The Impact of Grammatical Differences on Mandarin Chinese-English Simultaneous Interpreting

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Abstract

In this PhD thesis, I investigate the impact of grammatical differences on English-Mandarin Chinese simultaneous interpreting (SI), drawing upon an empirical study of professional and student interpreters. The thesis focuses on the effects of three English grammatical categories including passives, adverbials and noun phrases and of three Mandarin Chinese grammatical categories including coverb phrases, noun phrases and topic-prominent clauses on SI between the two languages. For each category, I compare interpretations of instances in which the grammatical structures are the same across the two languages with interpretations of instances in which the grammatical structures differ across the two languages, focusing on accuracy of content and appropriateness of delivery. The results indicate that grammatical differences have a statistically significant impact on the interpreting performance of both professionals and students, although the impact of expertise is also attested through the consistently better performance of professionals than of students.

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Finally, I would like to express my great indebtedness to my parents in China. I would never have had the opportunity to brave the pursuit of education, knowledge and dream in the UK without their love, understanding and firm support all the time.

TABLE OF CONTENTS

8

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Abbreviation	Term
ASSOC	Associative (-*de*)
BA	Coverbs "*bǎ*", "*jiāng*"
BEI	Coverb "*bèi*"
BT	Back translation
CG	Good in content

3sg	Third person singular pronoun
CI	Consecutive interpreting/ interpretation
CL	Classifier
CO	Omission in content
COMP	Comparative
CP	Coverb phrase
CRS	Currently relevant state (-*le*)
CS	Substitution in content
CSC	Complex stative construction (-*de*)
DC	Correction in delivery
DCO	Complete omission in delivery
DG	Good in delivery
DGE	Grammatical error in delivery
DUR	Durative aspect (-*zhe*,-*zai*)
EA	Error analysis
EG	English gloss
EVS	Ear-voice-span
EXP	Experiential aspect (-*guo*)
GEN	Genitive (-*de*)
LP	Long passive
M	Mean
NOM	Nominaliser (-*de*)
NP	Noun phrase
P	P-value
PFV	Perfective aspect (-*le*)
PL	Plural (-*men*, -*xie*)
Pro	Professional
RF	Reduce forcefulness (-*a* or -*ya*)
SD	Standard deviation
SI	Simultaneous interpreting/interpretation

SL	Source language
SC	Subject-prominent clause
SP	Short passive
ST	Source text
Stu	Student
TL	Target language
TC	Topic-prominent clause
TT	Target text

Introduction

Overview: the introductory chapter starts with a general background of literature on SI and on the impact of grammatical differences on SI, followed by the research rationale, aims and questions of the current study, and it concludes with the outline of the dissertation.

Context

This dissertation presents an empirical study of the influence of grammatical differences on simultaneous interpreting (hereafter SI) between Mandarin Chinese[1] and English.

According to Gillies (2005: 3), SI is the immediate on-site oral translation from one language to another, which requires the interpreter to listen and speak at the same time, and to split attention between listening to and comprehending the input from the speaker, transferring the source language (hereafter SL) input into output in the target language (hereafter TL), and self-monitoring the output. As De Groot (1997: 27) states, due to the simultaneity, interpreters have to start encoding the original speech into the TL after hearing a few words rather than a whole sentence, a segment or a whole speech. For a number of reasons, this may require simultaneous interpreters to anticipate the latter part of a sentence or wait for information required for processing a heard segment, as illustrated in Example (a) on anticipation from Van Besien (1999: 250-251) and Example (b) on waiting from Mei (2009: 144).

Example (a): Anticipation

(a) Speaker: 58 laden werden. Ferner beabsichtigen wir
                59 dem Verwaltungsrat gelegentlich der Sitzung
                60 am 28. März in Basel je einen
                61 Prototyp mit jeder der beiden Varian-
                62 ten der Inneneinrichtung ***vorzuführen***.
   Interpreter: 59 et nous avons également l'in-

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[1] Chinese will be used instead of Mandarin Chinese hereafter, however, it still refers to Mandarin Chinese.

60 tention le 28 mars à Bâle

61 de *présenter* les proto-

62 types heu avec les différents types d'aménagement

63 intérieur, et en outre de heu des

As shown in Example (a), the speaker's and the interpreter's utterances are divided into numbered segments; each segment is three seconds long. In the German ST, the verb *vorzuführen* (to show) is expressed by the speaker at the end of segment 62, but its French correspondence *présenter* (to show) is articulated earlier than the speaker's utterance in segment 61. This is a frequent phenomenon in SI from German into French or English as verbs in German often come at the end of the sentences, but the corresponding verbs in the TL(s) have to occur earlier in the interpretation.

Example (b): Waiting

(b) ST: They are trying hard to realise the objective of modernization and democratization
SI1: *Tāmén zhèng zài nǔlì   shíxiàn [waiting] xiàndàihuà   hé mínzhǔhuà de mùbiāo.*
EG1: They now at try hard realise [waiting] modernization and democratization
de objective (*de* is a Chinese particle placed before the head noun).

According to Mei (2009: 144), in the SI of (b), the Chinese interpreter hears "objective" first but does not encode into TL immediately. Instead, the interpreter stores the head noun "the objective" in memory and waits for its English postmodification, as Chinese only has premodification. If the interpreter had not waited, he or she might have produced the following faulty utterance:

SI2: *Tāmén zhèng zài nǔlì   shíxiàn mùbiāo,   xiàndàihuà   hé mínzhǔhuà de mùbiāo*
EG2: They now at try hard realise objective, modernization and democratization *de* objective.

14

The time between when an interpreter hears the input and when he or she begins to speak is known as the ear-voice-span (hereafter EVS), and simultaneous interpreters need to make the best possible use of this time period to ease the burden on their working memory and to enable them to produce a meaningful and well-formed speech. A number of scholars have undertaken research into the length and measurement of EVS (Paneth 1957, 1957/2002, Goldman-Eisler 1972/2002) and the factors affecting the length of EVS and SI in general, such as the rate of input (Gerver 1969, Seleskovitch 1978a, Lederer 1981); the accent of the speaker (Sabatini 2000, Kurz 2008, Gile 2009); the quality of the input signal (Gerver 1974a); individual factors including "how much is grasped, work habits, familiarity with the language and the desire to be faithful to the original" (Oléron and Nanpon 1965/2002, Lambert 1989a, 1993, Hamers 2002, Liu 2008); and grammatical differences between the languages involved, which is believed to be a key factor affecting SI (Goldman-Eisler 1972, Kirchhoff 1976/2002, Gile 1997/2002, Van Besien 1999, Lee 2002, Kurz and Färber 2003, Al-Rubai'I 2004, Seeber and Kerzel 2012). This factor will be the focus of the current research.

Many scholars have suggested that grammatical differences between languages are likely to exert a profound impact on the performance of simultaneous interpreters, and have devised and recommended strategies and tactics to deal with this impact. These include "waiting", as illustrated in Example (b) above, which is a comprehension tactic applied by interpreters to obtain sufficient information to allow them to provide well-formed output (Gile 1995a: 192) or "stalling" referring to slowing down the output or producing "neutral padding expressions" in order to avoid unnatural pauses or long silences during waiting (Kirchhoff 1976/2002: 116). Both waiting and stalling enable interpreters not only to comprehend more accurately because of the additional information they receive while waiting, but also to produce target segments that are less fragmented and reduce repetitions (Kade 1967, Kirchhoff 1976/2002, Gile 1995, Setton 1999, Mei 2009). "Segmentation" (Goldman-Eisler 1976/2002, Kirchhoff 1976/2002, Gile 1995a, Jones 1998, Setton 1999) of long sentences into shorter chunks, can lessen the burden on interpreters' short-term memory and free interpreters from having to produce long and complicated sentence structures. "Anticipation", as illustrated in Example (a) above, (Gile 1995a, Setton 1999, Chernov 2004, Mei 2009, Zhong 2009, Zeng 2009) can help interpreters predict the

15

incoming segment on the basis of their knowledge of linguistic conventions, extra-linguistic information and topics to be covered, and allocate more processing capacity to memory and production.

Research Rationale and Aims

Most literature on the impact of grammatical differences on SI investigates language pairs such as German-English (Goldman-Eisler 1972/2002, Wilss 1978, Gile 1997a, Seeber and Kerzel 2012), English-Arabic (Al-Rubai'I 2004), English-Japanese (Gile 1992a, 1995a, 1997a), English-Korean (Lee 2002), English-Italian (Zanetti 1999), and English-Polish (Bartłomiejczyk 2006). There have also been reports (Dawrant 1996, Setton 1999, Chang 2005, Hou 2005) on Chinese-English SI, and there are textbooks (Mei 2009, Zeng 2009, Zhong 2009) which offer solutions to the impact of grammatical differences on Chinese-English SI. However, these are based on theories or personal experiences of interpreting trainers and provide ideal but possibly unachievable solutions. In contrast, my study compares content and delivery errors made by student and professional interpreters in the interpretations of symmetrical structures with those in interpretations of asymmetrical structures[2]. Without this kind of comparison, it is difficult to be certain that potential errors are directly linked to the grammatical differences between the languages, and not simply to particular structures in one of the languages, for example, and to assess the force of their influence.

In addition, I have carried out a retrospective interview study to identify the strategies adopted by professional and student interpreters who took part in my study to see whether these strategies differ between the two groups. My study focuses on the impact of grammatical differences between Chinese and English on the performance of both professional and student simultaneous interpreters, because even though level of expertise has an impact on SI (which is also examined in this thesis), professional interpreters' performance will still be affected by SL-TL grammatical differences. Nevertheless, professional interpreters outperform students due to their experience, practice and

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[2] Symmetrical structures refer to grammatical structures which are the same across the two languages while asymmetrical structures refer to grammatical structures which differ across the two languages.

16

developed techniques, and the current study concludes with a section on pedagogical implications, offering a shortcut to expertise in interpreter teaching and training.

Research questions addressed

Based on the research rationale and aims mentioned above, the following research questions are addressed:

1. Do specific grammatical differences between English and Chinese correlate with identifiable errors in content and in delivery in SI from English into Chinese and vice versa?

2. Does the output of student and professional interpreters differ with respect to the features referred to in 1 above?

3. If the answer to the second question is affirmative, what will be the implications or recommendations for interpreter teaching and training?

In order to explore these questions, nine professional interpreters and twelve student interpreters were asked to interpret two speeches, each approximately ten minutes long, one in English and one in Chinese. Subsequently, the subjects were interviewed to identify their perceptions of problems caused by grammatical differences and any coping strategies they employed. The SI output and parts of the interviews were transcribed and qualitatively and quantitatively analysed.

The predicted results were that a) although level of expertise tends to have an impact on SI, the grammatical differences between Chinese and English would still have a significant impact on the quality of the interpreting performance of both professional and student groups; b) the analysis of the experimental results would demonstrate an expertise-related difference in successfully coping with grammatical differences in SI.

Outline of the dissertation

The dissertation consists of six chapters. Chapter 1, an introductory chapter, presents three well-known models of SI (Gerver's process model of SI 1976, Moser's process model of SI 1978, and Gile's Effort Model of SI 1995), highlights the key features of SI, and identifies some of the main factors affecting SI performance. Chapter 2 focuses on grammar-related factors affecting SI in particular and reviews the literature on SI strategies and on expert-novice differences. Chapter 3 focuses on six grammatical categories of Chinese and

English, namely English adverbials, English noun phrases (hereafter NPs), English passives, Chinese coverb phrases (hereafter CPs), Chinese NPs and Chinese topic-prominent clauses (hereafter TCs), and the challenges that grammatical differences between the languages in these areas could pose to SI between them. Chapter 4 describes the methodology adopted in the thesis, focusing on ethical issues relating to the experiment, and the design of the experiment, before introducing the method of analysing the experimental output. Chapter 5 reports the results of the research and the last chapter (Chapter 6) concludes the dissertation with a summary of its major findings, and recommendations on grammar-related coping strategies in SI.

Chapter 1 Literature on SI

Overview: Chapter 1 is a literature review on SI, focusing on the process and cognitive models of SI, the key characteristics of SI such as simultaneity, EVS and the distinguishing features of SI from other linguistic tasks such as monolingual activities, translation, and CI, and the major factors, namely presentation rate, accent, noise and individual factors, that have a significant impact on SI performance.

1.1 Cognitive models of SI

1.1.1 Gerver's process model of SI

SI is a highly complex cognitive task, in which interpreters have to deal simultaneously with listening, comprehending, memorizing, producing, and monitoring. Since the 1970s, a variety of cognitive models of this complex task have been developed, including the first two holistic information processing models (Gerver 1976, Moser 1976, 1978), a psycholinguistic communication model (Kirchhoff 1976), a redundancy-based probability prediction model (Chernov 1979), and some partial processing models such as a depth-of-processing model (Lambert 1983), a text comprehension model (Dillinger 1989), and a general model of memory during SI (Darò and Fabbro 1994).

Gerver (1976) was among the first to develop a full processing model of SI by adopting the information processing approach, but he (1976: 202) explicitly points out that his model is just "a first approximation to a model of the processes involved in SI." Gerver's process model (1976) focuses on two main aspects of the interpreting process (see Figure 1-1 from Gerver 1976: 192):

1) Permanent structural features such as a variety of memory systems for buffering inputs and outputs to enable the simultaneity of different components of the task;

2) Control processes, especially monitoring, which can be selected by the interpreter and which may also determine the distribution of attention to the different components of the task. (Gerver 1976: 193).

Figure 1-1: Gerver's process model of SI
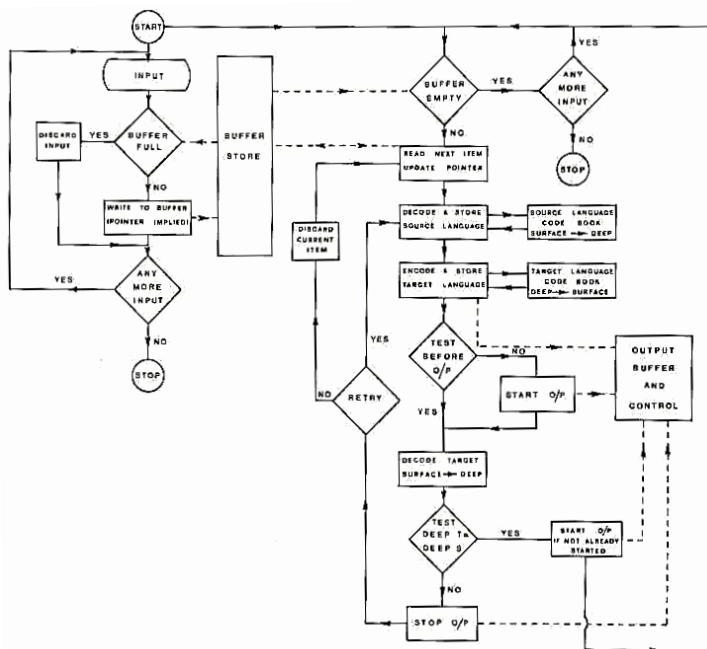
According to Gerver (1976: 193), temporary storage plays an essential role in SI. Interpreters must be able to store incoming information in a buffer store while interpreting another source message; and the results of intermediate steps of analysis must also be retained in the temporary store.

According to Gerver's process model (1976: 193-202), SI involves input procedures, decoding and encoding procedures and output procedures. During input, a ST is received in the temporary buffer store. According to Gerver (1976: 192), the decoding and encoding procedures include two parts, namely "decode and store source language"

and "encode and store target language". During the first part, interpreters "decode the phonetic representation of each segment of the source language message and understand it in terms of its underlying structure and meaning in relation to the context" (Gerver 1976: 197), and the second part refers to the encoding of the decoded messages in the TL. Interpreters may immediately produce output after understanding the SL, or may check the translation against the ST before production, and then proceed if the translation matches the ST or stop if it does not, or try another way if time is sufficient. Interpreters may also check the translation against the ST after production, and then continue if the translation matches the ST or correct if it does not as long as time is sufficient. This is the first comprehensive representation of the process of SI; however, it has never been empirically tested, as Moser-Mercer (2002: 151) points out: "there is no literature on the use of Gerver's model in an experimental setting and, due to the author's untimely and early death, he himself was not able to interpret new research findings in light of his model."

1.1.2 Moser's process model of SI

Another early model of SI was developed by Moser (1976, 1978) on the basis of Massaro's (1975) speech comprehension model. Moser's model represents the temporal flow of the process of SI as shown in Figure 1-2 from Moser (1978: 355).

Circles mark the beginning and the end of the process, which may come to a natural end when a target message is articulated, or which may end when a message is discarded and the process is terminated. Single-headed arrows indicate the temporal flow of the process. Boxes describe the information stored or the products of the cognitive processes at individual processing stages such as words and phrases. All the intermediate headings refer to the cognitive operations at the processing stages. Double-headed arrows display top-down and bottom-up interaction with long-term memory (LTM). Diamonds indicate decision points in the process. If the decision leads to a Yes-answer, the process will proceed; however, interpreters spilt their attention between the incoming ST and the output of the TT, so a rehearsal procedure is also in place when the answer is Yes. If the decision leads to a No-answer, interpreters may wait for more information or try again or just discard the message. Also, it is worth mentioning that a decision point named "prediction" or "anticipation", which is not mentioned in Gerver's model, is present in Moser's model. According to Moser-Mercer (2002: 151), "[s]everal colleagues have tried to argue it should

appear earlier in the process, but without having already processed a certain amount of prior information prediction on future input is simply not possible". It is also generally agreed that anticipation is often employed by simultaneous interpreters to shorten waiting time and begin to process before complete information is received, and to avoid working memory being overloaded by a large amount of information (Wilss 1978, Lederer 1981, Dillinger 1990, Gile 1995a, Van Besien 1999, Chernov 2004, Mei 2009) (see Section 2.3.3.3).

