeed'.

The reason for these mistakes is that machine translation is not linked to dictionaries which are specially made to give the meanings for

such expressions. One way to feed machine translation with such expressions and their translations is perhaps adding an icon that we call idioms and feed it with translated idioms. When one faces an idiom in his/her translation, s/he can resort to that sort of dictionary of idioms. The dictionary of idioms would give a meaning but still the translator would have to choose from among different options or to match the idiom with the context. It would even be a better idea to include more than one dictionary to cover all the expressions, the basic expressions and the complicated ones. For example, http://www.almaany.com/ and http://www.wordreference.com/ are two online dictionary websites which can offer an acceptable translation for idiomatic expressions.

2- Everyday Language and Culture

English (source)	Machine translation
4 Super Bowl ads that nailed it! From talking babies to working chimps, what draws viewers to America's biggest game of the year is often unexpected.	4 إعلانات سوبر السلطانية أن مسمر! من التحدث إلى الأطفال الشمبانزي العمل، ما يلفت للمشاهدين أكبر لعبة أميركا من السنة غالبا ما يكون غير متوقع
Jon Stewart Drags FOX News For Ferguson Coverage & He Nails It	جون ستيوارت تستمر FOX أخبار لفيرغسون التغطية وانه الأظافر و

Source 3:http://fortune.com/2015/01/30/4-super-bowl-ads-that-nailed-it/

Source 4:http://blackamericaweb.com/2014/12/03/jon-stewart-drags-fox-news-for-ferguson-coverage-he-nails-it-video/

'Nailed it' is another famous colloquial idiomatic expression which means that one succeeded in doing something. As one can notice, the machine translation also translated it literally as (مســمر) which means 'hammering a nail in it' and as (وانــه الأظــافر) which means 'nails of the fingers'. This translation does not express or produce the effect desired from the idiomatic expression. This expression is difficult for a machine to relay it since it is used in everyday language and it's not used in the technical texts where terms and expressions are always as they seem and there is nothing underneath their surface meaning. That is why the system needs to be fed not only with technical knowledge but also with everyday knowledge necessary to translate and handle such language. Besides, it does not fit the context in both examples. The first one talks about succeeding in advertising the Super Bowl and the second one discusses how John Stewart succeeded in humiliating Fox News who only showed one side of the story during the coverage of the Ferguson incident.

English (source text)	**Machine translation**
She'll never buy that story about you getting lost!	وقالت انها سوف أبدا شراء تلك القصة عنك التخبط!

Source 5: http://dictionary.cambridge.org/dictionary/british/buy

In this example, one can notice that other than the ambiguous and meaningless translation of the whole sentence, users cannot even comprehend anything from it; machine translation also translated the expression 'buy that' literally into (شــراء تلــك) which means 'purchasing

something'. 'Buy' has so many meanings and one of those meanings is a special meaning used in certain cases to mean 'believe what someone has said or done easily without any doubts'. It is definitely noticeable that it is used to give that special meaning. It verifies the horrible misunderstanding that machine translation creates when it translates literally and in return it could mislead and confuse the user into thinking that the literal meaning is the correct one. It also confirms the idea that Google Translate was not sufficiently fed with even the basic concepts or expressions which are used more often in everyday language.

English (source text)	**Machine translation**
The cat is out of the bag	القط للخروج من الحقيبة

In this example, the English expression 'The cat is out of the bag' is translated literally into (القط للخروج من الحقيبة) which means 'the cat gets out of the bag'. This expression is used in a situation where someone revealed to other parties or people a certain secret about someone else who is trying so hard to hide his/her secret. Machine translation does not give the intended meaning but it gives a totally different new literal meaning which doesn't even indicate the intended meaning through the metaphorical literal translation made by machine translation; in other words, the figurative speech in this case does not help to hint at the intended meaning. In Arabic language and culture in this case, the literal translation would sound really odd and out of place when someone talks about disclosing secrets and then suddenly moves on to talk about cats taken out of bags especially since this

metaphorical expression is not used to hint about anything in Arabic culture.

English (source text)	Machine translation
Don't beat around the bush - get to the point!	لا فاز في جميع أنحاء بوش – وصول الى نقطة!

Source 6: http://dictionary.cambridge.org/dictionary/english/beat-around-the-bush

This example clearly shows one of the horrible consequences of having a very well-known expression to be translated by Google Translate 'beat around the bush' into a literal translation (فاز في جميع أنحاء بوش) which, if back translated, means 'winning all over Bush'. 'Beat around the bush' is said when someone is trying to avoid saying or doing something by talking about something else to distract the other person for a certain reason. As it can be noticed the literal translation produced a silly and an absurd meaning which has nothing to do with the actual context; it is as if the literal meaning talks about something completely different that is irrelevant to the current context.

Actually Google Translate is based on the accumulative memory deposited and stored by users. So Google Translate needs to be enhanced more by including or adding more information that is connected with idiomatic expressions especially everyday knowledge and contextual and cultural information to the data base.

3- The Implied Meaning vs. Literal Meaning

English (source text)	Machine translation
Keep somebody company	الحفاظ شركة شخص
I'll keep you company while you're waiting.	سوف تبقي لكم شركة بينما كنت في انتظار.

Source: 7:http://www.oxfordlearnersdictionaries.com/definition/english/company

In this example, machine translation did not just translate the expression literally as (الحفـــاظ شـــركة شـــخص) which means 'preserving somebody's firm' but also gave a different meaning to the expression which may create confusion or misunderstanding for the user especially if that user has no clue what the implied meaning is or the situations where it is used in the source culture. 'Keep somebody company' means that 'you spend some time with someone so that that person will not feel lonely'. Even in the second example where the expression is put in context, machine translation could not translate it properly even though the example shows the exact situation where it is usually used to give that implied meaning. It is such a shame that something like this that shows the beauty of the source language and culture is not conveyed even slightly in the target language by machine translation. Not to mention that machine translation didn't provide a similar impact or effect to that of the source expression.

