CHAPTER 5

CONCLUSIONS

5.1   Conclusions Pertaining to MT Product

The analysis of data in Chapter 4 reveals a number of inadequacies and flaws in the MT products under study. Some of these MT defects are prevalent in all sets of data analyzed, CASE 1 through CASE 5.

Based on the findings of the analysis of data, this study broadly groups the defects in MT product into four categories, namely 1) defects related to language structure; 2) defects related to language use; 3) defects related to meanings; 3) defects related to reality.

The following are brief explanations with examples[1] of each of the MT defects.

1) <u>Defects related to language structure</u>:
These defects refer to the grammatical and syntactic errors in the target language produced by MT. They are prominent

and prevalent in all the cases analyzed. The linguistic construction '五月你在从前活' in the MT product in CASE 1, for example, is a defect of this sort. So is the linguistic string '现在我已经被提供他们的二个非常可提供的驾驶和一在Kancil 在附近现在驾驶我的朋友!' in CASE 2.

2) <u>Defects related to language use</u>:
Defects related to language use refer to the inappropriate use or wrong choice of words in the target language. These defects may be in terms of the linguistic meanings or the contextual meanings of the source texts.

The MT clause '它变成清楚我们一点也不真的来那远' which is supposed to convey the meaning of '*it becomes clear that we haven't really come that far at all*' in CASE 3 is an example of how the wrong choice of words results in no linguistic meaning or sentence meaning. Also in CASE 3, the use of the word '机械' to represent 'gadgets' totally distorts the contextual meaning of 'gadget'.

3) <u>Defects related to meanings</u>:

Defects related to meanings include various types of meanings that have been erroneously included or excluded in the target text. This type of defects are all pervasive in MT mainly because all the other types of MT defects in MT somehow have some implications in meanings and meanings constitute the essential part of translation.

A point of great significant in the context of this study is that these defects of MT include MT's failure to put across the utterance meanings, pragmatic meanings, implied meanings and intended meanings in the source text.

The MT construction in CASE 1 '五月你在从前活' is a case where MT fails to convey the utterance meaning/pragmatic meaning of the expression '*May you live in interesting time*'. Another case as regards MT's failing to convey utterance meaning/pragmatic meaning is the MT version of '*it becomes clear that we haven't really come that far at all*': '它变成清楚我们一点也不真的来那远' (CASE 3).

A case where MT is not successful in putting across the implied meaning `in the source text is the MT product '如果你不把人当成完整的人，连举手之劳的事也不屑去做，是不对的，因为我们相信人类是最高级的生命，我们应该帮助别的人类，而不是"次人类"。（这种态度，也延伸到"次人类"的亲属。）' which is meant to be the translation for ' *It is easy if you don't think of people as completely human to not bother to lift a finger to help, because we believe that human beings are the highest order in life and we should help other humans, not these "sub-humans". (This attitude, by the way, also extends to relatives of "sub-humans".)* ' in *CASE 5.*

MT's failure to convey the intended meaning of the source text is witnessed in the translation of the word 'gadget' into '机械' for the source sentence '*We like to think of ourselves as a developed society just because we can own every gadget conceivable.*' in *CASE 3.* Two other examples in this regard are those quoted above for MT's failure in conveying utterance meaning/pragmatic meaning and implied meaning. In any source text, the utterance meanings/pragmatic

meanings and implied meanings are the intended meanings of the source text author as well. In fact, it can be said that all meanings in the source text are the intended meaning of the source text author.

4) Defects related to reality

Defects related to reality consist of meanings and references in the translated text that do not accord with the real world. This category of defects is very much due to inadequacy in terms of knowledge on the part of the MT translator. The following are two examples of such defects, where the former is due to the lack of non-linguistic encyclopedic knowledge while the latter the lack of linguistic knowledge.

In CASE 4, the lexical item '上帝' in the translated text does not reflect the reference to 'God' in the reality of a multi-cultural and multi-religious society. The translated phrase '不该得到那尊敬' is not in accord with the reality of the Chinese language in that it does not conform to the syntax of the said language.

