Directionality Effects on Accuracy in English-Thai Consecutive Interpreting of Quantity Numbers

Sasee Chanprapun
Faculty of Liberal Arts, Thammasat University, Thailand
schanprapun@gmail.com

Abstract

It has long been debated whether interpretation should be performed only from a foreign language to the mother tongue or whether it should be performed from the mother tongue to a foreign language. Those in favor of the foreign to native language direction posit that such directionality allows the interpreter to produce more natural target language renditions while those in support of the native to foreign language direction claim that such directionality is more conducive to the interpreter developing a clear understanding of the source message. The interpreting of quantity numbers (sums) requires both accurate rendition in the target language and thorough comprehension of the source message. Building upon the directionality debate, a mixed method research was conducted on beginner level interpreting students to investigate directionality effects on the accuracy of English-Thai consecutive interpretation of quantity numbers. Findings showed that although the subjects scored slightly better in the Thai to English language direction, it is yet inconclusive if this was due to directionality. However, it was found that some characteristics of the English and Thai language quantity systems compounded with directionality both contributed to and deterred quality in interpretation at the same time.

Keywords: quantities, consecutive interpreting, directionality, cognitive load, Effort Model

Introduction

Directionality refers to the direction from and into which language is interpreted (Doubalova, Lumbreras, & Vianna, 2010). It is among one of the oldest topics discussed in translation and interpretation circles (Gile, 2006), where there have been long debates on whether interpreting should be performed from a foreign language into the interpreter's native language or from the interpreter's native language into a foreign language. Scholars in support of interpreting from a foreign language into a native language postulate that native speakers of a language have the total feel for the language and are therefore able to communicate most effectively in their mother tongue. Allowances can be made for interpreters to interpret from their native language into a foreign language only when the mode of interpretation is consecutive (Seleskovitch, 1978). Conversely, those in support of interpreting from a native language into a foreign tongue believe that understanding the message is of paramount importance. Since native speakers tend to understand their mother tongue better than foreign languages, the more effective way to communicate is when native speakers decode the message from the source language and interpret it into a foreign language (Denissenko, 1989). This direction of interpreting is also known as retour or interpreting from one's A language into a B language, according to AIIC-the International Association of Conference Interpreter's language classification. To date, there is yet to be any conclusive agreement as to which direction is best. Following the Paris School notion, the approach adopted by many interpreting schools is to focus their teaching on interpreting into the mother tongue (A language), but with a higher number of interpreting

activities involving the more exotic languages of the East, it has become necessary to employ retour interpreting (from one's mother tongue into a foreign or B language) for lack of interpreters with the required working languages (Lim, 2009). For the case of the Thai-English language pair, interpreters with English B interpret from Thai into English on a regular basis due to shortage of English native speaking interpreters (English A) to interpret from Thai to English. It is therefore interesting to investigate whether the B language "taboo" has any valid bearing on this retour practice.

Numbers are known to be problem triggers (Mazza, 2001) in interpreting due to their lack of contextual clue (Gile, 2017; Braun & Clarici, 1996) and the density of their meaning (Alessandrini, 1990). Quantity numbers (sums) create more tension for interpreters in that quantities are lexically expressed in different ways between the languages. The interpreting of quantities may demand higher cognitive resources for analysis of additional lexical semantic components not present in other contexts (Chanprapun, 2018). Because quantities form an important part of the source message that interpreters grapple with every day, it is interesting to inquire if interpreters perform better when interpreting quantities from their native language to a foreign language or when interpreting quantities from a foreign language to their native language. Consecutive interpreting, in which the interpreter provides the target language rendition with or without the help of note-taking after the speaker has completed his idea in the source language, is the chosen mode of interpreting for this study since it is used in a variety of settings, provides more flexibility and is therefore more widely used over simultaneous interpretation. Consecutive is also deemed more suitable for achieving accurate and complete renditions in high-stakes events (Russel & Takeda, 2015). In addition, because consecutive interpreting is often performed bi-directionally, it would be beneficial to find out if one direction is more advantageous over the other.