One of the things that incite the users to interpret the meaning of a set of words individually is that they rely on machine translation which

unfortunately has the same problem of focusing on and analyzing the individual meaning of words in an expression instead of analyzing the whole expression as one unit. So this example shows one of the important weaknesses of machine translation which can be solved easily by providing the system with expressions that have certain meanings if their individual words come together in certain situations. It is strange that such expressions were not translated properly by machine translation since the internet is filled with online dictionaries that take care of such expressions; all what the machine translation has to do is to analyze the meanings provided for the expressions by these dictionaries and translate them.

English (source text)	**Machine translation**
Russia and EU butt heads over travel ban	روسيا والاتحاد الأوروبي رؤساء بعقب على حظر السفر

Source 8:http://edition.cnn.com/videos/world/2015/06/01/russia-travel-ban-eu-officials-chance-lok.cnn

In this example, the English expression 'butt heads' is translated literally into a completely different, unrelated new meaning (بعقــب) which means 'following something'. 'Butt heads' means that 'certain parties are arguing about something in a harsh manner'. As it can be noticed, Google Translate provided an incomprehensible translation that can hardly be conceived as related or even fit to the actual context. Instead of giving a clear translation or even an acceptable one, machine translation or in this case Google Translate provided a new illogical literal translation that did not contribute to complete or clarify the text.

English (source text)	Machine translation
Police: Fake Officer Tried to Pull Over off-Duty Ohio Cop	الشرطة: موظف همية حاول سحب أكثر من واجب أوهايو الشرطي

Source 9:http://abcnews.go.com/Weird/wireStory/police-fake-officer-pull-off-duty-ohio-cop-32871224

In this example, 'pull over' is translated literally into (سـحب أكثـر) which means 'more pulling'. 'Pull over' is a legal and police expression used also by police officers to mean that 'the driver is ordered to stop or park his/her vehicle by the side of the road for a certain reason'. The reason might be that the driver was speeding beyond the speed limit or that the driver is suspected for carrying something illegal or perhaps he was driving under the influence of drugs or alcohol. As it is shown, machine translation failed to express this meaning and instead gave a literal meaning that could cause misunderstanding on the part of the user and it doesn't contribute anything to the meaning of the text.

4- Fixed and Context Free Expressions

English (source text)	Machine translation
I call shotgun	أدعو بندقية

In this example, machine translation translated 'I call shotgun' literally into (أدعو بندقية) which means 'I invite a gun'. Call shotgun is one of those expressions that do not particularly rely on the context to find their meanings since they have fixed and known meanings in the source culture. In other words, it doesn't have multiple meanings so there is a little chance

for ambiguity. This expression means that since one first said the expression 'I call shotgun', s/he means that s/he is the one who has the right to sit in the passenger's seat next to the driver. So who ever says it first, that person gets to sit next to the driver. It is not a rule or a law, it is one of those expressions that are socially understood and used more often than other expressions in everyday life. It is also very similar to the expression 'call dibs' except that 'call dibs' is used not with the passenger's seat next to the driver but with objects and even people. As it can be seen in this example, machine translation completely missed the target; it didn't even get close to the real meaning but instead it translated the expression literally into a completely new and irrelevant meaning which doesn't even fit the situation where it is used in. It is strange that such expressions which have only one meaning are not covered by the gigantic storage of machine translation. Even though these expressions don't have ambiguous multiple meanings to begin with, that is why not covering or including fixed expressions is considered as another shortcoming of machine translation. This kind of problem can be easily solved by feeding these kinds of fixed expressions along with their meanings and translations to the machine translation system.

English (source text)	**Machine translation**
Set the record straight	تعيين سجلات مباشرة

In this example, the expression 'set the record straight' is translated by machine translation literally as (تعيــين ســجلات مباشــرة) which means

'appointing direct records'. 'Set the records straight ' means 'to make things clear or tell the truth in a time or a context where there is a misunderstanding or confusion about a certain matter'. This expression is usually understood and known to the society of the source culture that there is no ambiguity in its meaning. As it can be noticed, unfortunately even a simple expression which only has one meaning is not listed in the machine translation system, so it is no wonder that machine translation translated the individual components of the expression literally and therefore creating a meaningless translation which has nothing to do with the context or the implied meaning.

English (source text)	**Machine translation**
I rest my case	أنا بقية حالتي

This legal expression is also considered as an idiomatic expression not only because of its metaphorical meaning but because it is used as a joke or as a statement among native speakers in everyday life. This expression is used when two people argue and one of them turns out to be right at the end after s/he proved his/her point through evidence and the other person is wrong. This expression is so popular that it even appeared in the "Simpsons: the movie" when Marge and Homer have an argument. Unfortunately, machine translation didn’t provide that meaning but it gave a literal and nonsensical translation (أنا بقية حالتي) which literally means 'I am the remnants of my condition'. This translation has nothing to do with the intended meaning or even the situation and this could mislead a translator

who has little or no sufficient knowledge about the source culture into thinking that this is the right translation.

English (source text)	Machine translation
My sister had to pull a few strings to get me this job.	أختي لسحب عدد قليل من سلاسل للحصول على لي هذه المهمة.

Source 10: http://dictionary.cambridge.org/dictionary/english/pull-strings

In this example, the English expression 'pull a few strings' is translated literally into (سحب عــدد قليــل مــن سلاســل) which means 'pulling chains'. Pull a few strings or some strings is used in situation where one person promises to use his/her influence or connections to certain influential people to get what s/he wants or what other people want whether it is legal or illegal. Machine translation didn't provide the effect intended by the expression and instead it offered a literal translation that sabotaged the strong effect of the whole text. Another reason is that the context or the situation is a clear indication that the expression was not understood to give the literal meaning since this expression has only one fixed meaning that can't be changed in certain situations. The strange thing about the way that Google Translate translated the expression is that it didn't include this very known expression in its list even though this expression is very basic or known and used quite often that it can be only described as overused in everyday conversation and even in novels and movies.