5.2   General Conclusions Pertaining to MT Process

Based on the findings of the data analysis in Chapter 4, defects in MT process are perceived to be of 3 broad categories, namely: 1) Defects related to linguistic decoding; 2) Defects related to interpretation and understanding; 3) Defects related to linguistic encoding.

These three categories of defects in MT process can be briefly explained as follows: 1) Defects related to linguistic decoding refer to the lack of, incomplete or inaccurate decoding of the surface structure of the source text. 2) Defects related to interpretation and understanding means the inability of MT to interpret and understand the source text content. 3) Defects related to linguistic encoding refer to the lack of, incomplete or inaccurate encoding of meanings in linguistic constructions. This means that inadequate or unsuitable lexicon and syntax have been used in the encoding process in the attempt to convey meanings.

In the concurrent analysis of MT product and MT process, this study relates the flaws in the former to the defects in

the latter. In doing so, this study discovers the close interrelation between the two. This finding leads this study to the following conclusions: 1) The flaws in MT product can and must always be explained in terms of MT process; 2) The evaluation of MT must consist in investigation of both the MT product and MT process.

The data analysis in Chapter 4 reveals that the MT process is significantly faulty. The different categories of defects found in the MT products analyzed are testaments to this claim.

However, from the analysis of the less faulty MT products in CASE 4 and CASE 5, this study concludes that MT is not too inadequate insofar as the source sentence/clause/phrase has the following characteristic: 1) syntactically short and brief; 2) contains referentially direct and common lexical items; 3) contains direct and explicit meanings; 4) has no or minimum elements of knowledge about the world; 5) is not directly linked to or interdependent with other sentence semantically.

As this study perceives it, a source sentence/clause/phrase with the above-mentioned characteristics necessitates mainly the decoding/encoding mechanism, rather than the interpreting/understanding mechanism in the translation process. Hence, in relation to the conclusions in the preceding paragraph, this study arrives at the following two conclusions: 1) MT may not be unduly faulty in sofar as the source text does not require much interpreting/understanding. 2) in the MT process, the inadequacy in the interpreting/understanding dimension is more significant than that in the decoding/encoding dimension.

The above findings and conclusions notwithstanding, this study does not claim or conclude that the decoding/encoding mechanism in MT is satisfactory. It is self-explanatory from the conclusions that several conditions (i.e. at least five conditions as identified earlier in this section) must prevail in the source sentences/clauses/phrases for MT to execute well-grounded decoding/encoding and hence to produce translations that are not too unacceptable,. Otherwise, as evident from the linguistically meaningless translations in

the MT products analyzed in Chapter 4, the decoding/encoding mechanism in MT can be substantially faulty.

The above conclusions about the mechanisms of decoding/encoding and interpreting/understanding in MT have some significant implications with regard to the dimension of 'knowledge' in MT.

The decoding/encoding mechanism in the translation process requires linguistic knowledge. Thus, the incapacity of MT to decode/encode satisfactorily implies that the machine translator does not have the linguistic knowledge that is necessary in translation. Meanwhile, the prevalent and consistent flaws in MT products in relation to various types of meanings -- especially utterance meanings/pragmatic meanings, implied meanings and intended meanings -- is a manifestation of the incapacity of MT to effect any interpreting/understanding mechanism. As the interpreting/understanding mechanism in the translation process requires encyclopedic knowledge, the incapacity on the part of MT to effect interpreting/understanding

mechanism is a reflection that MT possesses no encyclopedic knowledge whatsoever.

5.3 Conclusions Pertaining to MT Process: Perspectives of Relevance Theory

With a cognitive view of translation, this study aimed mainly at the analysis of translation process, particularly that in MT. Certain theses of a cognitive theory, namely Relevance Theory were applied for the purpose.

The theses of Relevance Theory applied, as mentioned in Section 1.2.3 of this dissertation are:

i)   Verbal communication is a cognitive phenomenon

ii)   Verbal communication consists of two (2) communication processes, namely, encoding-decoding process and inferential process

iii) The human mind focuses on the most relevant information available

The analysis of MT was carried out through the evaluation of MT product against HT process. From the findings of the evaluation, this study postulated and analyzed the adequacy/inadequacy in the processes of HT and MT respectively. Thereupon, this study arrived at some conclusions about MT process and MT generally.