Figure 1-2: Moser's process model of SI

23
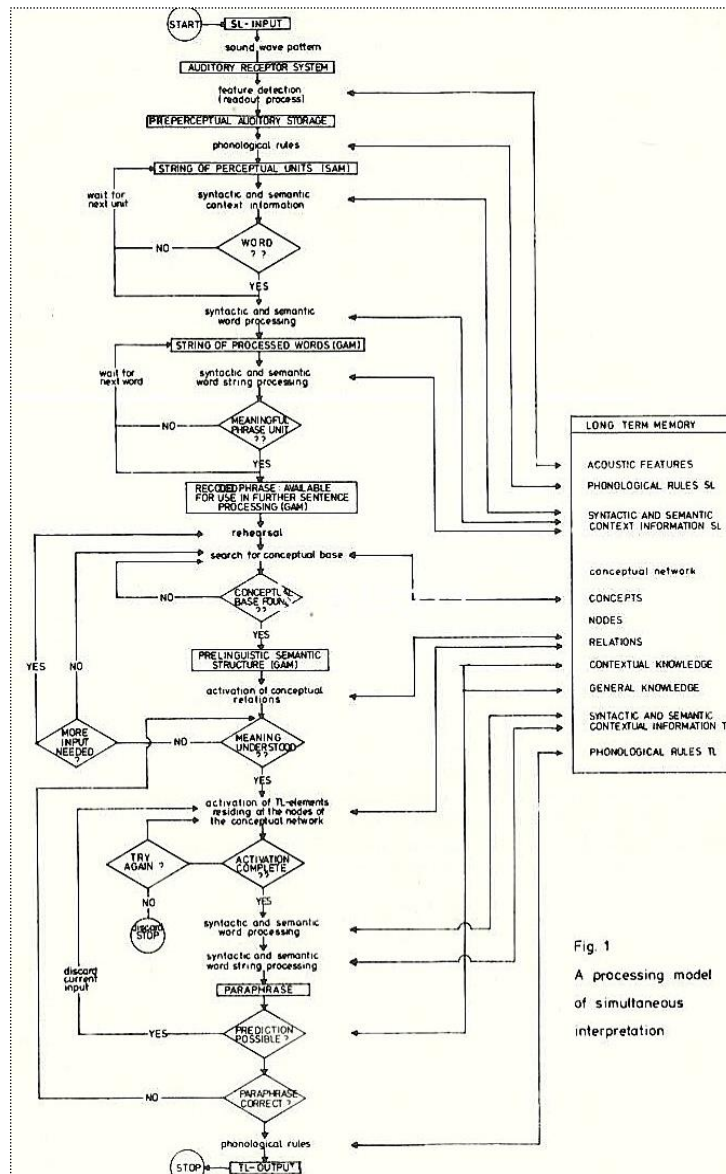
1.1.3 Gile's Effort Model of SI

The two models mentioned above clearly illustrate the complex operations of SI, but neither has been subject to empirical testing. In contrast, according to Pöchhacker (2004: 107), Gile's Effort Model (Gile 1995a) has "been applied successfully to experimentally generated empirical data". This model is designed to explain "performance limitations and failures as a phenomenon *per se*", and it posits three efforts in the process of SI including (i) the listening and analysis or comprehension effort (L), (ii) the production effort (P) and (iii) the memory effort (M) (Gile 1997/2002: 164).

The listening and analysis effort includes "all comprehension-oriented operations, from the analysis of the sound waves carrying the SL speech that reach the interpreter's ears, through the identification of words, to the final decisions about the meaning of the sentence" (Gile 1997/2002: 164).

The production effort (1997/2002: 164) includes all output-oriented operations "from the initial mental representation of the message to be delivered, through speech planning, and up to the implementation of the speech plan". There is no mention of monitoring effort in Gile's model. Gile (1995a: 166-167) states that the general rule for production is that the re-expression of the ST should be based on its meaning rather than on its form for four reasons. First, simultaneous interpreters may run into difficulty by following the syntactic structures of the SL due to grammatical differences between the two languages involved; second, simultaneous interpreters may lose their potential to act naturally like a speaker of the other language; third, word-for-word interpretations are very likely to lead to linguistic interference between the two languages, introducing into the SI output "grammatical mistakes, mispronunciations, *faux amis* [italics in original] (words that look similar in the two languages but which do not have the same meaning, connotation, or usage)", making it unpleasant, ambiguous and foreign to listen to. Fourth, following the structure of the SL too closely could reduce interpreters' ability to form hypotheses and grasp the underlying meaning of the ST.

The memory effort (1997/2002: 164) is the effort expended by storing information in short-term memory for later use. It can last up to a few seconds and operates non-stop throughout the process of interpretation. Short-term memory is needed (a) because of the time-lag between the receipt of ST and the production of TT, (b) because the production of

TT requires the information to be delivered to be stored and assembled in memory, c) to deal with exceptionally high or exceptionally low information density in the ST or with characteristics of the speaker, such as accent and idiolect, and finally d) because of language-specific factors such as grammatical differences between languages.

In addition to the three efforts mentioned above, there is a fourth effort called the coordination effort (C) applied by interpreters to coordinate the other three efforts. The process model of SI can be expressed in the following formula:

$$SI=L+P+M+C \text{ (Gile 1997/2002: 165)}$$

Based on the above formula, the following equation shows the relationship between the total (T) requirements (R) for processing capacity and the individual requirements.

$$TR=LR+MR+PR+CR \text{ (Gile 1997/2002: 165)}$$

Meanwhile, the relationship of the total available (A) processing capacity and the individual available capacity can be shown as follows:

$$TA=LA+MA+PA+CA$$

TR should not exceed TA (TR<TA) and each individual requirement for processing capacity should not exceed each individual available capacity (LR<LA, MR<MA, PR<PA, CR<CA) if the SI process is to go smoothly.

According to Gile (1995a: 174, italics in original), problems in SI including "deterioration of the *content* of the target-language speech" such as "errors and omissions", and "deterioration of its *delivery*" such as "linguistic output, voice and intonation" all arise from the saturation of processing efforts of interpreters.

Gile's Effort Model focuses on performance limitations and failures in SI rather than on the process of SI and my research focuses on the results, as evidenced in SI outputs, of grammatical differences in interpreters' performance as well, therefore, I will mainly draw upon Gile's model in the course of my own research.

1.2 SI features

1.2.1 Simultaneity

1.2.1.1 Listening and speaking

According to Gerver (1972: 28), the simultaneous interpreter's production lags roughly two to four seconds behind the speaker's production, therefore, simultaneity in his research and in my research does not mean that translation itself is simultaneous with the original speech, but refers to the simultaneous listening and speaking of the interpreter.

Gerver (1972: 75-76) notices that when experimental subjects spend over 75% of the total input-output time listening and speaking simultaneously, they are able to interpret 85% of the ST correctly and monitor and correct themselves at the same time.

In order to avoid listening and speaking at the same time, Goldman-Eisler (1968: 128) suggests that

> [t]he intermittent silence between chunks of speech in the speaker's
> utterance is a very valuable commodity for the simultaneous interpreter; for
> the more of his own output he can crowd into his source's pauses, the more
> time he has to listen without interference from his own output.

Goldman-Eisler's hypothesis is supported by Barik's (1973) investigation into the temporal characteristics of speakers' and interpreters' speech. In Barik's (1973) experiment, "two professional, two student and two amateur interpreters (one English-dominant and one French-dominant in each case) were asked to interpret "four types of material: spontaneous speech, semi-prepared material, prepared "oral" material, and prepared "written" material" into their dominant language or vice-versa. He concludes that simultaneous interpreters try to make the most use of the speaker's pauses in order to minimise the time spent in simultaneous listening and speaking.

Based on data[3] obtained by observing student interpreters' performance at a pilot experiment, Paneth (1957/2002: 32) also finds "simultaneity of the translation of one

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[3] The sample size of the pilot experiment is not clear.

phrase with the listening to another." She (1957/2002: 33) notices that sometimes, simultaneous interpreters make full use of the speaker's pauses by speeding up the interpretation and fitting their delivery as much as possible into the pauses in order to avoid overlap between listening and speaking, which seems to be in line with Goldman-Eisler's (1968) and Barik's (1969, 1973) assumption. However, Paneth (1957/2002: 34) also points out that interpreters who are "very fast speakers" or can anticipate "the likely conclusions of a cliché or grammatical construction" do not often use the speaker's pauses and can "finish nearly in step with their original" or sometimes even before the speaker.

According to Chachibaia (2001: 17), during the process of SI, "the interpreter is both a recipient and transmitter of the information simultaneously", which "strongly influences the process of interpreting". The question of whether or not simultaneously listening and speaking has a significant impact on the performance of simultaneous interpreters was investigated by Gerver (1974b). Gerver asked SI trainees to listen to, shadow[4] and simultaneously interpret recordings of passages of French prose from the *UNESCO Courier*[5] and to complete comprehension and recall tests after each passage. Trainees achieved higher scores after listening than after shadowing and interpreting, which suggests that comprehension is hindered by the simultaneity of listening and speaking; however, it is even more interesting to see that trainees obtained higher scores after interpreting than after shadowing, which suggests that simultaneity of listening and speaking has a greater impact on comprehension in simple repetition tasks than during complex translation processes. The final conclusion of Gerver's experiment is that for advanced SI trainees, simultaneous listening and speaking in itself does not hinder the performance of SI tasks, but it may place some limits on the efficiency of interpreters' performance.

As simultaneity between listening and speaking is a central feature of SI, Coughlin (1989: 107), Lambert (1988: 381), and Kurz (1992: 247) point out that listening and

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[4] Shadowing is a paced, auditory tracking task which involves the immediate vocalization of auditorily presented stimuli, i.e. word-for-word repetition, in the same language, parrot-style, of a message presented through headphones (Lambert 1992: 266).

[5] The UNESCO Courier is the main magazine published by the United Nations Educational, Scientific and Cultural Organization, UNESCO.

speaking at the same time during SI is a key sub-skill of the interpreter, which needs to be acquired by the interpreter through exercises at the early stage of training.

1.2.1.2 Listening, speaking and monitoring

Both Gerver's (1976) and Moser's (1978) models of SI suggest that simultaneous interpreters divide their attention between listening, speaking and monitoring, and that monitoring is used to check translations both before and after delivery. To be more specific, according Gerver (1976), an interpreter will store SL input in memory, decode the ST and encode the TT, check the encoded message against the source message before production and may also check the articulated output against the ST again in order to spot errors and correct him or herself if possible. Monitoring before articulation is not easily detected, whereas monitoring after articulation can be assumed when interpreters self-correct.

Dejean le Féal (1990: 154-156) comments on the issue of divided attention in SI from the perspective of the evaluation of interpreters' output, arguing that simultaneous interpreters' own evaluation of their performance "is not very reliable" and that during SI, they cannot pay attention to some obvious problems in their output such as "improper wording, unorthodox syntax, constant use of the same terms, slips of the tongue that remained uncorrected, numerous "uh's" and "um's" " because they are unable to allocate enough attention to monitoring.

Kalina (1992: 254), in contrast, maintains that monitoring is one of the strategies acquired through training and adopted by the interpreter in SI to "check whether a hypothesis made in anticipation is confirmed by the speaker" and "whether the interpreter's own production is in line with his/her planning." But whether interpreters' self-monitoring is reliable or not, the undeniable fact is that monitoring goes with listening and speaking at the same time in SI, which requires interpreters to split attention among different components of the task.

1.2.2 EVS

1.2.2.1 Definition of EVS

The time at which a simultaneous interpreter starts to speak has a significant impact on SI. Interpreters have to handle the time between receiving the input and beginning to vocalise

the output as efficiently as possible in order to minimise the burden on their short-term and long-term memory and to deliver something meaningful rather than just a word-for-word translation. There are two possible extremes in SI. If interpreters follow the speaker too closely, chances are that they will catch almost every word the speaker has said but will be unable to adjust syntactic structures or to indicate polarity. The other situation is that interpreters wait for too long in order to fully capture the content of the speech, and then try their best to catch up with the speaker, who is meanwhile carrying on speaking. Therefore, dealing with the time gap between input speech and output speech is a matter of maintaining a balance, which has been a subject of scholarly debate for decades.

Varantola (1980: 60) calls "the deliberate time lag" applied by interpreters "decalage or ear-voice span" and mentions that ear-voice span can help interpreters to "regulate the output" by waiting for a meaningful unit and "checking the correctness" of output beforehand. Varantola (1980: 60) also points out that students who are fearful of losing information usually deliver word-for-word translation at the cost of losing "the sense".

According to Jones (1998: 78), the first question for simultaneous interpreters is "when to start speaking". He outlines two "basic principles" of how to handle this problem, including "speaking as soon as possible" and "expressing something meaningful".

Pöchhacker (2004: 117) refers to the time period between the input speech from the speaker and the start of output delivery by the interpreter as "time lag".

Although there are different ways to name or define the time period between the original speech and the interpreter's output, such as "decalage", "ear-voice span", "the time to start speaking" and "time lag", there is overall agreement that this time period is paramount in SI.

1.2.2.2 Measurement of EVS

Although there is general agreement about the definition of EVS as the period of time that elapses between the interpreter hearing the input and beginning to vocalise the output, it will still not be an easy task to measure EVS accurately. Two main ways have been proposed, one based on time (Paneth 1957, 1957/2002, Treisman 1965, Oléron and Nanpon 1965/2002) and the other based on syntactic units (Goldman-Eisler 1972, 1972/2002).

According to Gerver (1976: 169), Paneth's (1957, 1957/2002) Master's thesis is

"the first lengthy discussion and analysis of simultaneous interpretation". Based on observations[6] of student interpreters at a pilot experiment, Paneth (1957/2002: 32) concludes that the mean value of EVS "seems to be between 2 and 4 seconds, involving 15-21 words" though the actual EVS varies. Treisman (1965) and Oléron and Nanpon (1965/2002) were among the first wave of scholars who carried out empirical studies on SI, according to Gerver (1976: 169). Treisman's (1965) research focuses on the impact of redundancy and familiarity of the input on shadowing and interpreting. She finds that interpreting imposes a heavier decision load than shadowing, which leads to a relatively longer EVS, and that therefore, the EVS for interpreting is longer than that for shadowing. Oléron and Nanpon (1965/2002) find that the EVS can range from 2 to 10 seconds according to their analysis of the transcriptions of interpretations of five passages delivered at a slow input rate and those of four passages delivered at a fast input rate produced by three professional interpreters working between German and French, French and Spanish, and English and French. They (1965/2002: 48) stress that linguistic factors, word order[7] in particular, can have an impact on the length of EVS, and in fact, "when this order is different in the respective languages, the inevitable result is hesitations of varying degrees of obviousness"; but interpreters may not be able to wait for too long before articulating, because a long EVS can easily overload their short-term memory.

EVS can also be measured in terms of syntactic units, according to Goldman-Eisler (1972/2002). Her study was designed to determine the EVS of SI by inviting six professional interpreters with English, French and German as their working languages[8] to participate in an experiment in which nine translations in these three languages were produced by these interpreters. Goldman-Eisler (1972: 132) questions the possibility of using the word as a meaningful unit to measure chunks as she (ibid) argues that there is "no correlation between the mean number of elements and ear-voice span". She (1972/2002: 72) suggests that the minimum EVS should consist of a NP and a verb phrase rather than

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[6] The sample size is unclear.

[7] What is known as "word order" in linguistic typology is in fact the order in which units carrying particular grammatical functions are placed in clauses and phrases. A focus on these units does therefore not imply a focus on or advocacy of what is known as word-for-word translation [also see Chernov (2004) in Section 2.1.2].

[8] The six interpreters include three English-French French-English interpreters, one English-French French-English as well as English-German German-English interpreter, and two English-German German-English interpreters.

just a word, and stresses that the verb phrase is central during SI. Because the verb phrase in German often occurs towards the end of a sentence, interpreters will need to store information before articulation, and therefore the EVS in SI from German tends to be greater than that in SI from English and French. This shows that the syntactic nature of a language has an effect on the length of EVS, which further supports Oléron and Nanpon's (1965/2002: 48) findings that linguistic factors, word order in particular, can have an impact on the length of EVS and interpreters' short-term memory can be overloaded due to a long EVS (see also above).

1.2.2.3 Factors affecting EVS

Almost all the literature has shown that EVS is not fixed but varies due to a variety of reasons. Factors that have been argued to have potential effects on EVS include the quality of the input (Gerver 1976, De Groot 1997); individual differences (Oléron and Nanpon 1965/2002, Liu 2008); the rate of input (De Groot 1997, Gerver 2002) and most importantly, linguistic features (Oléron and Nanpon 1965/2002, Goldman-Eisler 1972, Gile 1997/2002).

De Groot (1997: 44) points out that one input factor influencing SI and EVS is the level of noise in the environment in which the interpreter is working. However, as also mentioned in Section 1.3.1.3, Gerver (1976: 175) reports that in his (1974a) experiment,

> though there were greater ear-voice spans for interpreting (about 5.7 words) than for shadowing (about 2 words), the ear-voice spans remained fairly constant in good and bad listening conditions. These results suggested that in order to maintain a constant ear voice span in difficult listening conditions, the simultaneous interpreters in this particular study were prepared to sacrifice accuracy by lowering their response criteria, that is, by accepting more errors without attempting to correct them.

Gerver (1976: 172-174) concludes that "the optimal input rate" for the interpreter to cope with is between "100 and 120 words per minute" and "the upper limit for acceptable performance" of the interpreter is around "150 to 200 words per minute", and both Gerver (1969/2002: 58) and De Groot (1997: 45) point out that the higher the input rate is, the

shorter the EVS will be, and Gerver (1969/2002: 58) adds that the shorter the EVS is, the greater increase in the degree to which interpreters lag behind the speaker in terms of content delivery.

Oléron and Nanpon (1965/2002: 47) summarise the "individual differences" that may affect EVS, including "how much is grasped, work habits, familiarity with the language and the desire to be faithful to the original". Oléron and Nanpon's point is, to some extent, confirmed by Liu (2008: 164). Based on an experiment on differences in performance between experts and novices, Liu (ibid) concludes that due to their ability to "resort to semantic-based processing" and their experience in segmenting the ST, experts are likely to "process larger chunks of input" which also means they are likely to have a longer EVS than novices.

Although there are various factors affecting EVS, it is widely believed that languages ought to be a major factor to consider when the issue of EVS is discussed as it could decide the segmentation of the input speech. According to Gile (1997/2002: 170), syntactic differences between SL and TL can "increase the memory effort's processing capacity requirements" as interpreters may have to wait before having enough input to re-express it in the TT. Oléron and Nanpon (1965/2002: 48) illustrate this factor with an example of German-French and German-English simultaneous interpreters. As in German, "the verb or particle" usually appears at the end of the sentence, interpreters who want to produce the natural word order of French or English on the basis of a German source sentence may need to wait for the verb. Goldman-Eisler (1972) also points out that "90-95%" of the "chunks of translation" that she analysed showed that "the EVS consisted of at least a complete predicative expression, implying at least an anticipated lack of lexical and phrase-syntactic compatibility across languages"; and due to the verb-last feature of German, Goldman-Eisler (ibid) finds significant differences in EVS in interpreting from German into English and interpreting from English into German.

To conclude, although EVS may have a mean value of 2 to 4 seconds in the SI of certain language pairs involving German, French, Spanish and English, it still varies between different language pairs and the EVS may also be different when it comes to Chinese-English SI.