5- Unit of Translation

English (source text)	Machine translation
Pitbull – Pit bull	بينات الاتصال، حفرة الثور

In this example, the English name 'Pitbull or Pit bull' is translated literally into (بينات الاتصال ، حفرة الثور) which means 'a bull's pit or hole' and 'data calls'; those meanings are not even close to the actual meaning. Pitbull or Pit bull is a type of dogs which is really famous for having a wrinkly face with dangling cheeks and great physical strength. As it can be noticed, both translations are far from being close to the actual meaning of the term. This also shows one of the weaknesses of machine translation; not all basic and key expressions that are frequently used and contain no more than two words are covered by machine translation. Reducing the unit of translation, therefore, does not help in some cases as this one.

English (source text)	Machine translation
photobomb	photobomb

This example shows that machine translation does not have enough information about new expressions which are used frequently. Machine translation translated 'photobomb' as 'photobomb' even though the expression was meant or requested to be translated into Arabic; in other words, machine translation did not translate it but instead kept it as it is in English without translating the expression into Arabic. Google Translate in this case clearly is not provided with enough data to cover the new expressions which explain why machine translation couldn’t handle such

expressions and did not give any kind of translation. 'Photobomb' means 'while someone is taking a selfie or asked someone else to take his/her picture somebody jumps in and ruins the photo since s/he was not invited to have his/her picture taken with that someone'.

English (source text)	Machine translation
starstruck	starstruck

Another example that shows the failure of machine translation to translate some new and everyday expressions. 'Starstruck ' was also not translated but simply was relayed as it is, (starstruck) in English, even though the expression was requested to be translated into Arabic. 'Starstruck' means 'you are fascinated by someone who is really famous like a celebrity'.

English (source text)	**Machine translation**
doughnut hole\ donut hole	دونات حفرة

Source 11: http://www.investopedia.com/terms/d/doughnut-hole.asp

In this example, the English economic expression 'doughnut hole\ donut hole' is translated literally by machine translation into (دونـــات حفـــرة) which means 'doughnut 's hole'. Donut hole is an economic expression which means 'total prescription drug spending'. As it can be noticed, the translation suggested by machine translation (دونات حفرة) doesn't reflect the intended meaning expressed by the economic expression which could lead to misinterpretation of this economic expression and misleading the user into thinking in something unrelated like food and in this case doughnuts

which have nothing to do with the economic expression. The odd thing about this example is that machine translation didn't cover this kind of expression in its storage even though it is considered as technical translation since it is used in economic texts. The reason is probably because it is a new economic expression that can be found more often in texts that talk about Obamacare; in addition, its meaning doesn't rely on its surface or literal meaning but it relies on the hidden intended meaning unlike other technical expressions. This technical expression is also a short one which further solidifies the idea that sometimes machine translation doesn't translate them correctly.

6- Grammatical Structure

English (source text)	Machine translation
Police in a Philadelphia suburb launched a food tampering investigation Sunday after receiving multiple reports of needles in children's Halloween candy. Source12: http://www.foxnews.com/us/2015/11/02/report-halloween-candy-with-needle-type-object-probed/	شنت الشرطة في ضاحية فيلادلفيا تحقيق الغذائية العبث الأحد بعد تلقي تقارير متعددة من الإبر في الأطفال هالوين الحلوى.
It was suspected that his father, Bobby Hernandez, took him as part of a noncustodial parental abduction, according to the Vestavia Hills Police Department, just south of Birmingham. Source 13: http://edition.cnn.com/2015/11/04/us/missing-boy-found-alabama-ohio/index.html	ويشتبه في أن والده، بوبي هرنانديز، اقتادوه كجزء من اختطاف الوالدين غير الوصي، وفقا لوزارة هيلز الشرطة Vestavia، الى الجنوب مباشرة من برمنغهام.

This example shows that machine translation and in this case Google Translate has some serious problems concerning the grammatical structure or the word order of both the source and the target language. Machine translation does not consider the differences between two structurally different languages like Arabic and English and it could be for so many factors. First, the fact that it does not have the capabilities to distinguish the different structures between languages; this is why machine translation needs human intervention to fix the ungrammatical structures that Google Translate produces. Second, machine translation is not provided with enough information about the different structures between two completely different languages like Arabic and English.

The reason for emphasizing this matter is that machine translation does not only produce unstructured texts but also it could divert the meaning of the texts and give a completely different meaning like the second sentence. There are times when the user can figure out the core message behind the unstructured sentence like the first sentence mentioned earlier

Arabic (source text)	Machine translation
أكدت وزارة التربية والتعليم العالي على أنها لن تتهاون في اتخاذ الإجراءات القانونية والعقابية اللازمة تجاه رياض الأطفال غير الحاصلة على التراخيص المطلوبة أو أذونات الرحلات العلمية والترفيهية من جهات الاختصاص بالوزارة Source 14: https://www.maannews.net/Content.aspx?id=807134	The Ministry of Education and Higher Education confirmed that it will not tolerate to take legal and punitive measures necessary to kindergartens is taking place at the required licenses or scientific and recreational trips of the competent authorities of the ministry permissions

This example shows that even if Google translates from Arabic into English, the problem of word order still occurs. In this example, there are two verbs 'it will not' and 'is taking' following each other in the translated text by machine translation; in English, it is not grammatical or meaningful to use two verbs following each other. There is also the problem of ordering or the positions of the adjectives and the nouns being described.