Review of Literature

Much has been discussed about directionality in interpreting. What emerge from this discussion are two distinct schools of thought with some views positioned at differing points in between. The International Association of Conference Interpreters (AIIC – Association Internationale des Interprètes de Conférence) provides a classification of working languages as active and passive languages, with the mother tongue as an active language into which interpreting should be performed from other active and passive languages. AIIC goes on to further classify interpreters' working languages into A, B and C. An A language is the interpreter's mother tongue while a B language is one that he is perfectly fluent in but not his mother tongue, and a C language is one that the interpreter understands perfectly. Languages A and B are considered active languages into which the interpreter may interpret (from other working languages into A for both consecutive and simultaneous interpretation and from other working languages into B for either consecutive or simultaneous interpretation), and language C is considered a passive language that the interpreter does not work into ("What are working languages to a conference interpreter?", 2012). According to AIIC, there is a difference between understanding a language and speaking a language. Danica Seleskovitch (1978), AIIC's executive secretary from 1959 to 1963, claimed that interpreters may work from their A language into their B language successfully in consecutive interpretation because there is enough time to restructure the message, but this concession does not apply to simultaneous interpretation where there is time constraint and the interpreter is required to have a total feel for the language to be able to express it in a natural way. A number of AIIC interpreters participating in a survey also showed

preference for working into their A language (Lim, 2009). Some studies suggest that producing a second language is usually more difficult than comprehending a second language and interpreters would rather work into their native languages (Nicodemus & Emmorey, 2012). Thus interpreting should be performed from a foreign language into the interpreter's native language to produce more favorable outcomes.

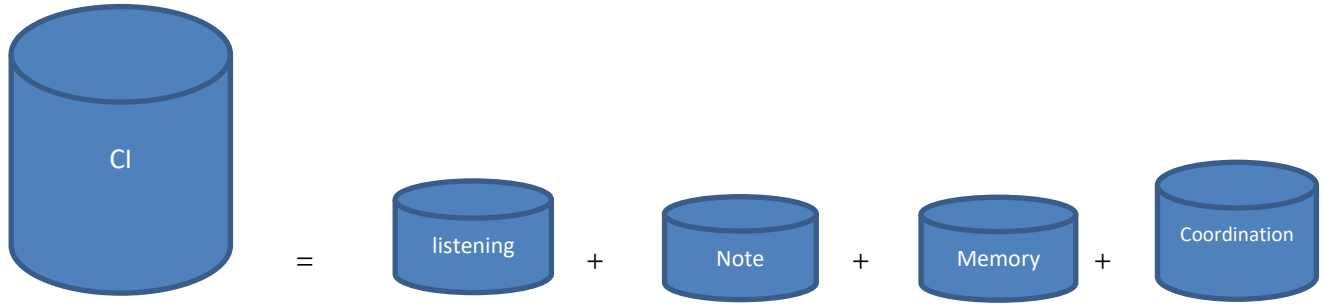
Contrary to this belief, Jurij Denissenko (1989), former Vice Rector of the Maurice Thorez Institute of Foreign Languages, Moscow (today known as Moscow State Linguistic University) posits that the advantage of working from an A language (native language) into a B language (foreign language) is that the interpreter is able to more fully understand the message since it is expressed in his mother tongue. Because he understands the message better, when he interprets the message into his B language, the interpreter will be better able to transfer the meaning in its entirety. Al-Salman & Al-Khanji (2004) found that Arabic-English simultaneous interpreters performed better interpreting from their mother tongue to a foreign language. In addition, retour interpreting (into one's B language) is regularly practiced out of necessity such as in the case of the Polish and English language pair, where private market interpreters are expected to interpret both from English into Polish and vice versa (Gumul, 2017), and in the case of the Korean and English language pair, where bi-directional interpretation is necessary to survive in a predominantly bilingual market (Lim, 2009).