32

1.2.3 SI and other language tasks

1.2.3.1 SI and monolingual activities

In SI, interpreters not only need to listen, speak and monitor their output as discussed above, they also need to transfer the input from one language to another, which makes SI even more challenging and demanding than monolingual activities such as shadowing (Treisman 1965, Gerver 1974a, b, Hyrinil, Tommola, and Alaja 1995, Rinnea, Tommolac, Laineb, Krause, Schmidt, Kaasinena, Sipilä and Sunnaric 2000, Christoffels and De Groot 2004), paraphrasing (Anderson 1994, Christoffels and De Groot 2004) and narrative production (Hou 2005).

The major difference between shadowing and SI is that shadowers need to listen and speak at the same time while simultaneous interpreters need to listen, speak and transfer from one language to another at the same time, which seems to make SI more complex and more demanding than shadowing.

Treisman (1965) and Gerver (1974a) compared shadowing and SI and found that "interpreting proved more difficult than shadowing" (Treisman 1965: 369) and EVS in shadowing was shorter than in interpreting because interpreters often needed to wait for a meaningful unit before articulation. Treisman (1965) investigated the impact of redundancy and of familiarity with the input on shadowing and interpreting and found that "translating is more difficult than shadowing not only because of decreased familiarity of either input or output, but also because of the increased decision load imposed by the more complex transformation between input and output" (Treisman 1965: 369). Gerver's (1974a) experiment on the impact of noise on SI also found that participants made more omissions and more errors in interpreting than in shadowing in both moderately noisy environment and highly noisy environment.

Hyrinil, Tommola, and Alaja's (1995) investigation into the pupillary response as an indicator of processing load in SI showed that the pupillary response varied according to the level of difficulty of the task, and that the pupillary response varied across three tasks, namely, listening, shadowing and SI. Pupil dilation increased significantly from the easiest task, listening, to the medium one, shadowing, and to the most difficult one, SI.

Rinne, Tommola, Laineb, Krause, Schmidt, Kaasinena, Sipilä and Sunnari's experiment (2000) adopted positron emission tomography (PET)[9] as a tool to investigate the difference between professional interpreters' brain activity when shadowing and when engaged in SI. They (2000: 85) find that "SI activates predominantly left-hemispheric structures (particularly the left dorsolateral frontal cortex) previously related to lexical search, semantic processing and verbal working memory".

All of these studies show that SI is more complex, more demanding and more sensitive to changes in variables such as information density and the level of noise in the environment than shadowing.

According to Christoffels and De Groot (2004), paraphrasing decodes the meaning of the input and expresses it in another way in the same language. It is regarded as the monolingual version of SI by some scholars (Anderson 1994, Green, Vaid, Schweda-Nicholson, White and Steiner 1994). There is little empirical research into the comparison between paraphrasing and SI, but Anderson (1994) and Christoffels and De Groot (2004) carried out a comparison of three tasks, namely shadowing, paraphrasing and SI to identify any "language-switch effect" (Anderson 1994: 116) and to establish whether or not "the act of crossing language borders, separate from the interpreter's other tasks, requires any processing time" or "any additional processing capacity" (Anderson 1994: 112)**.**

Anderson (1994) reported the results of an SI experiment in which 12 subjects were instructed to do SI from French to English, paraphrase in English and shadow in French and English respectively. Paraphrasing output was of significantly greater intelligibility than interpreting output; however, no significant differences in the amount of information loss and in the length of EVS between paraphrasing and interpreting were found. Shadowing produced the most accurate performance and the shortest EVS among these three task.

According to Christoffels and De Groot (2004: 228), shadowing, paraphrasing and SI are all characterised by the simultaneity of comprehension and production of a speech. However, in contrast to paraphrasing and SI, shadowing only involves the analysis of input

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[9] According to the glossary presented by US No Drugs, positron emission tomography (PET) is a technique for measuring brain function in living human subjects by detecting the location and concentration of tiny amounts of radioactive chemicals (http://www.usnodrugs.com/glossary.htm).

up to the semantic level (Marslen-Wilson 1973) and the literal repetition of what is heard immediately in the same language and there is no need to process the input for meaning. In contrast to SI, paraphrasing involves decoding the source input and reproducing it in the same language by other means such as by changing the word order or using words with similar meanings, which clearly requires semantic analysis. SI additionally involves the activation of and transfer between two languages. Based on such a comparison, SI seems to be the most complex process. In order to test this hypothesis, Christoffels and De Groot (2004) carried out an experiment in which 24 Dutch speakers with English as their dominant foreign language were instructed to finish three tasks, namely, shadowing 20 sentences in Dutch, paraphrasing 20 sentences in Dutch, and interpreting 20 English sentences into Dutch simultaneously, in two conditions. In the first, "simultaneous" condition, participants carried out each task as soon as the input was produced, whereas in the second, "delayed" condition, they started articulation after one complete sentence was heard and then continued to listen to the next sentence when they finished their articulation of the previous sentence and the experimenter administered the start of the next sentence. After each task in each condition, there was a recall test related to the task. The order of the four tasks and the order of the two conditions were counterbalanced to avoid any ordering effects. The 24 subjects were tested individually and their output was recorded synchronously on different tracks and transcribed for analysis. The analysis focused on output performance including a qualitative measurement of how well the meaning of the source message was preserved and a quantitative measurement of (i) the percentage of words of the input that was presented in the output, (ii) the EVS for the different conditions and (iii) the results of the recall tests. Participants obtained higher scores for the recall tests after each task in the delayed condition than in the simultaneous condition, which means that speech production may interfere with memory in the simultaneous mode. Interpreting performance was worse than shadowing, which is likely to be due to the transfer of the input. EVS was longer for interpreting than for shadowing, which indicates that unlike shadowers, interpreters require a meaningful unit before articulation; however, the differences between interpreting and paraphrasing were not significant, which supports the perception that paraphrasing is the monolingual version of SI. The explanation of the insignificant differences is that changes in grammatical structures in paraphrasing would

35

require more processing capacity than searching for grammatical equivalents in the TL in interpreting, although structural changes often happened in interpreting.

Apart from shadowing and paraphrasing, narrative production has also been compared with SI in terms of complexity and output performance. Hou's (2005) experiment was designed to compare grammatical performance on three tasks, namely SI (from Chinese into English), CI (from Chinese into English) and free narrative production in English. Four second-year students on a two-year postgraduate interpreting program in China were asked to complete the above three tasks. Free narrative production was superior to SI in terms of the grammar of the output and students were more likely to follow the grammatical structures of the SL, Chinese, in SI than in narrative production.

All the studies on the comparison between monolingual activities such as shadowing, paraphrasing and narrative production and SI have clearly illustrated that the simultaneity between speaking and listening and the transfer of input from one language to another distinguishes SI as a highly complex and challenging task. Also, grammatical or structural changes in the process of completing the task can pose great challenges to both intra-language interpreting such as paraphrasing and inter-language interpreting such as SI.

1.2.3.2 SI and translation

As Harris (1981: 154) states, "[w]e had better admit at the outset that translating and interpreting have much in common. When all is said and done, they are but 2 modes of what is essentially one operation: A process by which a spoken or written utterance takes place in one language which is intended and presumed to convey the same meaning as a previously existing utterance in another language". But having admitted that, SI and written translation still differ significantly with respect to simultaneity (Lonsdale 1996, De Groot 1997), comprehension (Harris 1981, Padilla and Martin 1992) and production (Herbert 1952, Nida 1964, Viezzi 1993a).

1.2.3.2.1 Simultaneity

According to Lonsdale (1996: 44), translators are "separated from the transmitter and the receiver by both time and space", whereas simultaneous interpreters play a role "in the same communicative context both physically and temporally". To be more specific, according to De Groot (1997: 27), simultaneous interpreters need to split attention between

the comprehension of the input from the speaker, the transfer of the SL input into the TL output, and the delivery of the TL output to the audience.

1.2.3.2.2 Comprehension

According to Harris (1981: 153-161), the difference between translation and interpreting is not just between written form and spoken form but starts with comprehension. To translate is, first and foremost, to comprehend a static text, during which translators can manage their own time, pace and any relevant resources. Unlike translation, to interpret simultaneously is to comprehend a dynamic input with unpredictable segments. In other words, as Padilla and Martin (1992: 197) state, simultaneous interpreters deal with the input segment by segment and do not have the advantage of obtaining the whole picture as translators do.

1.2.3.2.3 Output

According to Herbert (1952: 67), interpretation is usually shorter than the original speech. And according to Nida (1964: 120), written translation tends to be longer than the original text. The difference is easy to understand as interpreters often work with limited time, and sacrifice of details of the ST is sometimes inevitable. Based on a small-scale corpus study in which a published translation of an official speech delivered at the European Parliament and the transcription of the SI produced by a freelance interpreter from English into Italian were compared, Viezzi (1993a: 97-99) draws the following preliminary conclusions: a) "SI is shorter than WT [written translation] and follows SLT [source language text] very closely. SI is shorter as a result of a deliberate strategy but it is also shorter because it follows SLT so closely". The explanation for these results is that in order to deal with time constraints, simultaneous interpreters resort to the shortest possible solutions and also follow the structures in the ST closely while, given that more time is available, translators may expand on the ST when necessary; and b) "SI, then, is not as elegant as WT in terms of register and style". The explanation for this is also related to time constraints. Simultaneous interpreters do not have time to search for the most elegant words, expressions or structures as translators do.

1.2.3.3 SI and CI

According to Jones (2002: 5), conference interpreting includes two modes, CI and SI.

Gillies (2005: 3) states that during CI, the interpreter needs to listen to a speech of a length usually ranging from one minute to five minutes, comprehend what the speaker has said, memorise the speech and take notes, and then reproduce the same message in the TL. As mentioned in Section 1.2.3.2.1, SI requires the interpreter to listen and speak at the same time and to split attention between the input from the speaker and the output to the audience (De Groot 1997: 27). As in the case of the differences between translation and SI, the differences between CI and SI have been discussed by a number of scholars in terms of three main aspects: simultaneity (Gerver 1976, Lambert 1988, Coughlin 1989, Kurz 1992, Gile 1995a, Jones 2002), comprehension (Kalina 1992, Jones 2002) and output (Dawrant 1996, Gile 2001, Huo 2005).

1.2.3.3.1 Simultaneity

The first main difference between CI and SI concerns the sequence of the input from the speaker to the interpreter and the output from the interpreter to the audience. In CI, according to Gile's (1995a: 178-179) Effort Model, there are two successive phases, namely, Phase 1, the listening phase and Phase 2, the reformulation phase. The input from the speaker reaches the interpreter in Phase 1 and the output from the interpreter reaches the audience in Phase 2. SI also has these two phases, however, they almost go hand in hand with the speaker's input reaching the interpreter seconds earlier than the interpreter's output reaches the audience. In other words, Phase 1 and Phase 2, and listening and speaking occur simultaneously. According to Jones (2002: 66), this simultaneity can cause "acoustic difficulty[10]" and the interpreter has to be trained to get used to this unusual activity of listening and speaking at the same time. According to Gerver (1976: 178), CI is often regarded as superior to SI with regard to accuracy and style, but it must be born in mind that SI is much more stressful to perform than CI because interpreters have to listen and speak simultaneously.

1.2.3.3.2 Comprehension

Because consecutive interpreters first listen to a segment of speech, comprehend it and then re-express it in another language, they generally know what the whole segment is about, the

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[10] Acoustic difficulty refers to listening difficulty which is caused by the interference of simultaneous speaking, in other words, by the interference of the interpreter's own voice.

direction of discourse, the grammatical mood of the segment (interrogative, declarative, imperative, or exclamative), and its polarity (affirmative or negative). However, in SI, interpreters have to start encoding the ST into the TL after hearing a few words rather than a whole proposition, so they often have to anticipate what is to come, or retain the information so far received until they have enough information about the grammatical categories just mentioned to enable them to formulate the TT. Therefore, as Kalina (1992: 253) puts it:

> The advice frequently offered to student interpreters to forget about the words and concentrate on the meaning is well-meant and may, to some extent, do for consecutive, but it definitely does not suffice for SI. For in simultaneous, it is, among other factors, the incoming words on which the interpreter bases his assumptions, monitors them, decides on his production and checks it all over again.

The example below illustrates this point from the perspective of SI from Chinese into English. The example is from the experimental ST; the EG and the TT of the example are my own.

(1.1)   ST: *把帮助非洲发展和脱贫**作为主攻方向***

EG: BA help Africa develop and take off poverty **be main attack direction**

TT: Helping Africa develop and eradicate poverty **will be regarded as the top priority.**

Example (1.1) shows a Chinese '*BA*' construction which is unique to the language. '*BA*' is a type of Chinese coverb which functions as a preposition. According to Li and Thompson (1981: 360), "a coverb and its noun form a phrase that modifies the verb of the sentence. A coverb phrase, therefore, must always occur in a sentence with a verb". In other words, a coverb is not the real verb of the construction but functions as a subordinate part to the main verb (see Section 3.5 on Chinese coverbs). In SI, interpreters first hear a Chinese coverb followed by its own object and then the main verb. The coverb phrase (CP) as underlined in the above example includes a coverb '*BA*' and its object *帮助非洲发展和脱贫 (*help Africa develop and take off poverty). The verb phrase in bold font consists of

the main verb 作为 (be) and its object 主攻方向 (main attack direction). However, in English, the main verb usually follows the subject closely and precedes the object in a declarative sentence. Therefore, in SI of CPs such as the '*BA*' construction in the example, interpreters may have to wait for the main verb before producing the output, which will put pressure on their short-term memory. Simultaneous interpreters often cannot wait for the whole proposition before encoding into TL, and Jones (2002: 66) adds that unclearly-pronounced or unknown words spoken by the speaker, which may be comprehended by the interpreter after hearing the whole segment or the whole speech in CI can also present serious difficulties in SI. In SI, the interpreter neither knows the direction of the discourse "at macro level", nor of each proposition "at micro level".

1.2.3.3.3   <u>Output</u>

As discussed above, consecutive interpreters are able to listen to and comprehend complete messages before reproducing them in the TL, which is why it is generally the case that CI is superior to SI in terms of accuracy (Longley 1968, Gerver 1976, Weber 1989, Dawrant 1996, Hou 2005).

In order to compare the accuracy of simultaneous and consecutive renderings, Gile (2001) carried out an experiment in which twenty professional interpreters with French and English as their working languages and interpreting experience of over five years were divided into two groups of ten. One group was asked to do CI of a speech lasting 1 minute and 40 seconds, and the other was asked to do SI of the same speech. Their outputs were recorded and transcribed and the protocols were analysed with a focus on the areas which the Effort Model predicts as regular features of SI, such as false starts, incomplete sentences, unimportant modifiers, elements without direct correspondence in the TL, and digressions. There were fewer omissions and errors in the CIs of incomplete sentences than in the SIs, there were more omissions and errors in the CIs of digressions and unimportant modifiers than in the SIs, and SI was more accurate than CI in terms of overall fidelity. However, Gile (2001) also points out that the assessment was based on transcripts rather than a sound track, on small segments rather than the whole speech and on how the interpreters dealt with "local information discrepancies" which might not be regarded as problems "in the middle of larger segments".

Another experiment with the purpose of comparing SI output with CI output was

designed by Hou's (2005). To be specific, his experiment aimed to compare grammatical accuracy in SI from Chinese into English, in CI from Chinese into English and in free narrative in English. In his experiment, four second-year students following a two-year post-graduate interpreting program in China were asked to finish three tasks: (i) interpreting a five-minute Chinese speech into English consecutively, (ii) interpreting a five-minute Chinese speech into English simultaneously and (iii) producing a five-minute narrative in English. He found that CI and free narrative are superior to SI in terms of the grammar of the output, and that in the SI task, the interpreters were more likely than they were in the CI task and in the narrative task to copy the syntactic structures of the SL. For topic-prominent Chinese sentences (see Section 3.7 on Chinese TCs), this resulted in ungrammatical TL texts, because topic-prominent sentences do not exist in English. Similarly, Dawrant (1996) finds that word-order differences are likely to cause more errors and omissions in interpreting from Chinese into English in simultaneous mode than in consecutive mode. Both Hou (2005) and Dawrant (1996), thus, indicate that grammatical differences pose a greater challenge in SI than in CI.

1.3 Factors

1.3.1 Input factors

1.3.1.1 Presentation rate

The impact of presentation rate on SI has been widely studied. According to Gerver (1969), Seleskovitch (1978a) and Lederer (1981), for interpretation to be effective, the optimal speech rate for English speeches is between 100 and 120 words per minute (wpm) and according to Li (2010), the optimal speech rate for Chinese speeches is between 150 and 180 syllables/characters per minute, and empirical evidence has shown that fast input rate has adverse effects on SI (Treisman 1965, Gerver 1969, 1971, 1975, Kirchhoff 1976/2002, Seleskovitch 1978a, Lederer 1981, Galli 1990, Meuleman and Van Besien 2009, Li 2010). Meanwhile, Kirchhoff (1976/2002: 113) also claims that an extremely low input rate also negatively affect interpreting performance. Interestingly, Shlesinger (2003) and Vančura's (2013) even favour high presentation rate in SI (see below).

Gerver (1969, 1971, and 1975) and Treisman (1965) found that presentation rate

has a significant impact on SI in comparison to shadowing. In Gerver's experiment (1969), five interpreters were asked to simultaneously interpret from French into English and another five to shadow in French a recorded passage which was delivered at the increasing rates of 95, 112, 120, 142 and 160 wpm. Interpreters lagged further behind or displayed a longer EVS and produced more errors and more omissions than shadowers as the presentation rate increased. During interpreting, subjects tended to pause more and deliver shorter chunks in order to maintain a steady pace, while during shadowing, subjects tended to speak faster, deliver longer chunks, and to pause only briefly between deliveries. The different performance of interpreters and shadowers showed that the correlation between interpreting performance and input rates should be attributed to the impact of presentation rate on the more complex cognitive process of SI rather than on perception alone. Treisman's experiment (1965) on the effects of redundancy and familiarity of STs on shadowing and interpreting also shows that information rate has a significant impact on accuracy and efficiency of interpreting and shadowing and the impact on interpreting is even more significant than on shadowing, which is attributed to the "increased decision load between input and output required in translation".

Based on error analysis of SIs, Galli (1990) also examined the effects of input rate on SI between English and Italian on the interpretations produced by three professional interpreters at increasing rates from 106 to 156 wpm. High delivery speed tended to cause more omissions and mistakes.