In the whole process of postulating and analyzing, much emphasis was placed on three aspects in the translation process, namely: 1) the interpretation of meanings, especially the utterance meanings and intended meanings of the source text author; 2) the conveyance of the said meanings; 3) the roles of the translator (especially the MT translator) in the translation process.

Another significant dimension of the postulating and analyzing process is the application of the model of 'two-tier communication in translation' proposed in this study. The analysis of the roles of the 'machine translator' (and human translator) as hearer and speaker respectively at different stages of the translation process were carried out on the basis of this model.

The conclusions of this study were drawn along the lines of the aforementioned emphases and notions.

5.3.1 MT and Interpretation of Meaning

In terms of Relevance Theory, this study concludes first and foremost that interpretation of meanings is virtually non-existence in MT. This conclusion is based on concrete evidence and rationale.

As identified in this study, the prevalent and consistent 'meaninglessness' in the MT products under study is a strong evidence that interpretation of meanings never happens in MT. Such 'meaninglessness' is particularly veritable in that the MT products fail to put across the utterance meanings/pragmatic meanings and intended meanings of the source texts.

Substantiating the above claim of evidence is the rationale that utterance meanings/pragmatic meanings and intended meanings are inseparably related to interpretation. In order

to put across the utterance meanings/pragmatic meanings and intended meanings of the source text, MT must first have access to these meanings; and the access to these meanings is only achievable through interpretation.

As this study sees it, in translation it is not unlikely that the utterance meanings and/or intended meanings of the source text are only inaccurately translated due to inaccurate interpretation. In such a case, interpretation does take place prior to translation. This circumstance could be cited as the basis to reject the conclusion of this study that interpretation never takes place in MT. However, this study is unequivocally in the said conclusion. The rationale is that the problem of meaninglessness is not only acute and pervasive, but also consistent in all MT product analyzed.

Besides the above rationale, the conclusive claim about the non-existence of interpretation is derived from the close connection between interpretation, inferencing and context as clearly implied in Relevance Theory

In Relevance Theory it is claimed that, for successful verbal communication, an inferential process must ensue the encoding-decoding process. This means that it is only through inferencing that the hearer will be able to interpret, understand and thereby successfully complete the verbal communication. In this study, however, it is found and concluded that no inferencing ever takes place in MT; and this is traced back to MT's incapacity to address context.

Based on Relevance Theory, inferencing in the translation process is achievable only when the information in the source text author's utterance interacts with the context. In other words, a subset of the translator's assumptions about the world (context) must exist and must interact with the information in the source text to produce some cognitive effects that lead to inferencing. However, this cognitive phenomenon never takes place in MT. This is because, in the first place, the machine translator, being a machine, does not possess any psychological construct of context: it has neither life experience nor encyclopedic knowledge about the world to possess any assumptions about the world.

Due to the non-existence of context in the machine translator, the machine translator has no shared cognitive environment with the source text author where the cognitive effects/contextual effects can take place. Naturally, this also means that the phenomenon of 'relevance' which must take place in the mutual cognitive environment for successful verbal communication never occurs.

In fact, it can be succinctly said that 'relevance' is never achieved in MT because there is no cognition in the machine translator. Translation as a form of verbal communication should be a cognitive phenomenon. Cognition is necessary for the machine translator to focus on the most relevant information contained in the source text so as to effect the cognitive effect of 'relevance'. More elaborately, cognition that is furnished with the psychological construct of context must exist in the machine translator before the machine translator can search for and pay attention to the information intended by the source text author.

Since the machine translator is unable to fulfil the above requirement, it cannot proceed to make inferences about the

source text utterances. This incapacity then renders interpretation and understanding of the intended meanings of source text impossible.