Amid the mixed findings regarding the two polar extremes, there are some who question the validity of both schools of thought. Gile (2006) questioned if other factors, compounded with directionality, might also affect the performance of interpreters. He suggested that the most important factor causing different outcomes in directionality performance is the cognitive load and he went on to question if equal amounts of processing capacity were required for speech comprehension and speech production. In his Effort Model of consecutive interpretation (Figure 1), which provides an analysis of cognitive resources used, Gile (2009) divides consecutive interpretation (CI) into two phases: the listening phase and the reformulation phase. In the listening phase, the efforts needed are L(listening) + N(note taking) + M(short term memory operation) + C(coordination) while in the reformulation phase, the efforts needed are Rem(remembering) + Read(Note reading) + P(production). The main assumption is the mental effort required at any time in this process must not exceed the total available mental capacity; and if it does, performance deteriorates.

With regard to the directionality question, Gile (2006) queried if more cognitive resources were required for the listening phase or for the production phase. If we hypothesize that more cognitive resources are needed for the listening phase where source language meaning is analyzed, then it would be beneficial to interpret from one's mother tongue into a foreign language (from language A to language B) because interpreters will supposedly do well in this phase since their mother tongue is the language they have highest command of. In this case, interpreting from the interpreter's mother tongue would help economize on the mental capacity used and leave more mental capacity for the other efforts. However, if more mental resources are required for the production phase where message is reformulated into the target language, it would be a good idea to interpret from a foreign language into the interpreter's mother tongue (from language B to language A) for the same reasons that the interpreter will be able to use native language fluency/command to his advantage. The language the interpreter has best command of is his mother tongue. When he reformulates the message into his mother tongue, because he has best command of it, he would be able to economize on the mental resources needed in the effort as well. Further to this, it has been suggested that the effects of interpreting

direction on performance should not be considered in isolation as there may be other variables affecting interpreters' output as well. Perhaps certain variables may interact with one interpreting direction in a different way than it does with the other (Dose, 2017). There is yet to be a conclusion about which phase requires more mental capacity or if other factors come into play in the mental capacity requirement as well.

Listening Phase



Production Phase

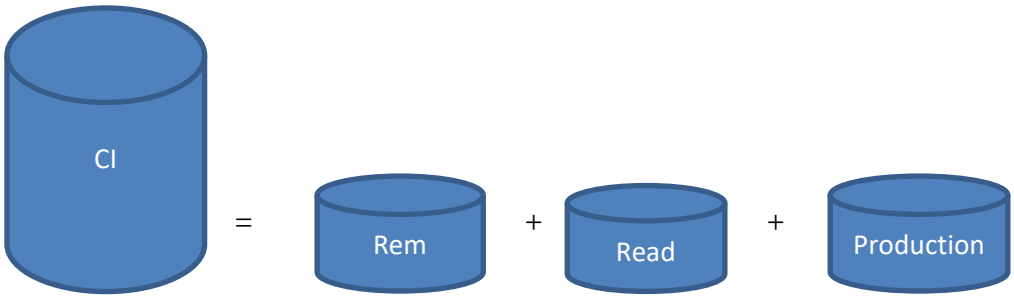


Figure 1: The Effort Model of Consecutive Interpretation

The debate about directionality mainly centers upon Western European languages, for which it is possible to find enough native speaking interpreters to interpret in a unidirectional way-only into one's native language. Conversely in the East, there are many countries using exotic languages such as Thai, Bahasa and Vietnamese, etc. For these languages, it is almost impossible to find interpreters whose mother tongue is a western language (such as English) to interpret from Thai, Bahasa or Vietnamese into English. It is therefore necessary in this context for the interpretation to be bi-directional, with the same interpreter interpreting from language B to language A and from language A to language B as well. Due to this limitation, in the East we find that interpreters are expected to work both from a foreign language (B or C) into their mother tongue and from their mother tongue (A) into a second language (B). It has also been suggested that interpreting into a B language is feasible and acceptable. In fact, some believe

that a competent interpreter should be able to work equally well in both directions (Lim, 2009). For Thailand, native Thai interpreters usually work from a foreign language into Thai (from B to A), with increasing demand for interpreting from Thai into a B language (such as English). Like many interpreters in the East, Thai interpreters are increasingly required to work bi-directionally, interpreting from and into a foreign language.