Suggested Translations and Strategies

The suggested translations mentioned in this section by the researcher are possible solutions to the expressions which were mistranslated by machine translation with the hope that future designers can improve or enhance and add to the machine translation storage or lists. The following suggested translations are manifestations of sense of judgment and are based also on the contexts of these expressions.

1- Capturing the Different Senses

English (source text)	Suggested translation
Holding Your Ground: Preparing for Defense if it All Falls Apart. HOLDING YOUR GROUND is an instructional guide and planning tool that addresses defensive preparation of a location. If the government can no longer protect your home, farm or property, HOLDING will teach you how.	"التمسك بمبادئك : التحضير للدفاع اذا كل شيء فشل." "التمسك بمبادئك" هو دليل ارشادي و اداة لوضع الخطط التي تناقش تحضيرات دفاعية عن موقع معين. اذا لا تستطيع الحكومة الدفاع عن منزلك او مزرعتك او ممتلكاتك، "التمسك" سوف يعلمك القيام بذلك.

The suggested translation is (التمسك بمبادئك) which means 'stick to your principles'. This translation fits the context that this expression is used in since the researcher is familiar with the American culture and knows the context where this expression is used.

English (source text)	Suggested translation
Forget sending them to their room! Banning children from going online is the new version of 'grounding'	انس إرسالهم إلى غرفهم! منع الأطفال من الولوج وتصفح الانترنت هي النسخة الجديدة من "العقاب"
to ground a child	لتعاقب طفل

The suggested translations for both ' grounding' and 'to ground' are (العقـــاب) which means 'punishing someone for something wrong s/he did'. This translation fits the context that talks about disciplining a child by punishing him/her so that they can learn not to do the bad things they did again either by preventing them from watching T.V or sending them to

their rooms. Since the researcher is familiar with the American culture and knows the context where this expression is used, the researcher was able to convey the intended meaning behind it.

English (source text)	Suggested translation
Oh, knock it off Alex, I'm really not in the mood for your jokes. Source:http://dictionary.cambridge.org/dictionary/english/knock-it-off	أوه، توقف عن هذا يا أليكس، أنا حقا لست في مزاج للنكات الخاصة بك.
She got knocked up	لقد حبلت
Knockoff\ knock-off goods	البضائع المزيف او المقلدة
knock your socks off	سيدهشك
knock them/'em dead	قم بأفضل ما لديك و ستنجح

These suggestions capture the different senses of ' knock ' which is used in different contexts. The first expression ' knock it off ' can be translated as (توقف عن هذا) which means 'stop doing something that is really annoying'.

The second expression ' knocked up ' can be translated as (لقد حبلـــت) which means 'getting pregnant'.

The third expression ' knockoff\ knock-off ' can be translated as (البضائع المزيف او المقلدة) which means 'a cheap copy of original items'.

The fourth expression ' knock your socks off ' can be translated as (سيدهشك) which means 'something amazing and surprising will happen'.

The fifth expression ' knock them/'em dead ' can be translated as (قم بأفضـــل مـــا لـــديك و ســـتنجح) which means 'do the best you can and you will succeed'.

2- Everyday Language and Culture

English (source text)	Suggested translation
4 Super Bowl ads that nailed it! From talking babies to working chimps, what draws viewers to America's biggest game of the year is often unexpected.	اعلان السوبر بول نجح بقوة. من اعلان طفل متكلم الى قردة عاملة ، ما يجذب انتباه المشاهدين لحضور اضخم الالعاب الامريكية في السنة هو احيانا غير متوقع.
Jon Stewart Drags FOX News For Ferguson Coverage & He Nails It	جون ستيورت اهان فوكس نيوز لطريقة تغطيتها لقضية فيرغسون و قد نجح بذلك

The suggested translation is (نجح بقوة) or (قد نجح بـــذلك) which means 'succeeded in doing something'. This example is very similar to many expressions such as 'made it'. This example proves that one of the important factors in giving a good translation is to live and experience the daily life conversations in order to give them logical meaning. In this case the human translator would use his/her logic and sense of judgment in order to understand that in this context it is used to mean something in that culture and it does not have to do with the literal meaning of nails.

When one translates a certain cultural expression, one doesn't just understand but also tries to produce the same effect or at least a similar effect. So a translator should not take what the machine translation tells him/her for granted since it still has many flaws that need to be fixed; s/he

should already be familiar with that culture or at least search through the internet for the contexts of the idiomatic expression when s/he deals with idiomatic expressions. So one should be familiar or understand what that expression means in that culture and try to relay it because after all what a translator does is that s/he tries to give the reader a closer look at the expression used in certain contexts in that culture.

English (source text)	**Suggested translation**
She'll never buy that story about you getting lost!	انها لن تصدق ابدا قصتك بأنك ضللت الطريق

The suggested translation for 'buy' is (تصدق) since it fits the context. The context in this case is that the first person is not going to believe the other person's story easily without any doubts. The researcher used her sense of judgment which is based on context and knowledge of the source culture to conclude that 'buy' in this case is used to mean 'believe' since this meaning is used in everyday language and can be distinguished from the other meanings easily if the person knows about their uses and contexts in that culture. In other words, you have to be familiar with the meanings and the uses of certain expressions in order for you to get the right sense or else you would get the meaning wrong and end up with a nonsensical translation.

English (source text)	**Suggested translation**
The cat is out of the bag	انكشف السر

The suggested translation for 'The cat is out of the bag' is (انكشف السر) which is interpreted as 'the secret is out or revealed and everybody knows about it'. The suggested translation fits in the context which is usually used in and it explains and clarifies the intended meaning. The literal meaning in this case would be a pointless metaphorical expression since it will not serve the objective of being clear or even relatable to the Arabic culture; it will only provide a meaningless set of words that have nothing to do with the context.