5.3.2 MT and Conveyance of Meaning

Based on both the evidence identified so far and the points presented in the previous section (Section 5.3.1), the overall conclusion about 'MT and Conveyance of Meanings' would be: MT virtually does not convey the meanings intended in the source text because it has no capacity to access the said meanings through inferencing.

In Section 5.2, it was concluded that: 1) MT may not be unduly faulty insofar as the source text does not require much interpreting/undertanding; 2) the inadequacy of MT process in the decoding/encoding dimension is not as acute as that in the dimension of interpreting/understanding. In terms of the thesis of 'Two Communication Processes in Verbal Communication' in Relevance Theory, these two conclusions, together with the overall conclusion mentioned

earlier, jointly mean the following: in the verbal communication of MT, the first communication process, namely coded communication process is slightly developed while the second communication process, the inferential process is not developed at all. This, in effect, is yet another overall conclusion for this section of the dissertation.

Nevertheless, as Section 5.2 further concludes, the coded communication process in MT is in no way satisfactory and can even be substantially faulty if certain conditions are not present. In terms of the notion of 'Two Communication Processes in Verbal Communication', this means that the failure in MT may start in the first communication process (i.e. the coded communication process) rather than in the second communication process (i.e. the referential communication process); and this defect can be as great as that in the second communication process. This is the first conclusion in relation to the defects in the coded communication process.

Another conclusion in relation to the defects in the coded communication process is based on the belief in this study

that the coded communication process may witness defect in the decoding part; the encoding part or both parts. While it cannot be easily ascertained as to where and when in the coded communication the problem starts, based on the fact that MT never succeeds in reproducing any pragmatic meaning from the source text means that whatever flaws from the erroneous decoding and/or the lack of inferencing of the source text inevitably manifest in the encoding, resulting in erroneous encoding. Hence, this study can certainly conclude that MT consistently incurs defects in the encoding part of the communication process.

In summary, while the combinations of defects in the MT process are varied, the fact that MT never succeeds in reproducing any pragmatic meaning from the source text justifies the conclusion that MT definitely fails in the imminent step before translating -- the encoding step.

5.3.3 MT and the Hearer-Speaker Relations

On the basis of the model of 'Two-tier Communication in Translation' proposed in this study, the machine translator is perceived to play the roles of hearer and speaker in the first tier and second tier of communication in translation respectively. From the findings of the data analysis in Chapter 4, this study concludes that the machine translator fails as the hearer and speaker respectively in both stages of the MT process.

In the first tier of communication in translation, the machine translator, as the hearer, definitely fails to actuate the inferential process to recover the pragmatic meanings of the utterances in the source text. As mentioned in Section 5.3.1, the machine translator is incapable of searching for the relevant information from the source text utterances to uncover the intentions of the source text author. In other words, despite the fact that there are ostensions on the part of the source text author (i.e. the speaker), there is no inferential capability on the part of the machine translator (the hearer). This situation negates the complete ostenstion-

inferential mechanism that is necessary for the uncovering of the intended and pragmatic meanings of the source text utterances.

As mentioned in the second last paragraph of Section 5.3.2, in terms of the coded communication process, MT may witness defects in the decoding part, the encoding part or both parts. This means that besides the failing in the inferential aspect, another aspect where the machine translator may fail as a hearer in the first tier of communication in translation is the decoding part of the coded communication process. In this regard the machine translator is unable to decode the linguistic meanings encoded in the surface structure of the source text.

In the second tier of communication in translation, the machine translator acts as the speaker in the communication process. Its failing is in encoding the intended meanings of the source text author in the surface structure of the translated text. As indicated in the last paragraph of Section 5.3.2, due to the consistent failing on the part of the machine translator to access the intended meanings of the

source text author through inferencing in the first tier of communication in translation, in the second tier of communication it consistently fails to convey the said intended meanings in the encoding process. As the speaker in the second tier of communication in translation, the machine translator is unable to rectify whatever flaws that has been passed down from the first tier of communication.

5.4 Conclusions Pertaining to Context in MT

Due to the inseparable relation between context and 'relevance' and hence the close relation between context and interpretation of meanings, it is necessary to allocate a whole section for the conclusions pertaining to contexts in MT.