Language and numbers share a common property in that one can always add more input to both and make the meaning go on indefinitely. Just as one adds more language material to existing structures, one can add more numbers to an existing quantity to create more sums (Hauser, Chomsky & Fitch, 2002). In interpreting, numbers are problem triggers (Mazza, 2001) because they are dense in meaning (Alessandrini, 1990) and because we cannot usually rely on context clues to interpret numbers (Gile, 2017; Braun & Clarici, 1996). Contrary to other components of the message which build upon one another in a coherent way, numbers are unique outliers in that their meaning is hardly dependent on any other part of the message. Consequently, interpreters may be required to use more mental effort when interpreting numbers. In addition, individual languages have their own distinct number structure (Pellatt, 2005) and lexical representations of quantities. In English, words are used in conjunction with multipliers to indicate quantities. The same case applies to Thai, but the difference is the multipliers are not applied in the same way, making it impossible to merely transcode or pair up words when interpreting quantities between the two languages. In such situations, interpreters are required to perform an additional analysis when interpreting certain sums. Figure 2 below illustrates the disparities between the two quantity systems and the number of analytical steps required to interpret the quantities. For certain quantities, mere transcoding or a pairing of words will be sufficient to render an accurate interpretation, but for other quantities, an additional multiplication step needs to be performed to obtain a faithful rendition in the target language. In the English to Thai direction, the quantities requiring both transcoding and multiplying steps are "ten thousand", "hundred thousand", "ten billion" and "hundred billion". In the Thai to English direction, the quantities requiring a combination of transcoding and multiplying acts are "ten thousand", "hundred thousand", "billion", "ten billion" and "hundred billion". Considering the additional mental resources required, it is interesting to inquire if interpreters' performance deteriorates when interpreting these quantities. It should be noted that in the English to Thai direction, the quantity "billion" can be interpreted by merely pairing the English and the Thai words, but in the reverse direction, when interpreting the same quantity from Thai to English, the process involves first a word pairing action and then a multiplying action. It is therefore also interesting to investigate the difference in directionality performance for the interpreting of this sum.

Considering the debate on directionality and performance, it is also interesting to investigate which interpreting direction interpreters perform better in when dealing with quantities. Following the Paris school of thought, interpreters should do better interpreting quantities from a foreign language into their mother tongue. However, the Russian school of thought would likely suggest that interpreting in the opposite direction yields better outcomes.

English		Thai		Analytical Steps Involved			
Multiplier word	Numerical word	Multiplier word	Numerical word	English - Thai		Thai - English	
				transcode	multiply	transcode	multiply
	One		(หนึ่ง)One	✓		✓	
	Ten		(สิบ) Ten	✓		✓	
	Hundred		(ร้อย)Hundred	✓		✓	
	Thousand		(พัน)Thousand	✓		✓	
Ten	Thousand		(หมื่น)Ten Thousand	✓	✓	✓	✓
Hundred	Thousand		(แสน)Hundred Thousand	✓	✓	✓	✓
	Million	(หนึ่ง)	(ล้าน)Million	✓		✓	
Ten	Million	Ten(สิบ)	(ล้าน)Million	✓		✓	
Hundred	Million	Hundred (ร้อย)	(ล้าน)Million	✓		✓	
	Billion	Thousand (พัน)	(ล้าน)Million	✓		✓	✓
Ten	Billion	Ten Thousand (หมื่น)	(ล้าน)Million	✓	✓	✓	✓
Hundred	Billion	Hundred Thousand (แสน)	(ล้าน)Million	✓	✓	✓	✓
	Trillion	Million (ล้าน)	(ล้าน)Million	✓		✓	

Figure 2 Differences between the English and Thai Quantity System and the Number of Steps Required in Interpretation