English (source text)	Suggested translation
Don't beat around the bush - get to the point!	لا تراوغ \ تماطل، ادخل في صلب الموضوع

The suggested translations for 'beat around the bush' are either (تراوغ) which means 'trying to manipulate the situation into your own advantage for the sake of getting away with something' or (تماطـــل) which means 'prolonging your conversation by repeatedly changing the subject to avoid talking about a particular matter'. As one can notice, both of the Arabic translations basically mean the same thing or give the same intended meaning and both of them are suitable for the context of the English expression.

3- The Implied Meaning vs. Literal Meaning

English (source text)	Suggested translation
Keep somebody company	يؤنس
I'll keep you company while you're waiting.	سابقى معك لأونسك بينما تنتظر

In this example, the suggested translation for the expression 'Keep somebody company' is (يــؤنس). This expression shows that one does not need only to know the context or the situations in which the expression is used and in this case it is used in cases where the other person might feel lonely if s/he stayed alone whether s/he is going somewhere or waiting but also to understand that when certain words are used together, one shouldn't only look at the meanings of the words individually.

English (source text)	Suggested translation
Russia and EU butt heads over travel ban	روسيا و الدول الاوروبية يتجادلان بحده حول قانون منع السفر

The suggested translation for 'butt heads' is (يتجــادلان) which means arguing. (يتجــادلان بحــده) fits the context and shows that there is a heated argument between Russia and the EU over the travel ban. It is essential to use the word (بحــده) since this is no ordinary or simple argument that could be solved in a matter of minutes but rather a sensitive and serious issue to both sides. The literal meaning of the expression will not contribute anything to the text; it will not fit the context and it could result in weird and meaningless translation. It is better with these kinds of expressions to give the idea or the intended meaning implied by the context.

English (source text)	Suggested translation
Police: Fake Officer Tried to Pull Over off-Duty Ohio Cop	الشرطة : شخص متنكر بزي شرطي حاول اعطاء امر لشرطي خارج الخدمة من اوهايو بإيقاف مركبته بجانب الطريق

In this example, the suggested translation for 'pull over' is (اعطاء امر بإيقاف مركبته بجانب الطريق) which means 'giving an order to stop at the side of the road'. It is crucial to make the audience understand that this kind of expression is an order that cannot be issued by a citizen but by a police officer hence the Arabic expression ((اعطـــاء امـــر indicates that this is an order. Then followed by the Arabic expression (بإيقاف مركبته بجانب الطريق) to explain what the other person is ordered to do by the police officer. So in this case, the translation should clarify what the expression is trying to convey since there is no similar expression that is so brief in Arabic as the English expression 'pull over'.

4- Fixed and Context Free Expressions

English (source text)	Suggested translation
I call shotgun	انا اريد الجلوس بجانب السائق و لقد سبقتكم في قول ذلك

This example shows that unfamiliarity with the source culture could create problems and huge misunderstanding; it will be difficult to even guess the meaning. So the suggested translation for 'I call shotgun' is more detailed than the original expression since unlike English, expressions that cover a lot of social meaning are pretty rare in Arabic. The suggested translation is (انا اريد الجلوس بجانب السائق و لقد سبقتكم في قول ذلك) which literally means 'I want to sit next to the driver and I said that first' to show that since I said that I want to set next to the driver first then I should be allowed to do so. This kind of Arabic expression is actually used even between kids as

a type of competition that if one says something first then s/he is allowed to do the thing s/he said or wanted to do first. The English expression and its suggested translation are pretty similar in terms of effect and meaning.

English (source text)	Suggested translation
Set the record straight	لتوضيح الامر \ لتوضيح حقائق الامور

The suggested translation for 'set the record straight ' is either (لتوضيح الامر) which means 'to clarify something' or (لتوضـــيح حقـــائق الامـــور) which means 'to clarify the facts or truths about something' and they both basically mean the same thing. The researcher understood the hidden meaning behind 'set the record straight ' and the researcher is also familiar with the situations where this expression is used in everyday life. The situation or the context where it is used is when there is huge misunderstanding between certain parties and one of the parties wants to clarify or clear this misunderstanding by telling them the truth of the matter or making it comprehensible enough for them in case there is some confusion about a certain matter.

English (source text)	Suggested translation
I rest my case	لقد اثبت قضيتي\رأيي

The suggested translation for 'I rest my case' is (لقد اثبت قضيتي\رأيـــي) which literally means that 'one proved his/her case or opinion'. The reason why the researcher chose to translate 'my case' as (قضـــيتي) is because this expression could also be used in legal contexts and it can also hint to the meaning metaphorically. 'My case' could be also translated as (رأيي) which

means 'opinion' to express the actual intended meaning directly instead of hinting to it in case the user did not know that 'case' is used as a figure of speech in everyday situations.

English (source text)	Suggested translation
My sister had to pull a few strings to get me this job.	لقد استخدمت اختي الواسطة التي ساعدتني للحصول على الوظيفة

The suggested translation for 'pull a few strings' is (استخدمت الواســطة) which means 'using your influence or contacting certain acquaintances or connections with influence to get something done whether it is legal or illegal'. This kind of expression needs to be explained when translated to Arabic to get the full sense of the expression and to relay what it actually tries to say. Clarifying the meaning can be really helpful since the literal meaning of the expression will not give any kind of indications or hints to its actual intended meaning and it will result into ambiguous nonsensical Arabic translation. The reason why it is suitable to use the word (الواسطة) is because it includes both the meaning of using one's influence or contacting influential people who could help him/her to get what s/he wants.

5- Unit of Translation

English (source text)	Suggested translation
Pitbull – Pit bull	نوع من الكلاب الشرسة

The suggested translation for 'Pitbull – Pit bull' is (نــوع مــن الكــلاب الشرسة) which means 'a kind of ferocious dogs'. For this noun, it is better to

explain that it is a type of dogs and not just any dog but a dog that is known for its ferocity and is considered a very dangerous dog that is why adding the word (الشرســة) which means ferocious is an important component to describe such dogs. It is not recommended to use transliteration as (بيتبــول) since not all Arab people know that (بيتبــول) is a type of dogs which can be dangerous to approach; they might mistake it for a name of a person. So the solution suggested to give more details in this case seems more reasonable and also it helps to avoid ambiguity as well.