Given the adverse effects of fast input rate on SI, Li (2010) proposes four high speed-related coping strategies. First, the interpreter can request that the speaker slow down by pressing the "slow down" button on the interpreting control panel, although this may not be very effective as speakers often get carried away; second, the interpreter can speed up, although this may result in incoherent interpretation or speech that is too fast for the audience; third, the interpreter can summarise, although this may "result in omissions or truncated logic" and is also energy-consuming; finally, the interpreter can terminate the service, which is regarded as a last resort and not recommended. In terms of coping strategies, Meuleman and Van Besien (2009) agree that high presentation rate can pose challenges to simultaneous interpreters. Their experiment was intended to establish how simultaneous interpreters cope with extreme speech conditions including complex sentence

structures and fast input rate. 16 professional interpreters were asked to interpret an impromptu passage with complex sentence structures and a reading delivered at a fast rate. The results showed that for complex sentence structures, most interpreters tended to resort to segmentation (see Section 2.3.3.2) and just a few produced acceptable interpretations by tailing[11] the speaker; for high presentation rate, most interpreters tended to adopt the tailing strategy and just a few tended to apply segmentation as a strategy to cope with the high speed of delivery. Meuleman and Van Besien conclude that both syntactic complexity and high input rate have an impact on interpreters' choice of strategies.

Kirchhoff (1976/2002: 113) mentions that "[t]he presentation rate, which the interpreter cannot influence, has an impact on all operations of the process: all phrases are under time pressure. When language structures diverge, a high presentation rate is particularly stressful", but at the same time, Kirchhoff (ibid) also claims that "[a]n extremely low presentation rate, on the other hand, also has a negative impact if it forces the interpreter to carry out complex storage operations that make problem-solving more difficult than at an average rate of presentation."

In contrast to the arguments mentioned above for the negative impact of high presentation rate on SI, Shlesinger's (2003) experiment suggests that a high presentation rate may enhance SI. In order to test the effects of presentation rate on working memory in SI, Shlesinger (2003) asked sixteen professional interpreters to interpret the same six STs at two separate sessions, with a three-week interval

> to minimize the chance of their remembering their own solutions to particular segments: texts 1, 3, 5 were delivered (on tape) at 120 wpm and texts 2, 4, 6 at 140 wpm at one of the sessions (with short breaks between texts); texts 1, 3, 5 were delivered (on tape) at 140 wpm and texts 2, 4, 6 at 120 wpm at the other session. The order of presentation was counterbalanced across subjects (Shlesinger 2003: 33).

Interestingly, the interpreting performance was consistently but not significantly better at the higher input rate. Though Shlesinger's (2003) experiment aims to examine the

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[11] Tailing means following the speaker closely.

impact of input rate on SI, the results also seem to reveal that repositioning multiple attributive premodifiers in a SL NP to be postmodifiers in a TL NP, in other words, restructuring the SL to follow the grammatical conventions of the TT can saturate a professional interpreter's short-term memory, which causes errors such as omissions in the interpretation, and the impact of restructuring on SI is even greater when the input is delivered at the lower input rate. Shlesinger (2003: 45) explains that the slower presentation rate damages the string[12] integrity of the TT and causes a massive loss of information such as "the omission of most of the items in the strings" because the possibility of ST decay increases due to the increased strain on interpreter's working memory. To complement Shlesinger's (2003) analysis from a professional angle, Vančura's (2013) corpus analysis focuses on seventy-six Croatian (mother tongue) SIs produced by 19 interpreting trainees of thirty-eight English STs delivered at average rates of 142.79 wpm and 154.28 wpm respectively. According to Vančura (2013: 87), "[d]iscrepancy in number between STs and TTs is a result of more than one trainee interpreter interpreting the same ST, but in a different group and at a different time[13]". The analysis was carried out at both intra-textual (or delivery) level and inter-textual (or content) level and the results also showed that the slower the presentation rate was, the lower quality the interpretation was. Both Shelsinger's (2003) experiment involving interpreting experts and Vančura's (2013) corpus analysis of interpreting novices have shown that a lower input rate entails a risk of ST decay due to the strain on working memory, and Vančura (2013: 94-95) also concludes that though both studies are in contrast with other studies, "it is clear that the success of rendition of the TT is not dependent on the speech rate, as it is on various factors" such as "information density", "preparation and familiarity with the topic", and grammatical differences between SL and TL (see Chapter 2), "and the student's personal skill to deal with a faster ST rendition."

1.3.1.2 Accent

According to Gile (2009: 171), extra processing capacity is required for comprehension of

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[12] A string refers to a combination of "four attributive modifiers (adjectives) followed by a head (a noun)", as in "a stupid, biased, shocking, public account" (Shlesinger 2003: 42).

[13] However, Vančura (2013) does not clearly mention the time lag between the first and second time of interpreting or any approach to minimise the repetition effects.

speech delivered with a strong foreign accent; therefore, a strong non-native accent could pose challenges for the simultaneous interpreter.

Sabatini (2000) reports the findings of an experiment involving ten final year Italian interpreting students who were asked to undertake three tasks including listening comprehension, shadowing, and SI of two English speeches delivered with Indian and American accents. Each speech was roughly 11 minutes long. Subjects listened for 3 minutes and then finished a listening comprehension test; then they shadowed for 2 minutes; and finally they simultaneously interpreted for the last 6 minutes. The results clearly showed that listening comprehension, which required least processing capacity among the three tasks, was performed best; however, the difference between shadowing and SI was not significant, and Sabatini (2000) attributed the latter finding to the subjects' lack of practice in shadowing, and "[m]any departures from the shadowed text, which are counted as errors and lower the score, are caused by the tendency to correct or reformulate during shadowing." However, Sabatini (2000) also concludes that her

[e]valuation of the problem areas suggests that 'atypical' speech features (e.g., pronunciation, culture-bound references) are indeed a source of difficulty, leading to omissions or misinterpretations. In this respect, 'non-standard' speech seems to be a potential problem trigger.

Kurz's (2008) also carried out an experiment in which ten students were asked to simultaneously interpret a recorded English ST into German, half of which was delivered by a native speaker in Received Pronunciation (RP) and the other half was delivered by an non-native speaker with a strong foreign accent[14]. The interpretations of the speaker with a strong foreign accent displayed higher loss of information than those of the speaker who used RP. Kurz (2008) attributes the results to lesser availability of processing capacity for comprehending the ST and producing the TT as a consequence of the need to allocate more processing capacity to ST comprehension. Again, this supports the view of SI as a highly complex cognitive operation.

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[14] According to Kurz (2008: 185), "[u]nfortunately, we have no information regarding the speaker's origin/mother tongue" and "our impression was that the speaker's mother tongue might be Arabic, but there is no confirmation of that. His presentation suffers from mispronunciations as well as major prosodic flaws (rhythm, intonation)."

1.3.1.3 Noise

A noisy environment also has a significantly adverse impact on SI. In Gerver's experiment (1974a), twelve professional interpreters were asked to shadow and simultaneously interpret French prose into English in a noise-free environment, a moderately noisy environment and a highly noisy environment. Noise significantly correlated with a decrease in the proportions of texts correctly shadowed and interpreted and noisy environments including both the moderately noisy environment and the highly noisy environment caused more omissions and more errors in interpreting than in shadowing. The performance differences between shadowing and interpreting in noisy environments established that interpreters' errors should be not only attributed to misperception of the ST under noisy conditions. Gerver (1974a) also found that interpreters were less able to detect and correct their errors under noisy conditions and concluded that it was highly likely that in noisy environments when more processing capacity was required for perceiving the source message, the processing capacity for interpreting and monitoring would decrease accordingly.

1.3.2 Individual factors

Apart from input factors such as presentation rate, accent and noise, personal factors also seem to have significant effects on SI. According to Oléron and Nanpon (1965/2002) and Liu (2008), the output of SI also depends on factors pertaining to the interpreter, including "how much is grasped, work habits, familiarity with the language and the desire to be faithful to the original". Ear preference[15] and age of bilinguality[16] also have significant effects on SI, according to Lambert (1989a, 1993) and Hamers (2002).

In Lambert's (1989a, 1993) experiment on the effect of ear preference on information reception in SI, 18 right-handed subjects, among whom 8 spoke French as their native or dominate language and 10 spoke English as their native language, were asked to simultaneously interpret one of two speeches, one in English and the other in French, into their mother tongue. Each 12 minute speech was divided into four equal segments. The first

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[15] Simultaneous interpreters may prefer to use one ear (either right or left) or both ears to receive the input.

[16] Age of bilinguality refers to the age of bilingual acquisition, for instance, there are "infant/childhood bilinguals" and "adolescent bilinguals", as mentioned in Hamers (2002: 593).

segment was used for warm-up and the subjects were asked by the researcher to simultaneously interpret the following three segments by using (a) both ears, (b) left ear only and (c) right ear only respectively. Error analysis was applied and errors were categorised into three types, omissions, additions and meaning errors. Interpreting performance was the best when right-handed interpreters listened to the speech through their left ears and monitored and polished their interpretations using their right ears; interpreters also tended to perform better using either left or right ears than using both.

Hamers (2002) reinterpreted Lambert's experimental data (1993) and adopted Lemieus's propositional approach[17] (1995) to examine the impact of experience, age and age of bilinguality on simultaneous interpreters' hemispheric preferences. His results indicate that hemispheric preference is much more personal than Hamers expected and that no matter which ear the interpreters used, interpreters with more years of experience interpreted better.

1.4   Conclusion

In conclusion, in order to show that SI is a highly complex, demanding, and cognitive task, this chapter has focused on the processes, the features of SI, and the key factors that can have an effect on interpreting performance. After a detailed description of process and cognitive models of SI, the Effort Model of SI was identified as the ideal model for the current research. Next, the chapter outlined the key features of SI: simultaneity and EVS, and its striking differences from other language tasks. The last part of the chapter was devoted to the main factors that have a great influence on SI performance.

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[17] According to Hamers (2002: 589), "Lemieux developed a propositional analysis enabling her to identify the propositions of the output language that were identical or similar to those of the source language".

Chapter 2 Grammatical Differences and SI

Overview: Chapter 2 provides a review of literature on the effect of grammatical differences on SI, discussing previous research which argues for and against the impact of structural dissimilarities on SI first. It then moves onto the literature around the impact on SI of grammatical differences between specific language pairs, English and Chinese in particular, followed by the literature on SI strategies, language-related strategies in particular, and previous research into expert-novice differences. The chapter highlights that the underlying difference between previous research into English-Chinese SI and current research is that a qualitative and quantitative contrastive error analysis will be adopted in this study to examine interpreting experts and novices' SIs of both similar and dissimilar structures.

2.1 General background

Apart from the factors mentioned in Chapter 1, the effect of grammatical differences between the two languages involved on SI has also been a controversial issue, giving rise to debates among scholars in the interpreting field. According to Pöchhacker (2004: 34-35), three major schools of interpreting laid the academic foundations for research, teaching and training, including the 'Leipzig School' represented by Kade, Kirchhoff and Salevsky, the 'Soviet School' championed by Chernov, and the 'Paris School' led by Seleskovitch, García-Landa and Lederer. The Leipzig School and the Soviet School worked closely with each other, the former focusing on the role of linguistics in interpreting studies and the latter focusing on the role of prediction or anticipation in SI. The Paris School holds an opposing view to the 'Leipzig School' and focuses on sense or meaning rather than structure or form.

2.1.1 Arguments against the impact of linguistic structures on SI

A small number of representatives of the Paris School such as Seleskovich (1962, 1978b), García-Landa (1981) and Lederer (1981) champion the interpretive theory of translation known as "*théorie du sens*" (theory of sense). According to Seleskovitch (1978b: 336),

interpreting is "a triangular process"[18] during which the interpreter is not "transcoding" linguistic items except for "fixed correspondences like proper names, numbers and specialized terms" but is comprehending and conveying "sense". According to Seleskovitch (1978b: 336), "sense" is "made up of the linguistic meaning aroused by speech sounds and of a cognitive addition to it". It is also "nonverbal", which means that interpreting is a process of deverbalizing and reverbalising meaning rather than transcoding linguistic forms. Therefore, it is believed by the Paris School that simultaneous interpreters should convey the meaning or *sens* rather than interpreting words, and as long as interpreters can master comprehension and production simultaneously well, SI would be achievable without the help of language-related strategies (see Section 2.3.3 for language-related strategies).

However, even if this view of language processing were accepted, as mentioned in the previous section, SI, unlike tasks such as translation and CI, would be affected by differences between the two languages involved in the sequencing of sense groups because of the linear development of STs in SI and the need to interpret while the speaker is still speaking. The interpreter would often need to retain the sense of speech segments already heard while not knowing which segments were still to come, and would have limited time to formulate the target speech to sound natural to the audience.

2.1.2   Arguments for the impact of linguistic structures on SI

There are far more scholars who argue that grammatical differences between two languages have a significant impact on SI (Goldman-Eisler 1972, Kirchhoff 1976/2002, Wilss 1978, Riccardi 1996, Gile 1997/2002, Jörg 1997, Setton 1999, Van Besien 1999, Zanetti 1999, Lee 2002, Jones 2002, Kurz and Färber 2003, Al-Rubai'I 2004, Chernov 2004, Seeber 2011, Seeber and Kerzel 2012) than there are scholars who argue that this impact is insignificant (see Section 2.1.1).

Chernov (2004: 145), the key figure of the Soviet School, points out that word order problems in SI are quite different from those in written translation. In the written form, translators are able to make "radical changes in the sequence of sense groups" while those changes "are in most cases impossible in SI due to the linear development of the SL

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[18] The triangular process involves the input utterances from the speaker, the meaning obtained by the interpreter and the output utterances from the interpreter to the audience (Pöchhacker 1992: 212).

discourse over time and constraints on the capacity of the interpreter's working memory, which can only hold a limited number of elements." He (2004: 145, italics in original) especially stresses that "the problem for SI lies rather in the need to maintain, as far as possible, the sequences of *sense groups* (not the word order) of the original". From Chernov's point of view, both translation and SI should convey meaning as suggested by the 'Paris School', however, the sequence of sense groups in SI is influenced by word order differences due to the linear delivery of the input, time limits, and constraints on interpreters. He (2004: 163) also suggests that "resorting to syntactic restructuring", such as changes between active and passive voice, and verb conversion "while preserving the communicative word order (theme+rheme) and the functional perspective of the utterance" could solve some of the problems caused by word order differences and make the syntax of the interpretation "as flexible as possible".

In contrast to the triangular process model of *théorie du sens* championed by the Paris School, Kirchhoff (1976/2002), as one of the representatives of the Leipzig School, proposes the multi-phase model which touches upon issues related to linguistic surface structures in SI, syntactic dissimilarities between SLs and TLs in particular, and focuses on psycholinguistic processing difficulties. Kirchhoff (1976/2002: 118) states that "Multiple-task performance becomes a problem if task completion requires cognitive decisions which, in sum, reach or even exceed the individual's processing capacity limit."

Also, according to Kirchhoff (1976/2002: 113),

[t]he degree of correspondence in a language pair is a decisive variable. If the syntactic structures of the two languages are similar, the interpreter is usually not required to replan syntax in the TL and can work without a high probability risk. The cognitive load in simultaneous interpreting between structurally similar languages is lower than that of a monolingual paraphrasing task, despite the need for recoding. In simultaneous interpreting between structurally divergent languages, the interpreter will need to process larger segments. Proceeding with TL production before syntactic disambiguation involves a high probability risk. If divergent structures coincide with segments carrying a high subjective information

50

value per unit of time, the interpreter's processing capacity may be overloaded, and information loss may occur.

Also, as mentioned in Chapter 1, presentation rate has an impact on SI performance, and according to Kirchhoff (ibid), differences between the structures of two languages involved in the task can exacerbate the impact of high presentation rate and also that of extremely low presentation rate which requires more processing capacity for storing information in memory, and in turn, "make[s] problem-solving more difficult than at an average rate of presentation" (also see Section 1.3.1.1).

Like Kirchhoff (1976/2002), Gile (1995a) also focuses on processing capacity and processing difficulties in the simultaneous mode. According to Gile (1995a: 169-170), for SI to proceed smoothly, a delicate balance must be maintained between the processing capacity requirements of four Efforts, namely, the Listening and Analysis Effort (L), the Short-term Memory Effort (M), the Speech Production Effort (P) and the Coordination Effort (C) (see Section 1.1.3), and

saturation may occur through an increase in processing capacity requirements in the Short-term Memory Effort when the source language and target language are syntactically very different, and force the interpreter to store a large amount of information for some time before being able to reformulate it in the target language (Gile 1995a: 174).

To sum up, as previously mentioned by representatives of the 'Paris School', both written translation and SI shall convey the meaning of the source message rather than focusing on the surface structures of the source language, which is an undeniable truth. However, in SI, sense groups or translation units that interpreters have access to on the spot are subject to the influence of word order differences due to the linear development of the ST and the time constraints of the task. When grammatical structures of two languages involved are identical, simultaneous interpreters may be able to reproduce the obtained translation units of the ST in another language immediately, however, when it comes to divergent structures, interpreters may have to wait and restructure two or more translation

51

units to make sure the TT is grammatically acceptable to the target audience, or to segment and interpret different translation units separately, or to anticipate the coming translation unit in order to release the pressure on their short-term memory. In other words, it is very likely that SI is meaning-based within each translation unit while is form-related between translation units.

2.2 Language specificity

According to Chernov (2004: 135), when it comes to the impact of grammatical differences on SI, "we cannot fully abstract ourselves from specific language pairs". Therefore, this section will focus on the literature around the impact on SI of grammatical differences between specific language pairs.

2.2.1 Language pairs in SI research

The impact of German grammatical structures on SI between it and languages such as English, French, Greek, Italian and Japanese has been investigated by a number of scholars (Goldman-Eisler 1972/2002, Ilg 1978, Wilss 1978, Liontou 1996, Riccardi 1996, Gile 1997a, Jörg 1997, Setton 1999, Van Besien 1999, Kurz and Färber 2003, Seeber 2011, Seeber and Kerzel 2012), and the effects of grammatical differences between other language pairs such as English-Arabic (Al-Rubai'I 2004), English-Japanese (Fukuii and Asano 1961, Kunihiro, Nishiyama and Kanayama 1969, Gile 1992a, 1995a, 1997a), English-Korean (Lee 2002), English-Italian (Zanetti 1999), and English-Polish (Bartłomiejczyk 2006) have also been discussed widely.

Empirical studies on SI between the language pairs mentioned above have tended to focus on issues such as cognitive load (Seeber and Kerzel 2012), error analysis (Al-Rubai'I 2004), segmentation and EVS (Goldman-Eisler 1972/2002, Lee 2002) and strategies adopted by interpreters (Gile 1997a, Van Besien 1999, Zanetti 1999, Bartłomiejczyk 2006).