Methodology

The object of this study is to inquire if directionality produces different accuracy outcomes in consecutive English-Thai interpreting of quantities among beginner level interpreting students so that the findings may be used to inform subsequent course planning for interpreter training in the English-Thai language pair. The subjects are 10 beginner level interpreting students having received 24 hours of training in basic English-Thai consecutive interpreting. All are Thai native speakers (A language = Thai) who have studied English as a second language for 16 years and have very good command of English. To eliminate any possible interference effects from the context and to allow the subjects to focus particularly on the interpretation of the quantities, the subjects were asked to consecutively interpret two sets of 10 standalone (no context) sums from English to Thai and from Thai to English. The sums used in the experiment ranged from the thousandth digit to the trillionth digit. They were randomly ordered and recorded at a 100 word-per-minute speed, considered to be in the easy speed range of the Speech Difficulty Index (SDI)

(Setton & Dawrant, 2016), to correspond to the subjects' level of experience in interpreting. The tests were administered and recorded on two different days: one for English to Thai interpretation and the other day for Thai to English Interpretation. The tests were marked for accuracy and the scores rechecked. For each direction, the first test consisted of 10 round number sums while the second test consisted of 10 sums in full digits (every digit filled). There were no empty digits in between (no zeros in between). Tables 1 to 4 below list the sums used in the experiment and the results obtained. Please note that in the actual tests, the sums were heard in random order, not in ascending order as appears in the tables.

Results and Discussion

Table 1 Test Results for English to Thai Consecutive Interpretation of Round Figures

subject / sum	1	2	3	4	5	6	7	8	9	10	total score
1,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
50,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
200,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
7,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
30,000,000	✗	✓	✓	✗	✗	✓	✓	✗	✓	✓	6
800,000,000	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	8
9,000,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
70,000,000,000	✗	✓	✓	✓	✓	✗	✓	✗	✓	✓	7
500,000,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
4,000,000,000,000	✗	✓	✓	✓	✓	✗	✗	✓	✓	✓	7
total score	7	10	10	8	9	8	9	8	10	9	88 / 88

Table 2 Test Results for Thai to English Consecutive Interpretation of Round Figures

subject / sum	1	2	3	4	5	6	7	8	9	10	total score
1,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
50,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
200,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
7,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
30,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
800,000,000	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	9
9,000,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
70,000,000,000	✓	✓	✓	✗	✓	✗	✓	✓	✗	✓	7
500,000,000,000	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓	4
4,000,000,000,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
total score	9	9	9	8	10	8	9	10	8	10	90 / 90

Table 3 Test Results for English to Thai Consecutive Interpretation of Full Digit Figures

subject / sum	1	2	3	4	5	6	7	8	9	10	total score
1,786	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	9
45,879	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	9
527,869	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
8,485,965	✓	✓	✗	✓	✗	✓	✓	✓	✗	✓	7
38,754,212	✗	✓	✗	✓	✗	✓	✓	✓	✓	✓	7
646,576,812	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	9
2,687,258,247	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	8
56,845,214,251	✓	✓	✓	✓	✗	✗	✓	✗	✓	✓	7
672,589,245,364	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	8
9,873,521,487,253	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	8
total score	9	10	8	10	2	6	10	9	8	10	82 / 82

Table 4 Test Results for Thai to English Consecutive Interpretation of Full Digit Figures

subject / sum	1	2	3	4	5	6	7	8	9	10	total score
1,786	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
45,879	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓	8
527,869	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	9
8,485,965	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	9
38,754,212	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	9
646,576,812	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓	8
2,687,258,247	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	8
56,845,214,251	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	8
672,589,245,364	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
9,873,521,487,253	✓	✓	✓	✗	✓	✗	✓	✓	✗	✓	7
total score	10	10	8	8	9	8	6	8	9	10	86 / 86

Overall, test score showed the subjects performed better when interpreting from Thai to English. For quantities indicated in round numbers, the total score was 88/100 (*M=8.8, SD=1.03*) from English to Thai, and 90/100 (*M= 9, SD= 0.81*) from Thai to English. A paired samples t-test was conducted and no significance was found; *t(9)= 2.26, p=.343*. For quantities indicated in full digits, the total score was 82/100 (*M= 8.2, SD 2.52*) from English to Thai, and 86/100 (*M=8.6, SD=1.26*) for Thai to English. From the paired samples t-test conducted, no significance was found at *t(9) = 2.26, p = .670* either. Therefore, although the test scores suggest subjects perform better when consecutively interpreting quantities from Thai to English, such conclusions cannot be made and the hypothesis that directionality impacts accuracy

outcomes in English-Thai consecutive interpretation among beginner level trainees is rejected at this point.