English (source text)	Suggested translation
Photobomb	ظهر احدهم فجأة و افسد الصورة

The suggested translation for ' photobomb ' is (ظهر احدهم فجأة و افســد الصورة) which means 'somebody showed up suddenly and ruined the photo'. This translation fits the context which is usually used in and it conveys the intended meaning by explaining the term and also by choosing carefully the suitable words like the words (فجــأة) which means 'suddenly' and (افســد الصورة) which means 'ruined the photo'; so these words imply to the readers or the audience that the person who appeared suddenly in the photo wasn't invited to have his/her picture taken with the person or group of people who were supposed to have that picture taken without any intervention.

English (source text)	Suggested translation
Starstruck	منبهر بشهرة اونجومية شخص ما

The suggested translation for ' starstruck ' is (منبهر بشــهرة اونجوميــة شخص مــا) which means 'getting fascinated about someone because s/he is

very famous or a celebrity'. The word (منبهر) which means 'being fascinated' is used to show how someone is impressed by something. The words (شهرة او نجومية), which mean 'fame and stardom', are used since that fascinating or impressive person does not just refer to a person who is a celebrity; it could also refer to a public figure or a very famous person due to his/her profession. So this example like some of the examples mentioned in this section shows that machine translation sometimes does not always translate idiomatic expressions which contain two words or more correctly.

English (source text)	**Suggested translation**
Doughnut\donut hole	نفقات الادوية الموصوفة

The suggested translation for 'doughnut hole' is (نفقات الادوية الموصوفة) which means 'prescription drugs spending'. In this case, it is crucial to explain this expression and make it clearer so that both economic experts and non experts can fully comprehend what the term expresses. The literal translation is farfetched in this situation since it will only make things incomprehensible and will not fit in the economic context where it originated. Another reason why the literal translation won't work is that it will not indicate anything in the Arabic language and culture even in the metaphorical and symbolic level. So the best solution is to relay what the expression is trying to convey.

6- Grammatical Structure

English (source text)	Suggested translation
Police in a Philadelphia suburb launched a food tampering investigation Sunday after receiving multiple reports of needles in children's Halloween candy.	بدأت الشرطة في ضاحية فيلادلفيا بالتحقيق بشأن التلاعب بالغذاء يوم الأحد بعد تلقي تقارير متعددة عن إبر في حلوى الهالوين للاطفال.
It was suspected that his father, Bobby Hernandez, took him as part of a noncustodial parental abduction, according to the Vestavia Hills Police Department, just south of Birmingham.	يشتبه أن والده، بوبي هرنانديز، قد اخذه معه و هذا يعتبر اختطاف من قبل احد الوالدين الذي ليس له حق الوصاية على ابنه ، وفقا لمركز شرطة فستيفيا هيلز، الواقعة جنوب برمنغهام.
Arabic (source text)	Suggested translation
أكدت وزارة التربية والتعليم العالي على أنها لن تتهاون في اتخاذ الإجراءات القانونية والعقابية اللازمة تجاه رياض الأطفال غير الحاصلة على التراخيص المطلوبة أو أذونات الرحلات العلمية والترفيهية من جهات الاختصاص بالوزارة	The Ministry of Education and Higher Education confirmed that it will not tolerate to take legal and punitive measures necessary towards kindergartens which didn't get the required licenses or permissions for scientific and recreational trips from the concerned authorities of the ministry.

The suggested translations for these three sentences or texts were carefully structured to make their structures sound natural and grammatical by considering the different word order of each target language whether it is English or Arabic.

Best Uses of Machine Translation

In the domain of communication a sign (language is a series of signs) is interpreted according to the readers' surrounding reality, place, time and orientations. The message, therefore, received by a business man already has the foregrounding in the place, time and surrounding reality of the interpreter that s/he can rely on to interpret messages in his/her domain

As mentioned in previous sections, machine translation targets speed and content but undermines quality and accuracy. Speed and the content of the message are sometimes the only targets in messages especially in the business world. Some business men are sometimes in an urgent need of understanding the main idea in a Facebook or an e-mail message. By getting hints about the message they can use their own experience in their field and interpret the message. They are after meaning; accuracy does not interest them at this stage. A message that says: "goods are received but there are defects in some items" contains enough information for the target reader even if it comes scrambled and ungrammatical such as: "defect goods items received".

Machine translation is a reminder to us; it helps us open our eyes and minds to the basic part of our jobs as translators that we have forgotten to do for so long which is to relay what the message conveys and nothing more. No motives or opinions behind our translation. You as a translator should be like a child who because of his/her sincere honesty repeats exactly what other people say. Even though machine translation gives

literal meanings to certain idiomatic expressions, it does not mean that they are all wrong since a reader and a translator can tell that the literal translation actually hints at something beyond the literal meaning.

1- Hints to the Implied meaning

English (source text)	Machine translation
Strategic Communications Workshop: Hooked: How to Keep Your Audience on the Edge of Their Seats	ورشة عمل الاتصالات الاستراتيجية: معلق: كيفية الحفاظ على جمهورك على حافة مقاعدهم
Fearing bus ban, Arabs are on the edge of their seats. We work for Jews so why are they scared of us riding with them, ask Palestinian laborers on a West Bank-bound line, returning from jobs in Israel.	خوفا من حظر الحافلة، العرب هم على حافة مقاعدهم نحن نعمل من أجل اليهود فلماذا هم خائفون منا ركوب معهم، ونطلب من العمال الفلسطينيين على خط متجهة إلى الضفة الغربية، والعودة من العمل في إسرائيل.