Seeber and Kerzel (2012) point out that both German and English have verb initial structures but German also has verb final structures which do not exist in English. Their study (2012) involving ten AIIC[19] conference interpreters with English as their A

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[19] AIIC is the International Association of Conference Interpreters (www.aiic.net).

language[20] and German as their C language[21] aimed to identify the correlation between syntactically asymmetrical language structures and cognitive load during SI from German into English. According to Seeber and Kerzel (2012: 229), the "task-evoked pupillary responses" were used to "measure local cognitive load during simultaneous interpreting between syntactically symmetrical and asymmetrical structures". The experiment identified "larger pupil dilation with verb-final than with verb-initial constructions, suggesting higher cognitive load with asymmetrical structures"[22] (Seeber and Kerzel 2012: 228), and that whenever German verb-final structures are simultaneously interpreted into strictly verb-initial English, cognitive load will be significantly greater than when verb initial structures are simultaneously interpreted into English.

Al-Rubai'I (2004) carried out an experiment on the effect of six linear arrangements of Arabic on SI from English into Arabic in expressive, informative and vocative texts. The six linear arrangements were: i) adjectives that function as premodification in English NPs, which are almost always repositioned as postmodification in Arabic NPs; ii) nouns that function as premodification in English NPs, because premodifying nouns almost always follow head nouns in Arabic, and if there are more than one premodifying noun, the order of those nouns will have to be stored in memory because the order will be very important to the meaning; iii) NPs that function as subjects in English sentences, because English is an SVO language while Arabic is a VSO language, and if the English subject is a long NP, the interpreter will have to wait for the English verb before encoding into Arabic; iv) that-clauses that function as subjects, because the interpreter will have to wait for the verb before interpreting; v) non-finite subordinate clauses that precede the main clauses, because non-finite clauses including -ing participles and -ed participles precede the main clauses and give no indication of the gender or number of the subjects in the main clauses, so that

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the interpreter may have to wait for the subject in the main clause before interpreting into Arabic; and vi) the combination of non-finite clauses and parenthetical sentences that precede the main clauses, because in some cases, the subject immediately succeeding the non-finite clause is the subject of a parenthetical sentence or an inserted item rather than the subject of the main clause, so that the interpreter may have to pay close attention to the subject immediately succeeding the non-finite clause, which may force the interpreter to listen more attentively, analyse more accurately and wait even longer for the subject of the main clause. These are regarded as problematic constructions because they make the interpreter wait before interpreting into Arabic, which increases the pressure on short-term memory and on the cognitive load overall, which affects interpreting performance. Five professional interpreters with Arabic as their native language and English as the other working language were asked to interpret texts with the six linear arrangements in them. There was a correlation between the problematic linear arrangements on the one hand, and omissions and errors on the other. Tracking[23] was identified as the strategy adopted by interpreters, though not always successfully, to deal with those constructions, especially in vocative texts. The results also showed that the SIs of expressive and informative texts contained more departures from the ST than the SIs of vocative text.

Goldman-Eisler (1972/2002) carried out an experiment on the segmentation of input in SI, in which six processional interpreters, among whom three had English and French, one had English, French and German and two had English and German as their working languages, were invited to interpret spontaneous speeches and readings from English to French, from French to English and from German to English respectively. All the STs ranged from 3 to 6 minutes. There were nine interpretations in total, of which three were French translations of English spontaneous speeches, three were English translations of French STs including one spontaneous speech and two readings, and three were English translations of German readings. Dual-track recordings of both STs and TTs were represented visually as tracings as shown in Figures 2-1 and 2-2 which are from Goldman-Eisler (1972/2002: 70-71). The findings showed "that the crucial piece of information enabling interpreters to start translation is the predicate and that any elements

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[23] According to Al-Rubai'I (2004: 257), "Tracking (Ts) refer to the employment of certain tools available in the syntax of Arabic in order to follow the English word order as closely as possible. The interpreter, thus, avoids restructuring which forces him to lag too far behind the speaker."

interpolated between NP and VP will extend to EVS" (Goldman-Eisler 1972/2002: 72). Also, as mentioned in Goldman-Eisler (ibid), in German, unlike English and French, the predicate comes towards the end of a sentence in subordinate clauses, requiring interpreters to store larger chunks before interpreting than English and French do, which tends to result in longer EVS.

Figure 2-1: EVS between input and output chunks in simultaneous translation in order of succession in time.
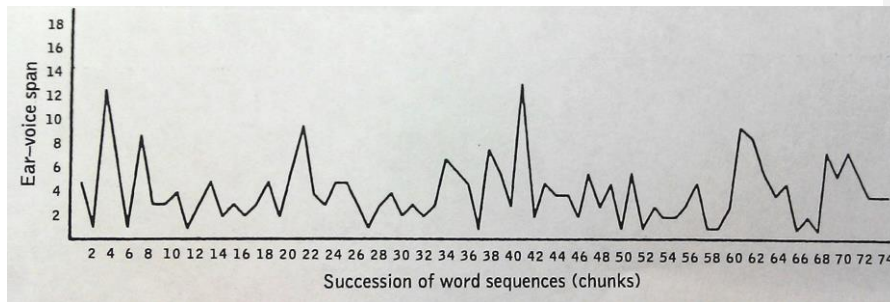
Figure 2-2: Record of text and simultaneous translation.
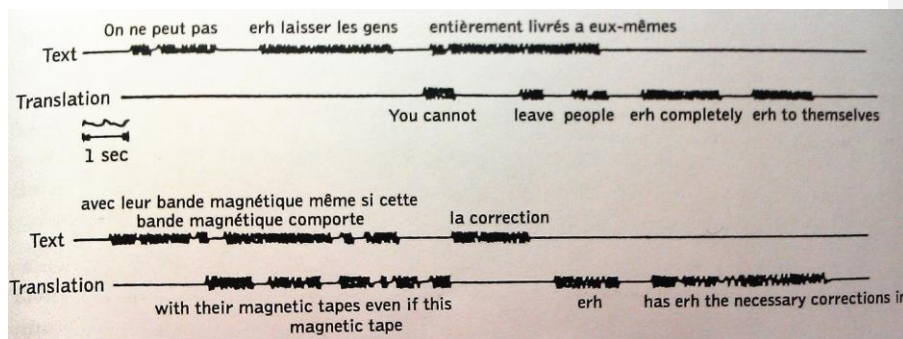
Similarly, Lee (2002) undertook an experiment on the EVS in English-Korean SI. A computer-aided analysis was undertaken of the interpretations into Korean of 30 audio-taped English speeches by eight professional conference interpreters with Korean as their mother tongue and English as their strongest second language. Roughly 800 English

and Korean sentences were included in the analysis, which revealed that the average EVS in English-to-Korean SI was three seconds. Lee also found that English-Korean syntactic differences posed a challenge for the interpreters. Korean, like German is an SOV language, so interpreters will have to hold the English verb in memory until they have produced the TT of its post-modification, which will lengthen EVS, impose pressure on memory and affect information processing. Lee further points out that the lengthening of EVS caused by syntactic differences for one sentence often had a negative impact on the EVS and quality of the SI provided for a following sentence.

Gile (1992a) carried out a comparative analysis of 23 Japanese speeches (19 readings and 4 recordings from a conference), 12 French speeches (5 recordings and 7 transcripts), 10 English speeches (5 recordings and 5 transcripts) and 6 German speeches (2 recordings and 4 transcripts), focusing on predictable sentence endings (PSEs) which were categorised into five groups including politeness markers, attenuation, grammatical function, morphological endings and hesitation pause fillers. The comparison showed that Japanese and German had a higher frequency of PSEs than Japanese, while French and English had a lower frequency of PSEs than Japanese. According to Gile (1992a: 19), as Japanese offers a number of PSEs, anticipation in SI from Japanese into English and French can give interpreters access to information before it is actually delivered, but he also points out that anticipation in the middle of a sentence was not helpful in the SI from Japanese into either English or French, because Japanese verbs often occur last in a sentence and interpreters would have to wait for a verb to make sure a safe interpretation was made. Gile's analysis suggests that anticipation can be adopted as a strategy in SI, but that for language pairs with strikingly different structures, it will be less effective than for language pairs with similar structures. Indeed, anticipation is not employed very frequently for SI between language pairs with very similar structures such as Polish and English, or Italian and English according to Zanetti (1999) and Bartłomiejczyk (2006).

All the studies discussed in this section suggest that structural dissimilarity has an impact on the frequency and effectiveness of the employment of strategies such as anticipation in SI, and this is also supported by an interpretation by Van Besien (1999) of Lederer's (1980, 1981) data. This is interesting since Lederer is among adherent of the

"*théorie du sens*" (Seleskovich 1962, 1978b), according to which structural differences between languages should have no effect on SI (see Section 2.1.1).

In order to test whether anticipation is an important strategy in SI, Van Besien (1999) analysed the data collected by Lederer (1980, 1981). The data consisted of interpretations produced by two professional interpreters of a 63-minute speech, of which roughly 55 minutes were in German and the rest in French. The French interpretations of the approximate 55-minute long German speech were transcribed and segmented into chunks of three seconds by Lederer (1980, 1981). Van Besien (1999) found that anticipation was adopted every 85 seconds on average, and the frequency was higher than Lederer (1981) expected. Van Besien (1999) also found that the verb was the most frequently anticipated element due to the fact that the position of the verb was one of the main surface structural asymmetries between the two languages involved, which suggested that anticipation adopted by interpreters to delay the articulation of a verb in SI is a language-specific strategy.

2.2.2   Chinese-English SI research

Chinese has also been of interest to interpreting scholars and practitioners (Dawrant 1996, Setton 1999, Chang 2005, Hou 2005) as it presents some striking differences from English (as we shall see in Chapter 3, some scholars go so far as to argue that Chinese falls into a typological category of its own).

Chang' research (2005) is devoted to the impact of directionality on the SI performance of professional interpreters. Ten interpreting experts, among whom seven were dominant in Chinese and three were either dominant in English or mastered both languages equally well, were asked to interpret two speeches from English into Chinese and two speeches in the other direction. Retrospective interviews were used after each interpreting task. Both the semantic content and the linguistic quality of the interpretations were quantitatively analysed and the interviews were qualitatively analysed. The results reveal that professional interpreters performed differently in English-into-Chinese and Chinese-into-English tasks, which Chang attributes to a variety of reasons such as differences in the proficiency of Chinese and English, interpreters' metacognitive awareness of the limits of their language abilities, interpreting strategies for different

57

directions, audience expectations and so on. The research also suggests that level of expertise may have an impact on interpreting performance and strategies.

Dawrant (1996) and Hou (2005) carried out comparative studies of Chinese-to-English SI and other linguistic tasks such as Chinese-to-English CI and English free narrative to investigate the complexity of the task and the factors which might have an impact on SI. Dawrant (1996) investigates the impact of word-order differences on SI by comparing the percentages of errors and omissions in CIs with those of SIs, and finds that the word-order differences are likely to cause more errors and omissions in SI output than in CI output (see Section 1.2.3.3.3). Dawrant (1996) also finds that interpreters are more likely to adopt strategies such as segmentation, waiting and anticipation in SI than in CI. Hou (2005) compares SI with CI and free narration and finds that CI and free narration are superior to SI in terms of the output grammar and that subjects have a greater tendency to copy the linguistic structures of the STs in the SI task than in the CI and free narrative tasks (see Section 1.2.3.3).

Both Dawrant (1996) and Hou (2005) establish that compared with other language tasks such as CI and free narration, SI is a more complex process on which word-order differences seem to have a greater impact. However, SI, CI and free narration are very different modes of language tasks, and while it is undeniable that the cross-mode comparison can indicate which task is more complicated and challenging for interpreters, it is not able to isolate the impact of the grammatical differences alone. A more appropriate approach is to compare the impact of grammatical identities with that of grammatical differences on the same mode---SI.

Setton's corpus-based study (1999) presents a qualitative analysis of the impact of sentence structures of German and Chinese on their English SIs and of possible strategies that interpreters could adopt to deal with the challenge posed by those structures. Here, given my own focus on Chinese-English SI, I only discuss the part of Setton's study which concerns Chinese-English SI. The main Chinese-English corpus used in Setton's research

> consists of two samples recorded at the Graduate School of Translation and Interpretation Studies (GITIS) of Fujen Catholic University in Taipei. The first and main sample for analysis is a speech on Taiwan's prospects for

rejoining the United Nations, which was prepared for delivery by a teacher at the Institute (a native Speaker of Modern Standard Chinese-Putonghua [sic]), on the basis of an article in an academic journal, and delivered in the framework of a mock seminar. The presentation was simultaneously interpreted into English by two professionals.

Both the ST and the two TTs were recorded on a multi-track recorder (Setton 1999: 107-108). Apart from the two English interpretations mentioned above, Setton's research also involves a "supplementary sample, from which some examples are taken, [which] consists of a videotaped television interview with a well-known Chinese dissident, Prof. Fang Lizhi, and English SI versions by one professional and two trainee interpreters" (Setton 1999: 108). According to Setton (1999: 132), the most commonly discussed language-related SI strategies include waiting, stalling, segmentation and anticipation, which are often adopted in the SIs "of structures in the input discourse which delay the appearance of a constituent needed at a certain point to construct a well-formed English sentence", for instance (all italics in original), "a *delayed* main verb, as in left-branching VP structures"[24], "a *delayed fixed-position argument* (e.g. Subject, Object) such as (a) the Head of a Subject or Object NP delayed by left-branching material (determiners, possessives, adjectives, reduced relative clauses", and "(b) a Subject delayed in other ways," "by *uncertainty about its Subject status* (Chinese Topic)", "a *Main Clause delayed by a subordinate clause*, or by adjunct or other material", and "other *empty positions* in SL which must be filled in TL. Languages differ in the ellipses they allow: zero anaphora in Subject position is common in Chinese" (Setton 1999: 131-132). However, based on the analysis of his corpus, he also finds that

> syntactic structure (involving long-range syntactic dependencies) does not itself constitute an obstacle to SI. No significant decrement in performance or delivery was noted in connection with long or syntactically complex

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[24] "'Left-branching' structures are attached to the left of the constituent which governs them, i.e. they occur in the speech string before the item they quality or modify. In English, long Verb-attached phrases follow the Verb; in German and Chinese, they often precede them. In German and Chinese, a whole 'participial' relative clause may precede and modify a Noun, and may itself contain a left-branching phrase" (Setton 1999: 132).

sentences, and the few Speakers' ungrammaticalities were ignored or circumvented. Over the longer sentences of the German source discourse, all three interpreters routinely generate and pursue their own sentence structure, using content from all sources as describe above, and largely disregard the input structure except insofar as it delivers meaning (Setton 1999: 270-271).

Also, the corpus examined by Setton shows that interpreters tend to focus on the meaning rather than the structure of SL texts. Setton concludes that the impact of grammatical differences on SI is not significant. However, such an impact can only be properly assessed through a contrastive study of the SIs of both symmetrical and asymmetrical structures and only through quantitative comparisons can we come to reliable conclusions about whether or not grammatical differences have a statistically significant impact on SI.

In addition, of the studies discussed in this section, only Chang (2005) examines both English-to-Chinese and Chinese-to-English SIs, Dawrant (1996), Setton (1999) and Hou (2005) only focus on Chinese-to-English interpreting, probably because Chinese is the mother tongue and English the second strongest language for many English-Chinese simultaneous interpreters, and therefore, interpreting from Chinese into English in the simultaneous mode has often been regarded as a more challenging task than interpreting in the other direction, and the SI of typical Chinese structures into English have attracted more attention than interpreting in the other direction. In contrast, in my thesis, the effect of grammatical differences on SI in both languages and in both directions will be examined in order to provide a comprehensive analysis of such an impact.

My study thus differs from those outlined above in the following respects; a) it is a contrastive study of the impact of both symmetrical and asymmetrical structures on Chinese-English SI; b) it examines SI between the two languages in both directions; c) it analyses its data both qualitative and quantitatively, assessing the evidence in terms of its statistical significance and following up with interviews with the interpreters to obtain qualitative data; and d) it examines the SIs of structures in each language which are matched by both asymmetrical and symmetrical structures in the other language.

2.3 SI strategies

According to Pöchhacker (2004: 133), interpreting strategies can be divided into on-line strategies which will be the focus of this section and off-line strategies such as building up knowledge in specific areas through reading, consulting experts, preparing glossaries and making up documents, which are also part of the process of knowledge acquisition in interpretation (Gile 1995a: 146-148). Off-line strategies are often adopted before and after an interpreting assignment (Pöchhacker 2004). This section is specifically devoted to on-line strategies or strategies employed during the interpreting task.

Some studies focus on several SI strategies (Gile 1995a, Kohn and Kalina 1996, Kalina 1998) employed at different stages of the task while others focus on a single type of strategy such as anticipation (Van Besien 1999), synthesis (Sunnari 1995) and compensatory strategies (Al-Khanji, El-Shiyab and Hussein 2000).

2.3.1 Typologies of SI strategies

2.3.1.1 Gile's classification

Gile (1995a: 191) uses the term "coping tactics" to describe all the conscious solutions adopted by interpreters to cope with the saturation of processing capacity and the inadequacy of knowledge. According to Gile (1995a: 192-201), tactics in SI can be divided into three categories: comprehension tactics, preventive tactics, and reformulation tactics.

Comprehension tactics are applied to cope with problems occurring at the comprehension stage when interpreters are under the threat of time pressure and the potential saturation of their processing capacity. There are four comprehension tactics, including (i) reconstructing the segment with the help of the context, (ii) using the booth mate's help, (iii) consulting documents in the booth, and (iv) delaying the response. The first three tactics can be regarded as focusing on external help and there are potential problems associated with them. For instance, reconstruction requires time and processing capacity with the associated risk of saturation; the boothmate may be reluctant to help during his or her own rest time or may stay outside the booth to relax; documents rely heavily on preparation which is not likely to cover all the words or names that interpreters may come across in SI, and referring to documents can result in loss of time and

information. The fourth tactic, delaying the response, will be discussed in Secion 2.3.3.1 below, which deals with language-related strategies (see Section 2.3.3.1).