Further to the tests, subjects also participated in a semi structured interview on what they thought about directionality impacts on accuracy in the consecutive interpreting of quantities. Subjects thought quantities were difficult to interpret because they have fixed formats to follow, both in the source language expression and in the target language rendition. Unlike other content, quantities cannot be paraphrased if the interpreter does not know the exact words to use. The lexical and semantic make ups of certain quantities are also very complex, requiring more time for processing; when analyzing the source language message and dismantling the lexical and semantic components and also when formulating the target language rendition or putting together meaning and language expression. According to the subjects, another problem with quantities is, unlike other content, there are no context clues. The interpreter needs to concentrate more and depends only on his assessment of the source sum to come up with an accurate rendition in the target language. Consequently, more mental processing is required when interpreting numbers. Figure 3 below provides a visual summary of the processing issues subjects faced.

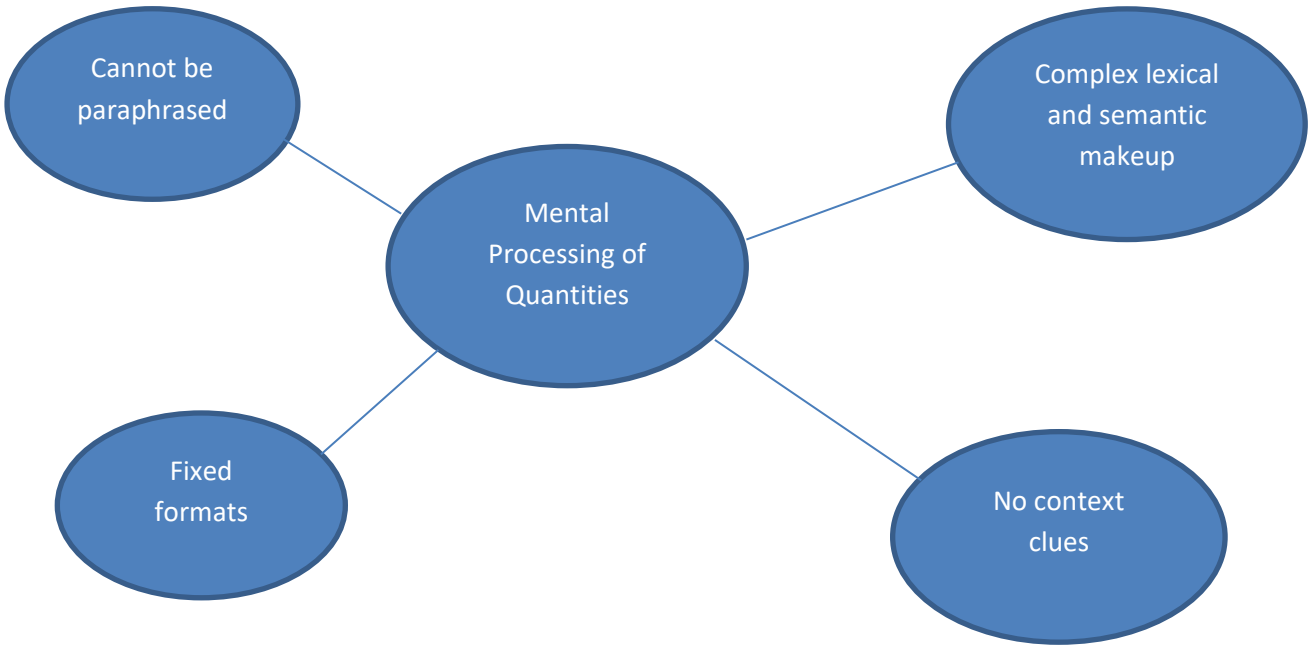


Figure 3 Issues Associated with Processing Quantities in Consecutive Interpretation