Source15:http://ce.columbia.edu/strategic-communications/events/how-to-keep-your-audience-on-the-edge-of-their-seats

Source 16:http://www.haaretz.com/news/features/.premium-1.622971

Some idiomatic expressions are translated by Google Translate literally; a reality which does not express the intended meanings; however, it does hint to their implied meanings. In this example, the expression 'On the edge of their seats' is translated literally as (على حافة مقاعدهم). In Arabic, one can still understand the implied meaning as either being enthusiastic or afraid. In this case, the deciding factor for the implied meaning depends on

the context itself. The first one implies enthusiasm while the second one implies fear.

English (source text)	Machine translation
Little league coach's inspiring pep talk Wed, Aug 20: The coach of a losing team at the Little League World Series this week said something so moving to his young players, people all over the country are talking about it.	الملهم حماسيا القليل مدرب الدوري الأربعاء، 20 أغسطس: قال هذا الاسبوع شيء يتحرك حتى لاعبيه الشباب مدرب فريق الخاسر في ليتل رابطة العالم السلسلة، والناس في جميع أنحاء البلاد يتحدثون حول هذا الموضوع.

Source17:http://globalnews.ca/video/1518762/little-league-coachs-inspiring-pep-talk

This example shows that not all the idiomatic expressions are mistranslated by machine translation. 'Pep talk' is an expression used in contexts where one person wants to comfort and motivate the other person with encouraging words especially if the other person feels disappointed or sad. This expression was translated perfectly by Google Translate as (حماســيا) which literally means 'motivational'. The reason why Google Translate translated this expression is probably because the expression is simply available in the memory or already fed into the system; someone added it to the Google Translate memory.

English (source text)	Machine translation
Christmas is just around the corner	عيد الميلاد هو قاب قوسين أو أدنى

In this example, the English expression 'just around the corner' is translated metaphorically into (قاب قوسين أو أدنى) which means 'very close to happen'. 'Just around the corner' means 'something or an event is about to happen pretty soon'. The metaphorical translation made by machine translation gives the intended meaning but that does not mean that machine translation covers all the necessary idiomatic expressions like the ones previously discussed.

2- Conveying the Message as it is

English (source text)	Machine translation
Palestinian terrorists have gone online. With little oversight, Palestinian extremists are recruiting online and publishing unfettered propaganda; the effects are already been felt on the ground in the form of a spate of recent 'lone wolf' terror attacks.	وقد ذهب الإرهابيين الفلسطينيين على الانترنت. مع الرقابة قليلا، المتطرفين الفلسطينيين تقوم بتجنيد على الانترنت وتنشر الدعاية غير المقيدة. وسبق أن رأى آثار على الأرض في شكل سلسلة من "ذئب وحيد" الهجمات الأخيرة الإرهاب.

Source 18: http://www.ynetnews.com/articles/0,7340,L-4598648,00.html

'Palestinian terrorists' was translated literally without any changes to (الإرهابيين الفلسطينيين) and 'Palestinian extremists' was translated literally as (المتطرفين الفلسطينيين). The example contains grammatical errors since the expressions should be translated as (الارهابيون الفلسطينيون) and (المتطرفون الفلسطينيون) but regardless of these grammatical errors, one as a translator or user can still understand the jest of it. This example does not contain an

idiomatic expression but it highlights something that we should give machine translation credit for. Unlike human translators, machines do not have the privilege of having opinions and motives. This may be considered as a weak point but it proves the fact that machines convey a certain message from one language into another as it is without prior motives even if it led to stereotyping or deforming the image of certain ideas or people. That is what translation is supposed to do after all; to convey something even when it does not agree with our opinions.

3- Scientific Expressions

English (source text)	Machine translation
cerebral hemorrhage	نزيف فى المخ

In this example, machine translation translated the medical term or expression 'cerebral hemorrhage' into (نزيف فى المخ) which means 'bleeding of the brain'. This shows how reliable and useful machine translation is when it comes to these scientific expressions that can be hard to find in dictionaries.

Arabic (source text)	Machine translation
نزيف فى المخ	cerebral hemorrhage

Machine translation can also be useful in back translation especially when users want to know the source text for the sake of enriching their knowledge about these expressions. In this case the translated expression (نزيف فى المخ) is translated back to English into 'cerebral hemorrhage'. That

is why Google Translate is considered useful in learning other languages and a great assistant on certain fields to the translator.

4- Unit of translation

English (source text)	Machine translation
Underdog	خاسر

This example shows that in some cases if machine translation is fed with idiomatic expressions that do not exceed a phrase then the translation would be more accurate than being fed with longer texts. 'Underdog' was translated into (خاسر) which means 'loser' and it is very close to the original meaning of the expression. The ‘underdog’ means a helpless person whom we sympathize with. A loser can be seen as someone who is a helpless person and who everybody feels sorry for. In other words, if the unit of translation is focused and smaller then the accuracy level of machine translation will get higher.

English (source text)	Machine translation
Veteran	محارب قديم

In this example, the machine translated the term 'Veteran' into an acceptable translation as (محـــارب قــديم) which means 'an old warrior or soldier'. This expression means that a certain person fought in previous wars; Americans use this expression when they talk about soldiers who fought in Vietnam or Afghanistan or even in Iraq. It can also be used symbolically if the Americans talk about a veteran fire fighter or doctor or

anyone who did his job for many years and suffered hardships along the way. (محـــارب قـــديم) can give both the symbolic meaning and the actual meaning of the expression 'Veteran'.

English (source text)	Machine translation
bully	تنمر

In this example, machine translation translated the expression 'bully' into an acceptable translation as (تنمر) which means 'treating someone badly or abusively'. 'Bully' or bullying means that 'kids or students of a certain age hurt others either verbally by cursing them behind their backs or in front of them or physically beating them or harassing them in any way'. The intended meaning is conveyed successfully; probably since it is a very short term that is not complicated or even ambiguous to decipher or even to be listed in the machine translation memory.