Preventive tactics, according to Gile (1995a: 194-196), are applied to deal with potential problems in connection with interpreters' prediction. There are four preventive tactics, namely (i) taking notes, (ii) changing the order of elements in an enumeration, (iii) changing the Ear-Voice Span, and (iv) segmentation. With regard to figures or names, interpreters may forget or have to wait due to grammatical reasons, for instance, "5000 kms per hour" is translated into "*měi xiǎoshí 5000 qiānmǐ*" (per hour 5000 km) in Chinese; another typical case concerns the different ways of organizing numbers in different languages. For instance, an interpreter cannot produce the TT as soon as he or she hears, e.g. "five hundred and twenty-three million" (523,000,000) because in Chinese, this is expressed in the order, *wǔ yì er qiān sān bǎi wàn* (5, 2300, and 0000), {five yi (nine digits in Chinese) two thousand three hundred wan (four digits in Chinese)}. Therefore, if the interpreter produces five hundred and twenty-three first, it will be difficult but necessary to amend it afterwards, which will waste time and occupy more processing capacity. In this case, interpreters usually choose to note down '523m' while listening and then produce the number based on the note. Taking notes obviously requires a form of external help, requiring pen and paper prepared in advance. In the case of lists of names or other linguistic items, interpreters may resort to the second tactic, changing the order of elements in an enumeration, to deliver what they hear last first in order to relieve pressure on memory. Changing the EVS is subject to personal habit and experience. Interpreters may try to produce as soon as possible or even anticipate in order to ease the pressure on memory, which can lead to wrong anticipation and incomplete target sentences; or interpreters may maximize comprehension by lagging behind the speaker, which can result in memory overload and loss of information. Changing the EVS may be advisable for students but its use in specific cases needs to be examined, although this is not one of the purposes of this thesis. Changing the EVS relies on the fourth tactic, segmentation which will be discussed in Section 2.3.3.2 on language-related strategies.

According to Gile (1995a: 197-201), there are 12 tactics for reformulation, including (i) "[d]elaying the response" (see Section 2.3.3.1), (ii) "[u]sing the booth mate's help", (iii) "[c]onsulting documents in the booth", (iv) "[r]eplacing a segment with a

62

superordinate term or a more general speech segment", (v) "[e]xplaining or paraphrasing when a term is difficult to interpret", (vi) "[r]eproducing the sound heard in the SL speech", (vii) "[i]nstant naturalization" referring to naturalizing "the source-language term, adapting it to the morphological or phonological rules of the target language" (Gile 1995a: 198), (viii) "[t]ranscoding" referring to "translating a source-language term or speech segment into the target language word for word" (Gile 1995a: 199), (ix) "[i]nforming delegates of an interpretation problem", (x) "[r]eferring delegates to another information source", (xi) "[o]mitting the information", referring to deliberate omission due to the breakdown of short-term memory or comprehension rather than an omission that is not noticed by the interpreter because his or her processing capacity has all been consumed by the listening and analysis effort, (xii) [p]arallel reformulation, and (xiii) [s]witching off the microphone which is the last resort for interpreters.

2.3.1.2 Kalina's classification

Like Gile (1995a), Kalina (1998) presents one of the most comprehensive classifications of SI strategies. As the detailed description of strategies was originally written by Kalina (1998) in German, the summary below is based on Liontou (1996, 2012).

According to Kalina (1998: 115-121) summarized in Liontou (1996, 2012), SI strategies fall into one of two groups. Group A includes strategies adopted to enhance the comprehension of input, such as preparation (e.g. information gathering), inference, anticipation (see Section 2.3.3.3) and chunking (see Section 2.3.3.2). Group B includes strategies employed to facilitate the production and monitoring of output and is further divided into five sub-groups, namely (i) ST conditioned strategies, (ii) TT conditioned strategies, (iii) emergency strategies, (iv) repair strategies and (v) global strategies. ST conditioned strategies include a) syntactic restructuring to counteract the interference of ST structures and achieve naturalness of TTs and b) transcoding or word for word interpretation adopted especially for lists of names and numbers. TT conditioned strategies include a) adjustment of the EVS, b) text compression for eliminating redundancy, c) text expansion for adding extra information for the purpose of explanation, d) stylistic strategies for producing TTs that are as elegant and expressive as possible and e) presentation strategies such as the good use of intonation or pauses. Emergency strategies include a) compression or information selection, b) omission or deletion of superfluous items, c)

generalization of items whose exact interpretation cannot be found, and d) simplification of difficult terms. Repair strategies are decisions to either correct errors or not to correct those errors which do no harm to the meaning. Global strategies include monitoring the coherence of STs with pre-formulated hypotheses and output production.

Liontou (1996) adopts Kalina's classification in her research and reports the results of a small-size corpus study which aims to find the strategies adopted by German-to-Greek simultaneous interpreters, to count the frequency of the strategies and to investigate which strategies are employed to deal with the influence of syntactic differences between German and Greek. The study analyses three Greek interpretations produced by three European Union interpreters of three speeches in German lasting approximately 5 minutes each. The total length of interpretation in the corpus is roughly 15 minutes. According to Liontou (1996), stalling is another SI strategy which is not included in Kalina's proposals, and stalling (60%) [25] and anticipation (10%) [26] were used by interpreters in Liontou's experiment to overcome difficulties caused by the syntactic differences between German and Greek. But due to her limited corpus, chunking (3%) [27] and syntactic transformation (1%) [28] cannot be considered as language-related strategies though they are also adopted by interpreters to deal with syntactic differences, and the remaining strategies such as changing EVS, text compression, self-correction and text expansion are considered as general strategies as they are related to the nature of SI practice rather than linguistic differences though the extension of EVS tends to be adopted by interpreters to deal with linguistic issues.

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[25] The percentage indicates the frequency of appearance of the type of strategy in the corpus. Stalling occurred ninety-six times in the corpus with roughly seven instances per minute and it "is often utilised to counter language-specific difficulties" (Liontou 1996: 50-51).

[26] There are "seventeen cases of anticipation (approximately one every minute of interpreting)" and "[a]ll "anticipation" instances were recorded in sentences where discrepancies existed between the DE and the EL syntax" (Liontou 1996: 49-51).

[27] "It would be arbitrary to reach a conclusion on the language-specificity of "chunking" based only on the five instances recorded in this study" (Liontou 1996: 52).

[28] "[O]nly one case of "syntactic transformation" was recorded. All other sentences seemed to follow the syntax of the source text" (Liontou 1996: 49).

2.3.2   Work on individual SI strategies

Individual SI strategies such as anticipation (see Section 2.3.3.3), synthesis (Sunnari 1995) and compensatory strategies (Al-Khanji, El-Shiyab and Hussein 2000) have also been investigated.

2.3.2.1 Anticipation

Anticipation has been discussed widely as an important strategy in SI and will be discussed later as a language-related strategy (see Section 2.3.3.3).

2.3.2.2 Synthesis

Like anticipation, synthesis, also known as summarizing or macro processing, has been regarded as one of the central strategies of fluent SI (Sunnari 1995). According to Viezzi (1993b: 394-395), "the activation of" macro processing requires "the deletion of all superfluous words, the choice of shorter syntactic solutions or shorter words whenever they are available, the simplification of the SL text structure." Van Dijk (1977) lists four main types of macro-processing activities including a) selection, where particularly important or relevant micro-propositions are adopted into the macro-structure; b) deletion, where unimportant, irrelevant or redundant micro-propositions are deleted from the macro-structure; c) generalization, where a set of propositions is merged into one generalizing proposition and d) construction, where a macro-propostion can be constructed from several micro-propositions that mutually imply it.

Sunnari (1995) reports the results of an experiment which was based on the SIs of three recorded conference presentations produced by four professional and four student interpreters. The three presentations represent three interpreting situations, namely (i) the ideal situation in which the speaker is at ease with his audience and familiar with speaking to an audience via interpreters, both the speaker and the interpreters know the topic and the interpreters know the style of the speaker's presentation based on previous experience, and interpret into their native language; (ii) the counter-ideal situation in which the interpreters have to deal with various problems, for instance, the speaker reads from a written script, the interpreters were given the speech minutes before the presentation, the topic is source culture-related, the speech contains concepts and terms that do not exist in the TL, the speech "is full of names, abbreviations, dates and other figures", and "[t]he information in

the text is densely packed in highly complicated syntactic structures with long, left-branching sentences read out at an even speed", and "the interpreters (now working from their A language into their B language[29] had to find a way of conveying at least the gist of the message to the audience, because the presentations were to be dealt with in a panel discussion with the foreign speakers on the panel" (Sunnari 1995: 111); (iii) the pseudo-ideal situation in which the interpreter has done some preparation about the topic and the speaker, the speaker delivers without a script but the interpreter has to deal with frequent false starts, hesitations and self-corrections of the speaker, the speech contains special terminology, is delivered at a fairly fast rate and the interpreters interpret into their mother tongue. The results showed that the macro processing approach "was preferred to the "saying it all" approach in all cases". "In the counter-ideal and pseudo-ideal situations, interpreting would probably have been impossible without macro processing" (Sunnari 1995: 118). The expert-novice comparison showed that novices could not get the gist of the speech and the target speech presented fragmented and incomplete information. The explanation Sunnari (1995) provides is that adopting synthesis increases the requirements for processing capacity at the comprehension stage, and as a result, not enough processing capacity is available for production and monitoring. Experienced interpreters are able to allocate their processing capacity resources more efficiently, and know how and when to employ the macro-processing strategy or synthesis, and can therefore produce a better quality output.

2.3.2.3 Compensatory Strategies

According to Al-Khanji, El-Shiyab and Hussein (2000: 548), "comprehensible input" is extremely important in SI and specific strategies can be adopted by interpreters to deal with "incomprehensible input". Their analysis of specific strategies is based on the observation of English-to-Arabic SIs produced by four Jordanian interpreters with Arabic as their native language and English as their dominant second language. Although they did not practise interpretation professionally, they were all highly proficient in English and worked temporarily for the American television network CBS. The analysis showed that when "the interpreters' particular stage of linguistic development did not enable them to process either

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[29] See Note 3 and 4.

incomprehensible messages and/or information load" (Al-Khanji, El-Shiyab and Hussein 2000: 556), they tended to resort to five "compensatory strategies" such as (i) "skipping", that is, not interpreting a word or expression, due to incomprehensible input, or when they encountered repetitive expressions in the source speech, or if they were lagging behind the speaker; (ii) "approximation", adopted by interpreters to "reconstruct the optimal meaning by giving less precise meaning of a word or an expression in the target language instead of the required lexical expression in the source language"; (iii) "filtering", employed by interpreters to "compress the length of an utterance in order to find an economic way of expression"; (iv) "incomplete sentences", a reduction strategy often adopted by interpreters to deal with failures in comprehension of larger units of the texts; and (v) "substitution", a reduction strategy adopted by interpreters, who "used a lexical item in the target language which did not communicate the desired concept nor did it basically retain the meaning of the item in the source language" (Al-Khanji, El-Shiyab and Hussein 2000: 553-555). Among these five strategies, "approximation" and "filtering" are regarded as successful, while "skipping", "incomplete sentences" and "substitution" are considered unsuccessful due to the substantial change or loss of meaning.

2.3.3 Language-related strategies

This section will look at strategies used to deal with problems caused by grammatical differences between the SL and the TL, namely, waiting, stalling, segmentation and anticipation (Setton 1999: 50).

2.3.3.1 Waiting and stalling

Delaying the response is a comprehension tactic (Gile 1995a: 192) often applied to give interpreters more leeway and time to obtain enough information before production. Interpreters may not hear clearly and not comprehend a word or a segment, but they may be able to work out what is meant after being given more information or a broader context by the speaker. However, delaying the response is likely to overload short-term memory, causing information loss or maybe even breakdown of interpretation.

    According to Kade (1967), Kirchhoff (1976/2002), Setton (1999) and Mei (2009: 143-144), delaying the response, also known as "waiting", can enable interpreters not only to comprehend more accurately because of the additional information they receive while

waiting, but also to produce target segments which are less fragmented and reduce repetitions [see Example (b) in Introduction]. According to Mei (2009: 144), both repetitions and corrections may make the TT sound unnatural, damage communication, and be less faithful to the original and waiting can be adopted by interpreters to reduce the occurrence of those delivery inappropriateness. However, the strategy of waiting may cause its own difficulties, because if the nouns following the head noun are too many and too long, they will saturate the interpreter's short-term memory capacity so that he or she may forget the head noun. Therefore, the success of adopting the waiting strategy may vary from occasion to occasion, depending on the complexity of expressions, and from person to person, depending on the interpreter's familiarity with the language and his experience. According to Mei (2009: 144), with the accumulation of experience, interpreters resort to waiting more often; however, in order to ease the pressure on memory, they do not wait for too long, maybe half a sentence at most.

According to Herbert (1952: 65), Glémet (1958: 121), and Kirchhoff (1976/2002: 116), one thing that an interpreter must pay close attention to when waiting, is to avoid unnatural pauses or long silences. Therefore, the interpreter can also adopt stalling strategies, such as slowing down the output or producing "neutral padding expressions" (Kirchhoff 1976/2002: 116).

2.3.3.2 Segmentation

Segmentation, an important strategy for simultaneous interpreters (Kirchhoff 1976/2002, Gile 1995a), is also known as "chunking" (Setton 1999, Mei 2009: 97, Zhong 2009: 154), the "salami technique" (Jones 1998: 101), "working with subunits of sense" (Seleskovitch and Lederer 1995: 125), and "fission" (Goldman-Eisler 1976/2002).

According to Gile (1995a: 195-196), the SL-TL syntactic differences can overload short-term memory, but interpreters can segment long sentences into shorter chunks rather than being tied to the long structures. For instance, if faced with a complex sentence with three causes and one effect, interpreters can reproduce the three causes in three simple and independent sentences and will not indicate the complex relationship initially; when it comes to the effect, interpreters will need to indicate the cause-effect relationship by adding logical words such as 'so' or 'therefore'. In this way, interpreters convey messages rather than long and complex structures, which also make interpretation easily understandable for

68

the audience, whereas long and complex structures are not only problematic for interpreters but also for listeners.

According to Mei (2009: 97), the biggest challenge for simultaneous interpreters is to understand how to chunk, when to chunk and where to chunk. Chunking segments long sentences into shorter ones, fragments original texts and shifts or changes the emphasis of meaning. According to Mei (2009: 96), in order to reproduce the original speech completely, chunking should be applied along with other strategies including addition, deletion, conversion and anticipation, though chunking is the most important strategy for dealing with syntactic differences during the process of SI.

According to Zhong (2009: 155), there are three chucking positions in English sentences, namely subordinate clauses, prepositional phrases and particle constructions.

1) Subordinate clauses include subject clauses, attributive clauses and adverbial clauses. Chunking can be applied as soon as interpreters hear relative adverbs such as "when," "where", "why" and "how" and relative pronoun such as "who", "which", "whom", "what" and "that", which typically introduce subordinate clauses.

2) Prepositional phrases are NPs including prepositions such as "at", "in", "before", "on" and so on.

3) Particle constructions consist of present and past participles functioning as attributives and adverbials. These particle constructions are often cut off from main clauses and are interpreted as individual and separate sentences.

The following example is from Zhong (2009: 155):

(2.5) Japan surrendered in 1945 after Americans [sic] dropped two atom bombs.

Adverbials like "in 1945" and "after Americans dropped two atom bombs" are often be placed at the beginning sentences in translations into Chinese. However, during the process of SI, they are chunking positions; they can be interpreted into shorter chucks as shown in (2.6):

(2.6) *Rìběn tóuxiáng lè,/ (nàshì) zài 1945 nián;/ (zàizhè zhīqián), měiguórén tóulè liǎngkē yuánzǐdàn.*

EG: Japan surrender CRS/(that be) in 1945 year/(in that before) Americans drop
CRS two CL atom bomb

After chunking, "in 1945" is a prepositional phrase rather than a complete sentence, therefore, *nàshì* (that be) was added before the phrase to make it complete. The most satisfying written translation would be "after the Americans dropped two atom bombs, Japan surrendered in 1945". However, to produce this translation, the interpreter would not be able to begin to interpret until "after", and information received before this point might be forgotten. In order to keep syntactic linearity without waiting and restructuring, "after" was converted into "before" and "in that" was added before "before" to refer to what has been talked about before. In this case, "addition" and "conversion" have been applied in order to follow the sequence of incoming information.

2.3.3.3 Anticipation

According to Chernov (2004: 91), the theoretical foundation of anticipation can be traced back to the Theory of Activity in the Russian school of psychology. According to this theory, "mental activity, specifically perception, is driven by a basic principle of *anticipatory reflection of reality* (italics in original)". Chernov (2004: 91) incorporates anticipation into the process of SI based on this principle and states that "the basic mechanism making SI possible is the probability anticipation of the development of the message". Moser (1978) also includes prediction or anticipation as one of the key decision points in the process of SI and points out that anticipation often involves two procedures, namely a) a top-down strategy to anticipate what is coming next and b) a bottom-up strategy to monitor the outcome of anticipation, to compare it to the actual ST when available, and if possible, to correct when the anticipation goes wrong.

Though Clark and Clark (1977) mention that anticipation is also used in monolingual tasks, Dillinger (1990) claims that interpreters are superior in terms of anticipation to monolingual speakers, and Setton (1994) believes that exercises specially designed to develop the anticipation ability of interpreting trainees should be incorporated into SI training.

Gile (1995a: 176) also states that anticipation can be applied to deal with processing-capacity-related problems in SI, but he does not include anticipation in any of

70

his three groups of tactics. According to Gile (1995a: 176-178), there are two types of anticipation: extra-linguistic anticipation and linguistic anticipation.

Extra-linguistic anticipation is adopted to predict ideas (not exact words or expressions) that are likely to be expressed by speakers, given the context of events and speakers, the topic to be discussed in the event and the views of speakers. Mei (2009: 190) adopts the term "topic anticipation", and relates this to Schema Theory (Rumelhart 1980).

According to Rumelhart (1980: 34, italics in original), a schema

> is a data structure for representing the generic concepts stored in memory. There are schemata representing our knowledge about all concepts: those underlying objects, situations, events, sequences of events, actions and sequences of actions. A schema contains, as part of its specification, the network of interrelations that is believed to normally hold among the constituents of the concept in question. A schema theory embodies a *prototype theory* of meaning. That is, inasmuch as a schema underlying a concept stored in memory corresponds to the *meaning* of that concept, meanings are encoded in terms of the typical or normal situations or events that instantiate that concept. It is a theory about how knowledge is represented and about how that representation facilities the *use* of knowledge in particular ways. According to schema theories, all knowledge is packaged into units. These units are the schemata. Embedded in these packets of knowledge is, in addition to the knowledge itself, information about how this knowledge is to be used.

Zeng (2009:35) uses an example to illustrate topic anticipation. If the speaker starts a paragraph with "[t]he disciplines that this university boasts are overarching" in English, the interpreter needs to anticipate the names of disciplines such as philosophy, economics, law, engineering and so on. This can help the interpreter not only to reduce the burden on listening and shorten the time for comprehension but also to ease his psychological pressure while dealing with new segments.