Regarding directionality preference, subjects provided mixed opinions. Some felt they did better when interpreting from Thai to English because although they felt the Thai language system for quantities was more difficult to decipher, they were more familiar with the language and therefore more adept to understand the meaning. This group also felt that the English Language structure for expressing quantities was concise and logical with “ten” and “hundred”

as the only two multipliers (whereas in the Thai language system, there are six multipliers) and progressing up in levels that were easier to understand. Conversely, for the exact same reasons, a number of subjects preferred interpreting from English to Thai because they could understand the source language more easily as it was more distinctly structured. Once meaning is retrieved from the English source language, the subjects felt they could use their native speaker advantage to formulate the quantity with more ease into their mother tongue. Additionally, both groups remarked that it was confusing when they could not directly transcode the words used in the source and target languages and had to actually process the quantities by multiplying the numbers to transpose between the two languages. To conclude, the very same reasons of unbalanced complexity between the quantity indication systems of the two languages drive preference in both directions. Figure 4 below provides a visual representation of subjects' directionality preferences and the underlying reasons for their choice.

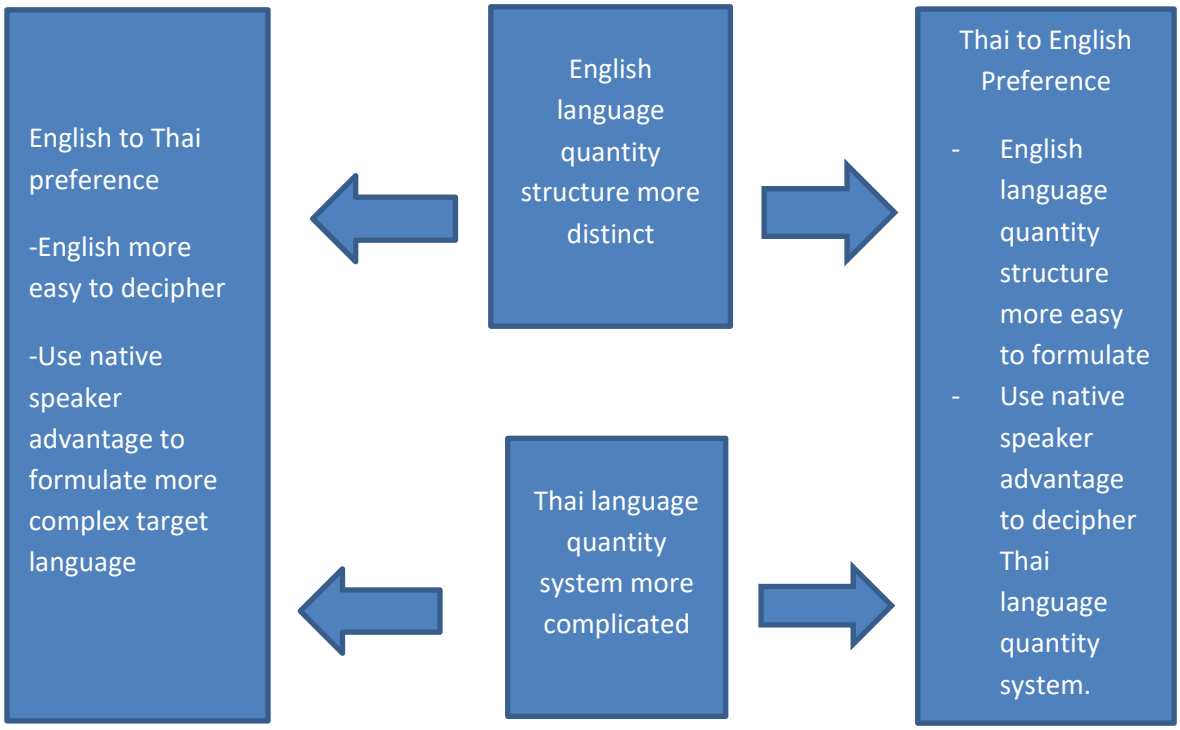


Figure 4 Reasons Associated with Directionality Preferences

Conclusions

As with the results of past research, the findings from this study are yet inconclusive. When interpreting from a foreign language to their mother tongue (from English to Thai), the subjects did not do so well as when interpreting from their mother tongue to a foreign language (from Thai to English) for both round figures and full digit figures. However, the differences in test scores are not significant and prevent us from concluding that subjects performed better when consecutively interpreting sums in the B to A language direction. From the interview, it was found that the very same factors contributing to improved accuracy in the consecutive interpreting of sums also contributed to deterioration of quality, depending on from which angle

it is considered. The subjects felt the English language quantity structure easier to understand with its two multipliers while to them, the Thai language quantity structure was more elusive with as many as six multipliers. While the Thai language quantity structure may pose a challenge to them on the one hand, but on the other hand, the subjects were able to use the native language factor to their advantage and compensate for the increased mental capacity requirement. Had it been the other way around that the English language quantity structure was more complex than the Thai language quantity structure and posed a greater challenge, this would have been compounded with the non-native speaker disadvantage and perhaps resulted in high levels of performance deterioration. In the same light, had the subjects been native speakers of English, they would have been put at a greater disadvantage than the Thai native speaking subjects because the complexity of the Thai language quantity structure would have been compounded with the non-native speaker disadvantage.