English (source text)	Machine translation
April fools	كذبة نيسان

In this example, the machine successfully translated 'April fools' expression by providing the intended meaning of this expression (كذبة نيسان) which means 'April lie'. April fools is a very popular event especially in America where people prank each other or lie to each other as a means of a joke. The reason why it was an acceptable translation is probably because it is one of those famous events like Christmas that are covered or listed in the machine translation storage due to the frequent use of these expressions and the repeated request for their translation.

English (source text)	Machine translation
tearjerker	المستدر للدموع

In this example, the expression 'tearjerker' is translated by machine translation into an acceptable translation as (المســتدر للــدموع) which means 'something that makes one cry'. Tearjerker is used when we talk about drama series or movie or any dramatic show with events that make one cry or make him/her sad. The Arabic expression (المستدر للــدموع) can definitely help to conclude that the thing being described causes sadness which serves a similar function to the English expression 'tearjerker'.

English (source text)	Machine translation
binge-watch	الإفراط في المشاهدة

This example shows that machine translation sometimes translates the idiomatic expressions which contain two words or more correctly without any mistakes or errors. This case: 'binge-watch', for example is translated successfully to (الإفــراط فــي المشــاهدة) which means 'excessive watching'. The translation made by machine translation is very close to the expression's meaning since 'binge-watch' means watching continuously episodes of TV shows or series or even movies without stopping; it could take hours or days. One of the reasons for the successful translation by machine translation is that some of these small sized expressions were already listed in the gigantic storage of machine translation.

English (source text)	Machine translation
Hit rock bottom	ضرب الحضيض

This example shows that there are cases where idiomatic expressions are not translated successfully by machine translation but still the user can understand the thought or the message behind it. In this case, 'hit rock bottom' is translated by machine translation as (ضــرب الحضــيض) which literally meant 'hitting the low status'; even though it is translated like that the user can figure out that what it actually meant is reaching a low status.

Conclusion and Recommendations

The previous examples in this thesis give the following results. First, there are main errors that occur while using machine translation to translate cultural expressions from English to Arabic. Machine translation makes no sense and does not contribute any meaning to the text; it gives literal translation to complicated idiomatic expressions in some cases. In addition, it doesn't produce the same effect of the idiomatic expression but that doesn't mean that machine translation does not work with simple idiomatic expressions. There is also the problem of word order and word structure and getting the different senses or meanings of an expression.

Second, there are many reasons or factors that lead to these errors. Machine translation does not have the basic contextual and cultural knowledge about certain idiomatic expressions. Machine translation cannot express the everyday language that does not require bookish knowledge since it is designed to deal with technical texts. In short, machine translation needs to be fed with more information which includes everyday language and metaphorical language by the designers in order to fulfill its purpose as an assistant to the translator. So the errors and their reasons show that there are so many flaws that need to be mended in order for machine translation to be truly a competent assistant to the human translator.

Third, there are solutions or strategies that can help solve these problems. For example, familiarity with the American culture, knowing the

context, basing your translation decisions on a logical and sensible judgment and not taking everything that the machine translation produces for granted. These solutions are considered as temporary solutions while the translator's assistant, machine translation, is still in the process of development to fix the serious flaws.

Finally, the use of machines in translation can be optimized on the side of the translator or it can be helpful for him/her. For example, the literal translation of the machine translation in some cases can be useful since it hints at something beyond that which is the implied meaning that can be figured out through the context of the text and this step relies on the translator who uses machine translation. Machine translation conveys a certain message from one language into another as it is without prior motives and that is the true meaning of translation. Machine translation can be useful for translating scientific expressions and back translation. Machine translation can be used for translating some idiomatic expressions that don’t exceed a simple phrase.

The researcher would like to give the following recommendations. First, the designers need to feed machine translation with enough data about not only basic and fundamental expressions but also complicated expressions which are used very often like everyday language and metaphorical language with their meanings or translations. Second, one way of doing that is to provide the system with more translation options for such expressions to cover the different contexts that these expression could

be used in; that way the user will be comfortable enough and at ease when s/he chooses the suitable translation that fits the context. Third, linking Google Translate to more than one dictionary of idioms from English to Arabic could provide the user with more options and it will cover the idiomatic expressions that need to be covered; online dictionaries such as, http://www.almaany.com/ and http://www.wordreference.com/.

The researcher would also like to suggest the following topics of research for future researchers. First, the quality of machine translation in certain fields like medical fields or legal fields. Second, the influence of machine translation on the translations made by translators whether it influences their work positively or negatively.

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جامعة النجاح الوطنية
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الترجمة الآلية: حدود الدقة والولاء للنص

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الملخص

بينما اصبحنا اكثر اعتمادا على الالات في كل ناحية من حياتنا، فان استخدام الالات في الترجمة اصبح تحديا مذهلا. نحن نفضل توفير الوقت و الجهود و التكلفة في الترجمة لكن بينما هذه المتطلبات متوفرة لدى الترجمة الالية، تبقى المشكلة في الدقة و الولاء للنص.قامت الباحثة في هذه الدراسة بعرض تحليلي لبعض النصوص و ترجمتها من خلال استخدام Google Translateو من ثم قامت بتصنيف الترجمات من حيث الاصطلاحات، المعاني المتعددة للمصطلحات، التعابير ذات الدلالة المتعلقة بالنص، التعابير غير المرتبطة بالنص، القواعد، و التراكيب.ثم خلصت الباحثة الى عدد من التوصيات حول تحسين استخدام الترجمة الالية حيث ان حركة الترجمة تسير باتجاه توظيف برامج الحاسوب في الترجمة بشكل فعال و لا مجال للتراجع رغم بقاء التدخل الانساني في الترجمة اساسيا.