Linguistic anticipation is especially employed to predict linguistic relations between

items of sentences, which has traditionally been one of the focuses of the Leipzig School, as exemplified, for instance, by Salevsky's (1978) research into syntactic strategies in Russian-German SI. As mentioned in Section 2.1.2, according to Gile (1995a: 177), three efforts, the Listening and Analysis Effort, the Short-term Memory Effort and the Production Effort, compete with each other for processing capacity in SI. Linguistic anticipation can help interpreters predict the incoming segment on the basis of linguistic conventions and allocate more comprehension processing capacity to memory and production. Gile (1995a: 176) explains that elements of speech are bound together according to certain rules or regularities and specific languages have particular linguistic characteristics. For instance, according to (Gile 1995a: 177), one linguistic feature of Japanese is "predictable sentence endings". Interpreters can take full advantage of this feature to anticipate the incoming ending and reduce processing capacity of listening and analysis later on (see Section 2.2.1).

According to Van Besien (1999: 250), "[a]nticipation refers to the simultaneous interpreter's production of a constituent (a word or a group of words) in the target language before the speaker has uttered the corresponding constituent in the source language". Van Besien's (1999) also reinterprets Lederer's (1980, 1981) data to illustrate anticipation in SI from German to French [see Section 2.2.1 and Example (a) in Introduction].

Riccardi (1996: 211) also points out that to ease the burden caused by syntactic restructuring on short-term memory of simultaneous interpreters, anticipation is widely regarded as a key strategy dealing with German into Italian interpreting. Bot (2000: 65) highlights that anticipation has been widely adopted by simultaneous interpreters to handle syntactic differences. Mei (2009: 190-191) gives simple examples to illustrate linguistic anticipation. For instance, information presented after the word "however" will stand in contrast to the information presented before it, and relations of "difference, disjunction, disparity" are likely to be succeed by two items connected by "between…and", so that when interpreters between English and Mandarin hear "difference", they can predict that there will be two contrasting elements following and will know that the corresponding elements in Chinese are usually placed before "difference" in Chinese. Therefore, interpreters have to wait for the two contrasting elements before rushing into interpretation in order to avoid repetition or fragmented interpretation.

This section started with a description of general classifications of SI strategies,

followed by three single types of SI strategies, and moved on to deal with three language-related strategies frequently adopted in the simultaneous mode. However, strategies do not guarantee successful interpreting, and the mastery of these strategies depends on practice and experience; therefore, it is likely that seasoned professional interpreters resort to these strategies more often and more successfully than student interpreters (see Section 2.4).

2.4 The expert-novice paradigm

Expert-novice comparison has been the focus of a number of studies focusing on phenomena such as pauses and errors (Barik 1973, 1975/2002), comprehension (Dillinger 1994), linguistics structures (Gile 1992a, 1997, Fabbro and Gran 1997), linguistic complexity (Hild 2001), recall and recognition (Lambert 1989b), working memory (Padilla et at. 1995, Liu, Schallert and Carroll 2004), simultaneous listening and speaking (Kurz 1996) and strategies and quality of interpreting (Tiselius and Jenset 2001).

Barik (1969, 1973, and 1975/2002) presents a detailed analysis of "disruptions" such as "omissions and errors" in SI (1975/2002: 89). The data include interpretations of a "spontaneous speech", "semi-prepared material (a non-technical lecture)", "prepared material intended for oral delivery (a non-technical formal speech)", and "prepared material intended for the written medium (the reading of a non-technical article)" (1975/2002: 79) produced by two professional interpreters, two student interpreters and two amateur interpreters who were very fluent bilinguals. All the subjects had English and French as their working languages. The expert-novice comparison showed that professionals made a lower percentage of omissions and errors than students, and that professionals' translations tended to be "more idiomatic and thus more open to slight phrasing changes and other minor "disruptions"" while students' translations were more literal.

In Hild's (2001) study on the effects of linguistic complexity on expert processing in SI, eight professional interpreters and eight student interpreters, all of whom had Bulgarian as their first language and English as their second language, were invited to interpret two English texts that were very similar in terms of "speaker, content, presentation and linguistic features" (Hild 2001: 253) but different in the degree of information density. The results show that students are more vulnerable to syntactic factors than professionals

and "factors other than the syntactic properties of the ST become more important determinants of skilled SI performance" (Hild 2001: 264).

Liu, Schallert and Carroll (2004) reported an experiment focusing on working memory and expert performance in SI. Eleven professional interpreters with training and at least two years of SI experience, eleven advanced and eleven junior student interpreters were instructed to simultaneously interpret three experimental speeches and to attend to take a listening span test used to measure the subjects' working memory capacity. The results reveal that the main reason why professionals outperform the two groups of students is that professionals are superior in terms of selective processing, self-monitoring, and efficiently allocating working memory resources.

According to Gile (1997b: 121) reporting viewpoints expressed by Déjean-Le Féal, Gran and Kalina at a workshop, the main differences between students and professionals are that students focus on language while professionals focus on meaning and show more automation than students in a task. According to Gile (1992b: 187),

> students should understand that they have to formulate the message not so that the linguistic structure and words used are closest to those of the Source Language Text, but so that the impact of the Target Language Text on the Receiver (reader or listener) is closest to the impact the Author of the Text is trying to achieve.

These arguments are well supported by Fabbro and Gran (1997). Fabbro and Gran's (1997: 23) experiment was first carried out on student and then on professional interpreters one year later. All the subjects were asked to receive sentences in one ear and to receive their corresponding translations in the other ear and to spot semantic errors and syntactic errors in some of those translations. The results revealed that professionals had a significant superiority in the recognition of semantic errors while student had a significant superiority in the recognition of syntactic errors. Fabbro and Gran (1997: 24) explain these findings as follows:

> [S]tudents are afraid of missing parts of the original message and stick to the

superficial structure of discourse, while professionals are more familiar with language switching and are flexible, relaxed and detached enough to forget words and concentrate on meaning.

However, they (1997: 24) add that the interpreting level of students and the fact that learning SI "is a gradual process" should be taken into consideration before jumping to any conclusions related to interpreting teaching or training.

2.5   Conclusion

This chapter started with a review of literature on the effect of grammatical differences on SI, and especially focused on research supporting and casting doubt on the impact of those structural dissimilarities. Secondly, it reported research findings concerning the impact of grammatical differences between different language pairs on SI and emphasized that the priority of this thesis, in contrast to previous research into English-Chinese SI, was to carry out a qualitative and quantitative contrastive error analysis of both professionals' and students' SIs of symmetrical and asymmetrical structures between these two languages. The third section was devoted to SI strategies, language-related strategies in particular, as well as to research into the differences between experts and novices.

Chapter 3 Chinese-English Grammatical Differences

Overview: the overarching aim of the research is to investigate the impact of divergent structures on English-Chinese SI in contrast to that of identical structures on SI of these two languages involved, therefore, the entire Chapter 3 presents a contrastive analysis of English and Chinese symmetrical and asymmetrical structures of six grammatical categories of English and Chinese respectively, namely English adverbials, English noun phrases (NPs), English passives, Chinese co-verb phrases (CPs), Chinese NPs and Chinese topic-prominent clauses (TCs), focusing on grammatical components, functions, constructions and positions of each grammatical category and highlighting the structural differences between English and Chinese in each category as well as the challenges that those differences could pose to SI of the two languages involved.

3.1 Introduction

According to Li and Thompson (1981: 17), "English is an SVO language, in which the verb typically follows the subject and precedes the object". They (ibid) provide the following illustration:

(3.1) John <u>wrote</u> a book.

  Subject verb object

Though Chinese has the same constituent order in simple sentences (Tomlin 1986: 87, 180, Croft 1990: 61, Song 2001: 64, 308), it is very difficult to classify Chinese in terms of word order. According to Li and Thompson (1981: 26), "Mandarin may be undergoing a change from an SVO to an SOV word order" as it has both SVO and SOV features as shown in Table 3.1 which is adapted from Li and Thompson (1981: 24).

Table 3-1: SOV and SVO features of Chinese

SVO LANGUAGE FEATURES	SOV LANGUAGE FEATURES
VO sentences occur	OV sentences occur
Prepositions exist	Prepositional phrases precede the V, except for time and place phrases

Auxiliaries precede the V	Postpositions exist
Complex sentences are almost always SVO	Relative clauses precede the head noun
	Genitive phrase precede the head noun
	Aspect markers follow the V
	Certain adverbials precede the V

Example (3.2) and (3.3) which are quoted from Li and Thompson (1981: 24-5) illustrate one SVO feature and one SOV feature respectively:

(3.2) complex sentences are almost always SVO

Wǒ tīngshuō nǐ mǎi – le   tā –   de   shū – diàn

I   hear   you buy – PFV 3sg –GEN book – store

I heard that you bought his/her book store.

(3.3) SOV sentences occur

Zhāngsān bǎ tā mà LE

Zhangsan BA 3sg scold PFV/CRS

Zhangsan scolded him/her.

Based on the word order features mentioned above, the literature on grammatical differences between Chinese and English highlights a number of issues which could pose a challenge to SI between the two languages (Darbyshire 1967, Quirk 1972, Li and Thompson 1981, Pan 1997, Ye 2001, Ross and Ma 2006, Xiao, McEnery and Qian 2006, Xu 2009, Shi 2010), including prominently 1) English adverbials; 2) English NPs; 3) English passives; 4) Chinese CPs; 5) Chinese NPs and 6) Chinese TCs (presented in alphabetical order). This chapter will focus on the six grammatical categories mentioned above and highlight the striking grammatical differences between the two languages and the possible challenges the grammatical asymmetries could pose to SI.

3.2   English adverbials

3.2.1   Introduction to English adverbials

An English adverbial can provide information on the place, time, manner, cause, or degree of a process or characteristic represented by a verb, an adjective, a phrase or adverb (Quirk 1972). According to Quirk (1972: 420), there are six ways to realise adverbial functions as

illustrated in (3.4) to (3.9) which are from Quirk (ibid).

(3.4) Adverb and adverb phrases

Peter was playing as well as he could.

(3.5) NP which is not so common

Peter was playing last week.

(3.6) Prepositional phrase

Peter was playing with great skill.

(3.7) Finite verb clause

Peter was playing although he was very tired.

(3.8) Non-finite verb clause in which the verb is infinite or a present participle or a past participle

(3.8 a) *Peter was playing to win.*

(3.8 b) *Making a lot of noise they praised Tom.*

(3.8 c) *If urged by our friends, we will stay.*

(3.9) Verb-less clauses

Peter was playing, unaware that his wife was in the audience.

According to Quirk (1972: 421), adverbials can be either integral to clause structure, or peripheral to clause structure. Integral adverbials are termed adjuncts, and peripheral adverbials are either disjuncts or conjuncts.

This section will focus on the three major categories of adverbials, namely, adverbs, prepositional phrases and adverbial clauses by looking into their definitions, functions and positions within clause structure.

3.2.1.1 English adverbs

According to Quirk (1972: 268), in English, an adverb is a part of speech that can modify verbs, adjectives (including numbers), clauses, sentences and adverbs. In terms of syntactic functions of adverbs, they fall into one of the two categories, "clause constituent" and "modifier of adjective and adverb".

An adverb can belong to one of three classes, namely, adjunct, disjunct and conjunct when it functions as a clause constituent as shown in (3.10) to (3.12) which are from Quirk (1972: 269-270).

(3.10) Adjunct

Are they waiting outside or are they waiting inside?

(3.11) Disjunct

Fortunately, no one complained.

(3.12) Conjunct

All our friends are going to Paris this summer. We, however, are going to London.

Apart from being a clause constituent, an adverb can also function as a modifier of an adjective or another adverb. Except for *enough* which functions as a postmodifier as shown in (3.13) and (3.14) which are from Quirk (1972: 275, 277), all other adverbs function as premodifiers of adjectives and adverbs as shown in (3.15) and (3.16) which are from Quirk (ibid).

(3.13) Postmodifier of an adjective

His salary wasn't high enough.

(3.14) Postmodifier of an adverb

He spoke cleverly enough.

(3.15) Premodifier of an adjective

He is quite right.

(3.16) Premodifier of an adverb

They are smoking very heavily.

3.2.1.2 English prepositional phrases

According to Quirk (1972: 299), a prepositional phrase is comprised of a preposition as its core and a prepositional complement succeeding the preposition. The prepositional complement can be either a NP or a clause such as a wh-clause or V-ing clause functioning as a noun, as shown in example (3.17) to (3.20) which are quoted from Quirk (ibid).

Preposition   prepositional complement

(3.17) *With   certainty*

(3.18) *At   the bus-stop*

(3.19) *From   what he said*

(3.20) *By   signing a peace treaty*

However, according to Quirk (1972: 300), under some circumstances, the preposition has to give up the first position to the prepositional complement, or the complement is absent through ellipsis. In such cases, the preposition is said to be postponed.

79

Quirk (ibid) outlines the following possibilities as illustrated in (3.21) to (3.26):

(3.21) *Wh-questions: <u>which</u> house did you leave it <u>at</u>?*

(3.22) *Relative clauses: The old house <u>(which)</u> I was telling you <u>about</u> is empty.*

(3.23) *Wh-clauses: <u>what</u> I am convinced <u>of</u> is that the world's population will grow to an unforeseen extent.*

(3.24) *Exclamations: <u>what</u> a mess he's got <u>into</u>!*

(3.25) *Passives: She was sought <u>after</u> by all the leading impresarios of the day.*

(3.26) *Infinite clauses: <u>he</u> is impossible to work <u>with.</u>*

Quirk (1972: 301) states that a preposition can fall into one of two categories: simple prepositions and complex prepositions. Simple prepositions are those consisting of one word, such as '*at*' while complex prepositions are those comprised of more than one word, for instance, '*along with*'. Complex prepositions can be sub-divided into three groups.

a)   adverb+prep: *apart from, up to, away from;*

b)   verb/adjective/conjunction/etc+prep: *except for, due to, because of;*

c)   prep1+noun+prep2: *by means of, in comparison with, as a result of.*

According to Quirk (1972: 304), prepositional phrases are multifunctional; they can play a variety of syntactic roles in a sentence, for instance, they may function as adjunct, postmodifier in a NP, complementation of a verb, or complementation of an adjective, disjunct and conjunct.

As Quirk (1972: 304) mentions, among these functions, prepositional phrases functioning as adjunct and postmodifier in a NP are the most common. Under these circumstances, the prepositions of these phrases are closely related to the prepositional complements. Given that this section is centred around adverbials rather than noun modification, the following section will only focus on prepositional phrases functioning as adjunct, disjunct and conjunct, as shown in (3.27) to (3.29) which are quoted from Quirk (1972: 304).

Adjunct

(3.27) *The people were singing <u>on the bus.</u>*

Disjunct

(3.28) *He did, <u>in all fairness</u>, try to phone the police.*

80

Conjunct

(3.29) _On the other hand,_ _he made no attempt to help the victim or apprehend her_
attacker.

Quirk (1972: 304) emphasizes that prepositional phrases functioning as conjuncts
"are largely limited to idiomatic or stereotyped phrases" including "_of course_, _in a word_,
with respect, _in conclusion_, _at any rate_, etc".

3.2.1.3 English adverbial clauses

Adverbial clauses which are subordinate to main clauses function as adverbs providing
information on place, time, manner, cause, comparison, degree, purpose, condition, result
and concession. Adverbial clauses can be divided into two groups: finite clauses introduced
by subordinators and non-finite, verb-less clauses which are also called "abbreviated
clauses" in Quirk (1972: 304).

In terms of functions, adverbial clauses can be categorised into 10 groups, namely,
(i) clauses of time, (ii) clauses of place, (iii) clauses of condition and concession, (iv)
clauses of reason or cause, (v) clauses of circumstance, (vi) clauses of purpose, (vii) clauses
of result, (viii) clauses of manner and comparison, (ix) clauses of proportion and (x) clauses
of preference, according to Quirk (1972: 744-756). The following examples illustrate these
types of clauses.

(3.30) clause of time (initial position is common) (Examples from Quirk 1972: 744)

(3.30 a) _When I last saw you,_ _you lived in Washington. (Finite clause)_

(3.30 b) _He wrote his greatest novel_ _while working on a freighter._ _(Abbreviated –ing_
clause)

(3.30 c) _Once published,_ _the book caused a remarkable stir. (Abbreviated –ed_
clause)

(3.30 d) _When in difficulty,_ _consult the manual. (Abbreviated verb-less clause)_

(3.31) clause of place (Examples from Quirk 1972: 745)

(3.31 a) _They went_ _wherever they could find work._ _(Finite clause)_

(3.31 b) _Where known,_ _such facts have been reported. (Abbreviated clause)_

(3.32) clause of condition and concession (initial position is the tendency)
(Examples from Quirk 1972: 745)

(3.32 a) _If you treat her kindly_, _she'll do anything for you. (Conditional finite_

81

clause)

(3.32 b) *Although he hadn't eaten for days,* he looked strong and healthy. *(Concessive finite clause)*

(3.33) clause of reason or cause (the position of the clause mostly depends on the choice of the subordinator) (Examples from Quirk 1972: 752)

(3.33 a) *I lent him the money because he needed it. ("because" tends to follow the main clause)*

(3.33 b) *As Jane was the eldest, she looked after the others.*

(3.33 c) *Since we live near the sea, we enjoy a healthy climate. ("As" and "since" tend to take the initial position)*

(3.34) clause of circumstance (Example from Quirk 1972: 753)

Seeing that the weather has improved, we shall be able to enjoy our game.

(3.35) clause of purpose (more often infinitival clause) (Examples from Quirk 1972: 753)

(3.35 a) *In order to catch the culprits, elaborate plans were made. (Infinitival clause)*

(3.35 b) *The decision was made in order that peace should prevail. (Finite clause)*

(3.36) clause of result (Example from Quirk 1972: 754)

We planted hundreds of shrubs, so that by August the garden had improved out of all recognition. (Finite clause)

(3.37) clause of manner and comparison (Examples from Quirk 1972: 754)

(3.37 a) *She cooks a turkey exactly as my mother did. (Finite clause of manner)*

(3.37 b)*They hunted him as a tiger stalks his prey. (Finite clause of comparison)*

(3.38) clause of proportion (Examples from Quirk 1972: 755)

(3.38 a) *As time went on, their hopes began to wane. (Finite clause of proportion)*

(3.38 b) *The narrower the lane got, the more difficult the overhanging branches made it for us to keep sight of our quarry. (Finite clause of proportion, in this case, the former clause is the adverbial clause)*

(3.39) clause of preference (Example from Quirk 1972: 756)

Rather than/sooner than travel by air, I'd prefer a week on a big liner. (Bare infinitive clause)

3.2.1.4 Position of English adverbials

Generally speaking, Quirk (1972: 426) classifies the position of adverbials into four categories including "I" for "initial position", the position "before the subject"; "M1" for "medial position 1", the position "immediately before the operator" or "between two auxiliaries"; "M2" for "medial position 2", the position "immediately before the verb" or "before the complement in intensive BE clauses", and "E" for "end position", the position "after an intransitive verb" or "after an object or complement".