In light of the Paris School line of thought advocating for B to A language directionality (Seleskovitch, 1978), the subjects were able to use their native language proficiency in formulating the target language rendition. Since in the case of sums the target language (Thai) was more difficult to formulate due to it being more complex, the subjects were in an advantageous position because the target language was their mother tongue. In this sense, we may conclude that when dealing with sums, the foreign to native language directionality in interpretation is advantageous if the target (native) language structure is more complex than the source (foreign) language structure. However, this notion is contrary to what Denissenko (1989) postulated when he advocated for A to B language directionality in interpreting, arguing that thorough understanding of the message is more important than expressing it eloquently. In light of this, we may conclude that the directionality of native (Thai) to foreign (English) language interpretation when dealing with sums is advantageous if the foreign (target) language structure is less complex than the native (source) language structure. One can see that both the Paris and Russian schools of thought have bearing in this situation. It is obvious that they are but two sides of the same coin.

It is possible that other factors such as the complexity of the sums themselves (not of the language structure) also affect interpreting quality. According to Dose (2017), there may be other factors producing different interaction results in different interpreting directions. For both directions (English to Thai and Thai to English), the subjects performed better when interpreting round figures than when interpreting figures of full digits, suggesting that sum components also affect interpreting outcome and that further investigation is required. Additionally, the experiments in this research were conducted using isolated (no context) sums. In real life situations, interpreters are usually required to handle the interpreting of sums appearing in context, which requires additional mental capacity for the decoding of context in the source message and formulation of context in target language rendition. In such situations, the surrounding context may impact the interpreter's ability to produce accurate numerical renditions of the sums. It would be interesting to investigate the effects of context on the accuracy of sums interpretation.

This study is not without limitations, one of which is the small sample size dictated by the maximum number of students allowed in each cohort. Interpretation classes tend to be small in student number and interpretation instruction for the English-Thai language pair is rare. Perhaps further insight can be gained with data from a larger sample size if larger classes can be found in the future.

To conclude, although we cannot at this juncture indicate the more accurate direction for the consecutive interpretation of English-Thai quantity numbers, we have found that both the Paris School and Russian notions on directionality in interpretation provide valid explanations for the advantages and disadvantages of the English to Thai and Thai to English directionality in the consecutive interpretation of quantities.

About the Author

Sasee Chanprapun: Associate Professor, Department of English and Linguistics, Faculty of Liberal Arts, Thammasat University, Thailand

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