In Section 5.3.1, within the conclusions drawn with regard to interpretation of meanings and 'relevance' in MT, some conclusions have been drawn with regard to contexts in MT. In this section, more specific conclusions with regard to the

latter will be drawn. These conclusions will be based specifically on the questions raised in Section 1.3 ('Questions Raised in Study: MT In Relation to Context').

5.4.1   MT in Relation to Context: Linguistic Sense

All the findings of the data analysis in Chapter 4 and all the earlier conclusions in this Chapter reveal that MT is unable to account for context in translation. Hence it can be concluded that MT has the following problems which prevent it from producing semantically and pragmatically accurate translation:

1)   It does not differentiate between seemingly similar information;

2)   It is insensitive to ambiguities in meanings;

3)   It is insensitive to the marked differences in the linguistic contexts as well as the social-cultural contexts of the source language and target language respectively;

4) It does not cater for the varying contexts in a discourse and hence the interconnectivity of the different parts of the discourse;

5) It does not look at linguistic expressions in relation to the discourse but in isolation;

6) It does not take into account the functional aspect of the translation and hence the functional aspect of the translated text to the translated text readers

5.4.2   MT in Relation to Context: Cognitive Sense

All the findings of the data analysis in Chapter 4 and all the earlier conclusions in this Chapter reveal that MT is unable to observe any of the cognitive phenomena that is necessary for successful verbal communication. This, as concluded in Section 5.3.1, can be traced back to the incapacity of MT to address context, which in turn originated from the non-existence of context in the machine translator.

It is with the above findings and conclusions that this study can conclude the following with much certainty:

1)   Information from the source text context is never relevant to the machine translator in the same manner and degree as it is relevant to the source text reader.

2)   Source text 'information' relayed in the MT product context is never relevant to the translated text reader in the same manner and degree as the presentation of the said 'information' in the source text context is relevant to the source text reader.

3)   The way MT relays source text 'information' in the MT product never reflects the use of the target language in the real world and is thus never relevant to the translated text reader (i.e. reader of the target language).

['Information' here refers to utterance meanings and not lexical meaning or sentence meaning]

To be more precise, some clarifications need to be made with regard to the 'information' referred to in Conclusion (1) and Conclusion (2):

The 'information' referred to in Conclusion (1) is never relevant at all to the machine translator. For Conclusion (2), while there is always authentic information in the source text, such information actually never gets relayed and transmitted in MT. Also, since MT virtually transmits no utterance meanings, the 'information' referred to in Conclusion (2) in fact never exists; it is merely hypothetical to bring across the points in the conclusion.

5.5 Overall Conclusions of Study

MT in this study does not exhibit the fundamental essence of translation, both as product and process of translation. As a product, it lacks utterance meaning or pragmatic meaning which constitutes the 'core' of meanings in translation and in any verbal communication. As a process, it lacks the cognitive capacity that is necessary for interpretation of meanings.

In examining MT performance in domains that present contextual implications, this study specifically witnesses incapacity on the part of MT to address cognitive phenomena related to context. Every analysis and postulation on the flaws in MT leads this study to conclude that the origin of almost all failings in MT lies in MT's incapacity to address context related phenomena.

The incapacity of MT to address cognitive phenomena related to context as well as to effect any cognitive effects for the interpretation of meanings constitutes a strong defect in translation. This defect is strong enough for MT to be considered highly inadequate a system of translation in domains where contextual implications are significant.

As mentioned in Section 3.4, this study does not seek to assess the state of the art of MT in general. Hence in all its references to MT inadequacies in Chapter 4 and in this Chapter, 'MT' is not intended to be representative of all MT systems or programs.

The above notwithstanding, this study strongly believes that as long as an MT system does not include a mechanism that is anywhere near the cognitive processing in the human cognitive environment to address phenomena related to context, interpretation and the pragmatic aspect of meaning, the system is still too far away from being a viable system of translation.

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[1] Examples quoted are neither exclusive to nor all-inclusive for the respective categories of defects. This dissertation also does not claim that they are the best examples.