I am going to take the position of a prepositional phrase as one example to illustrate the position of adverbials in sentences. The position of a prepositional phrase, according to Quirk (1972: 334), is usually decided by the syntactic function of the prepositional phrase. If a prepositional phrase functions as a postmodifier of a NP, it usually succeeds directly the element it postmodifies. But if a prepositional phrase functions as an adverbial, the story will be totally different.

According to Quirk (ibid), for an adjunct, final or end position is the most common, as in (3.40) to (3.42) which are quoted from Quirk (ibid).

(3.40) *I saw him again on Friday.*

However, phrases of time in the initial position (before the subject) are also quite common.

(3.41) *On Friday, I saw him again.*

As for disjuncts and conjuncts, they are usually put before the subject though both initial and final positions are acceptable.

(3.42) *In my opinion, the wrong decision was made;*
Or: *The wrong decision was made, in my opinion.*

Compared with initial position and end position, medial or parenthetical position is the least usual. A sentence may have more than one prepositional phrase with the same function, and with regard to the sequence of adverbial prepositional phrases in one sentence, Quirk (1972: 335) points out that as a general rule "the phrases are placed in order of close relationship to the verb, those forming the complementation of the verb coming first, and conjuncts or disjuncts coming last". He (1972: 426) mentions that adverbs and short prepositional phrases functioning as adverbials are the most mobile elements in clause structure; most prepositional phrases functioning as adverbials very often occur in "E"

83

position, and very rarely occur in "M" positions but they may also occur in "I" position. In addition, according to Quirk (1972: 743), adverbial clauses functioning as adjuncts and disjuncts can be placed "in a final, initial or medial position within the main clause" with the finial position most common and the medial position rarest. In other words, there are few restrictions on the position of adverbials within clause structure, although some adverbials tend to be placed in the initial position and some in the final position.

3.2.2 Introduction to Chinese adverbials

According to Li and Thompson (1981: 320), Chinese adverbs can be classified into movable adverbs, nonmovable adverbs, and postverbal adverbials in terms of position in a sentence. Most Chinese adverbial clauses are linked with main clauses by one of two types of linking, namely, forward linking and backward linking, although linking elements can be omitted when the meaning can be inferred from the context (Li and Thompson 1981: 632). This section will focus on different types of Chinese adverbs and adverbial clauses.

3.2.2.1 Movable adverbs

Movable adverbs modifying the whole sentence can be placed either in the sentence-initial position or follow the topic or subject immediately and mainly include time and attitude adverbs as illustrated in (3.43) and (3.44) which are from Li and Thompson (1981: 321-322).

      (3.43 a) *Jīntiān wǒ bu shūfu*

           Today I not comfortable

           Today I don't feel well.

      (3.43 b) *wǒ jīntiān bu shūfu*

           I today not comfortable

           Today I don't feel well.

      In (3.43), *jīntiān* (today) is the time adverb, providing a time frame during which the event described by the sentence occurs. As shown in (3.43 a) and (3.43 b), the time adverb is a movable adverb which can occur either before or after the topic or subject but always before the predicate.

      (3.44 a) *xiǎnrán Zhāngsān bu gāoxing*

           Obviously Zhangsan not happy

Obviously, Zhangsan is not happy.

(3.44 b) *Zhāngsān xiǎnrán bu gāoxing*

Zhangsan obviously not happy

Obviously, Zhangsan is not happy.

In (3.44), *xiǎnrán* (obviously) is the attitude adverb, denoting "the speaker's attitude toward or evaluation of the event expressed by the sentence" (Li and Thompson 1981: 321). As a movable adverb, it can occur in the sentence-initial place or after the topic or subject and again always before the predicate.

3.2.2.2 Nonmovable adverbs

According to Li and Thompson (1981: 321), "the vast majority of adverbs in Mandarin are nonmovable adverbs". They succeed the topic or subject immediately and precede the verb. Nonmovable adverbs are divided into two groups including "manner adverbs" and "nonmanner adverbs."

"*Manner adverbs* (italics in original), as the name indicates, modify the verb phrase by signaling the manner in which the action of the verb phrase is carried out." Generally speaking, there are two ways to form manner adverbs, namely, "the addition of the suffix –*de*" to an adjective and the reduplication of each syllable in an adjective plus the addition of the suffix –*de*, as shown in (3.45) and (3.46) which are from Li and Thompson (1981: 323).

(3.45) *tā xīngfèn-de   pǎo – jìn – lai*

3sg excitedly   run enter come

S/He excitedly ran in.

(3.46) *tā kuài-kuài-de zǒu*[30]

3sg quickly   walk

S/He walked quickly.

In (3.45), the manner adverb *xīngfèn-de* (excitedly) is formed of the adjective *xīngfèn* (excited) and the suffix –*de*. In (3.46), *kuài-kuài-de* (quickly) is formed from duplicating the adjective *kuài* (quick) into *kuài-kuài* (quick-quick) and then adding the

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[30] "*tā kuài-kuài-de zǒu"* (Li and Thompson 1981: 323*)* in this case is used to illustrate how Chinese adverbs are derived from adjectives, however, it is worth pointing out that "*tā kuài-kuài-de zǒu"*is grammatically acceptable in Chinese while the more natural way to express the same idea is "*tā zǒu de hěn kuài"*(my own example).

suffix –*de*. Both of the manner adverbs are placed immediately after the subject or topic and before the verb.

The other major group of nonmovable adverbs includes nonmanner adverbs such as *yǐjīng* (already), *yìzhí* (straight), *cháng* (often) and *zǎo* (early), as shown in (3.47) from Li and Thompson (1981: 328).

> (3.47) *tā   yǐjīng   zǒu   le*
>
> 3sg already leave CRS
>
> S/He's already left.

3.2.2.3 Postverbal adverbials

According to Li and Thompson (1981: 352), postverbal adverbials refer to quantity adverbial phrases which consist of more than one word, and they "specify the extent or duration of an activity and must occur after the verb". Quantity adverbial phrases consist of a number, a classifier if required[31] and a noun, as shown in (3.48) and (3.49) which are from Li and Thompson (1981: 353).

> (3.48) *tā   zǒu –   le shí fēnzhōng le*
>
> 3sg leave – PFV ten minute CRS
>
> S/He's been gone ten minutes.

> (3.49) *tā   bǎ   wǒ tī –   le   yi jiǎo*
>
> 3sg   BA   I kick – PFV one foot
>
> S/He kicked me once.

shí fēnzhōng (ten minute) in (3.48) and *yi jiǎo* (one foot) in (3.49) are both quantity adverbial phrases which specify the duration and the extent of an activity respectively, and only occur after the verb.

3.2.2.4 Adverbial clauses

According to Li and Thompson (1981: 632-633), there are two ways to link two clauses in one sentence, namely forward linking and backward linking. This section will look at these two types of linking elements.

3.2.2.4.1 Forward-linking elements

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[31] Some time nouns, such as *nián* 'year' and *tiān* 'day', as well as certain other nouns found in quantity adverbial phrases, do not take classifiers (Li and Thompson 1981: 355, Note 9).

Forward linking elements can be used to link a clause with the following clause for the meaning to be complete, and sometimes, no explicit forward linking elements will be required to achieve the aim as the meaning can be inferred from the context. Forward linking elements are categorised into three groups including "forward-linking elements in clause-final position", "adverbial forward-linking elements" and "perfective aspect". (Li and Thompson 1981: 633). The three groups of linking elements will be illustrated in the following examples from Li and Thompson (1981).

The first group of forward linking elements appear at the end of the first clause and mainly include *dehuà* (if), *de shíhòu* (NOM time=when, while), *yǐhǒu* (after), *yǐqián* (before) and *ne, me* (pause particles), according to Li and Thompson (1981: 633). The position of this kind of element is shown in (3.50) from Li and Thompson (1981: 634).

(3.50) *nǐ   yǒu   qián   <u>dehuà,</u>, jiu   bu huì   xiàng   wǒ   jiè   qián   le*
      you   exist money   if   then not likely toward I borrow money CRS
       If you had money, you wouldn't have to borrow money from me.

As shown in (3.50), *dehuà* (if) as a forward-linking element in clause-final position occurs at the end of the first clause.

The second group of forward linking elements are adverbs, including movable adverbs which "can occur either in sentence-initial position or after the subject or topic" (Li and Thompson 1981: 635) and nonmoveable adverbs which "occur after the topic or subject" (Li and Thompson 1981: 638).

Movable adverbs include *fēidàn* (not only), *búdàn* (not only), *rúguǒ* (if), *jiǎrú* (if), *jiǎshǐ* (if), *yàoshi* (if), *chúfēi* (unless), *jíshǐ* (even if), *jiùshi* (even if), *yàobushì* (if not that), *suīrán* (although), *yīnwèi* (because), *yóuyú* (because), *wúlùn* (no matter whether), *búlùn* (no matter whether), *jìrán* (since), *jìshi* (since), *zhǐyào* (if only, as long as), according to Li and Thompson (ibid:635). Movable adverbs can be placed either before or after the topic or subject as illustrated in (3.51) and (3.52) which are from Li and Thompson (1981: 635-636).

(3.51) *tā   <u>búdàn</u>   huì   chàng – gē, hái   huì   tiào   bāléi – wǔ*
      3sg not:only know:how sing – song also know:how dance ballet –dance
      Not only can s/he sing, s/he also can do ballet.

(3.52) *<u>yàoshi</u>   jīntian fàng – jià,   jiu   hǎo   le*

if   today let:go – holiday then good CRS

if today were a holiday, that would be good.

According to Li and Thompson (1981: 637), most of these adverbial forward-linking elements appear with corresponding backward-linking elements in the following clauses as shown in (3.53) from Li and Thompson (1981: 636).

(3.53) *wǒ*   ***suīrán***   *hěn xǐhuān,* ***kěshi*** *méi qián*

I   although very like   but not money

Although I like (it) very much, I have no money.

The most common combinations of adverbial forward-linking and backward-linking elements are shown in Table 3.2 which is adapted from Li and Thompson (1981: 637-638).

Table 3-2: The most common pairings

of forward-linking and backward-linking elements

Forward-linking	Backward-linking
búdàn (not only)	*érqiě* (also),*yě* (also), *hái* (also)
rúguǒ (if), *jiǎrú* (if), *jiǎshǐ* (if), *yàoshi* (if)	*jiù* (then), *yě* (also)
jíshǐ (even if), *jiùshi* (even if)	*yě*(still), *hái* (still)
yàobushì (if not that)	*jiù* (then)
suīrán (although)	*dào* (but), *kěshi* (but), *hái(shi)* (still)
yīnwèi (because), *yóuyú* (because)	*suǒyǐ* (therefore), *jiu* (then)

Nonmovable adverbial forward-linking elements, in contrast to movable adverbial forward-linking elements as mentioned above, must be placed after the topic or subject or occur in sentence-initial position if the topic or subject is absent, such as *yòu...yòu* (both…and, not only… but also), *yě...yě* (not only…but also), *yuè...yuè* (the more…the more), *yībiān... yībiān* (while…Ving…Ving), as illustrated in (3.54) from Li and Thompson (1981: 639).

(3.54) *tā* ***yībiān*** *chī píngguǒ* ***yībiān*** *kàn – bào*

3sg while eat apple   read – paper

S/He's eating an apple while reading the paper.

88

The above four groups of nonmovable adverbial forward-linking elements require identical backward-linking elements, with the exception of *yì...jiù* (as soon as…then) which is a nonmovable adverbial forward-linking element, which occurs only after the topic or subject, but does not require an identical backward-linking element, as illustrated in (3.55) from Li and Thompson (1981: 639).

(3.55) *tā* **_yì_** *shuō, wǒ* **_jiù_** *dǒng   le*

3sg as:soon:as say   I   then understand CRS

As soon as s/he mentioned it, I understood.

According to Li and Thompson (1981: 639), there are three nonmovable adverbial forward-linking elements which are only placed in sentence-initial position, including *jíshǐ...yě* (even if…still), *chúfēi* (unless), *zhǐyǒu...cái* (only if…then), as shown in (3.56) from Li and Thompson (1981: 640).

(3.56) **_zhǐyǒu_** *tā   zhīchí   zhè – ge jiànyì, wǒmén* **_cái_** *néng chénggōng*

Only:if 3sg support this – CL proposal we   then can succeed

Only if s/he supports this proposal can we succeed.

As mentioned above, there are three types of forward-linking elements and the third type is the combination of perfective aspect suffix *–le* and an unquantified direct object. The suffix *–le* occurs in the first clause with an unquantified direct object, and the first clause is incomplete without "a second clause or the clause-final *le* 'current relevant state'" (Li and Thompson 1981: 641). The suffix *–le* which signals boundedness implies the meaning of sequence which can be expressed directly by *yǐhòu* (after). The usage of the suffix is illustrated in (3.57) from Li and Thompson (1981: 641).

(3.57) *tā   hē–* **_le_** *jiǔ,   jiu shuì – zháo   le*

3sg drink – PFV wine then sleep succeed CRS

After s/he drank the wine, s/he went to sleep.

Apart from all the forward-linking elements mentioned above, forward linking can also be expressed without a linking element. According to Li and Thompson (1981: 641), in such cases, the particular relationship between the two clauses is not signaled explicitly and must be inferred by the hearer from his/her knowledge of the situation and of what has been said to that point.

(3.58) *rénlèi   huó zài shì – shang,   bu néng bu láodòng*

Human:beings alive at world – on   not can not labor

Since/if/as long as human beings live in this world, they will have to do

hard work.

As shown in (3.58) from Li and Thompson (1981: 641), there is no explicit forward-linking element in the sentence. The first clause can convey complete meaning without the second clause, and the logical relationship is inferred by the hearer based on his or her knowledge of the world.

3.2.2.4.2 Backward-linking elements

According to Li and Thompson (1981: 653), the other way is to link a clause with the previous clause for the meaning to be complete. There are two types of backward-linking elements, namely, adverbial backward-linking elements in clause-initial position and nonmovable adverbs.

Adverbial backward-linking elements can only occur in the sentence-initial position of the clause, and are used to "link a clause either to the speaker's own previous clause or to a clause someone else has just said." This type of linking elements includes *bìngqiě* (moreover), *érqiě* (moreover), *kěshi* (but, nevertheless, however), *dànshi* (but, nevertheless, however), *búguò* (but, nevertheless, however), *ránér* (but, nevertheless, however), *háishi* (exclusive or) which is only used in questions, *huòshi* (inclusive or), *huòzhě* (inclusive or), *huòzheshì* (inclusive or), *wèideshì* (in order to), *shěngde* (so as to avoid), *suǒyǐ* (so), and *yīnwèi* (because) which can also be a forward-linking element.

(3.59) *nǐ yào wǒ bāng nǐ **háishi** yào zìjǐ zuò?*

you want I help you or   want self do

Do you want me to help you, or do you want to do it yourself?

In (3.59) from Li and Thompson (1981: 654), *háishi* (or) is a backward-linking element in the question and is used to link with the speaker's own previous clause.

(3.60) A: *wǒ juéde tā hěn nénggàn*

I   feel 3sg very capable

I feel s/he is very capable.

   B: ***érqiě***   *tā hěn yǒu   yǎn – xì de jīngyàn*

 moreover 3sg very exist act – play NOM experience

 Moreover, s/he has a lot of acting experience.

90

In (3.60) from Li and Thompson (ibid), *érqiě* (moreover) is a backward-linking element in the conversation between A and B and it is used to link with someone else's clause rather than the speaker's own.

In addition, nonmovable adverbs, such as *jiù* (then), *cái* (only then), *dào* (nonetheless), *yòu* (and), *yě* (but also), *yuè* (the more), and *yībiān* (V-ing), can also be backward-linking elements but the difference between adverbial backward-linking elements in clause-initial position and nonmovable adverbs is that the latter can only be used to link a clause to the speaker's own previous clause, as illustrated in (3.61) from Li and Thompson (1981: 655).

     (3.61) *tā juǎn – le   tóufã **cái**   piàoliang*

           3sg curl – PFV hair only:then pretty

           It's only when she curls her hair that she is pretty.

In conclusion, most Chinese adverbs are nonmovable adverbs, which means they are placed in a fixed position in a clause or a sentence; in most adverbial clauses, subordinate clauses are linked to the main clause by forward-linking or/and backward-linking elements, which means that some adverbial clauses can only be placed before the main clause while some can only be placed after the main clause and the position of an adverbial clause in a sentence is often decided by the nature of the linking element. In other words, if it is a forward-linking element, the subordinate clause must occur before the main clause and if it is a backward-linking element, the subordinate clause must occur after the main clause, except for *yīnwèi* (because) which can be either a forward-linking or a backward-linking element, according to Li and Thompson (1981: 653).

3.2.3 Contrastive analysis and possible challenges to SI

According to Darbyshire (1967: 116) and Quirk (1972: 426), English is a language which allows great freedom in the use of adverbials. And according to Li and Thompson (1981), Ye (2001: 27) and Ross and Ma (2006), Chinese does not offer much freedom in the use of adverbials, adverbial clauses in particular. Adverbial clauses usually precede main clauses or have a fixed place in a sentence. Therefore, when translating from English into Chinese, adverbials often have to be repositioned to make the translation acceptable to a Chinese audience.

In this study, if an English adverbial and its Chinese translation have the same

91

position in the English sentence and the Chinese sentence respectively, I will consider the English adverbial in Y (Yes) position; if they have different positions in the English sentence and the Chinese sentence respectively, I will regard the English adverbial as being in N (No) position. These situations are illustrated in (3.62) and (3.63) which show adverbs in Y position and N position respectively and in (3.64) and (3.65) which illustrate adverbial clauses that are in Y position and N position respectively. Examples (3.62), (3.63), (3.64) and (3.65) are from the experimental ST; the TT, the EG and the BT of these examples are my own.

(3.62) ST: <u>In recent months</u>, a Democracy Fund has been created.

TT: *最近几个月，（一个)民主基金创立了。*

EG: <u>closest few CL month</u> (one CL) democracy fund create PFV/CRS

BT: <u>In recent months</u>, a Democracy Fund has been created.

In (3.62), "In recent months" of the ST is also placed at the beginning of the sentence in its Chinese translation, modifying the whole sentence, so it is in Y position.

(3.63) ST: I put forward, <u>six months ago</u>, a balanced set of proposals for decisions at this Summit.

TT: *六个月前，我提出了一套平衡的提议，要在这次峰会上做决定。*

EG: <u>six CL month before</u> I put forward PFV one CL balance NOM proposal need at this CL summit make decision

BT: <u>Six months ago</u>, I put forward a balanced set of proposals for decisions at this Summit.

In (3.63), "six months ago" of the ST can be placed either before the subject "I" or between the subject "I" and the verb phrase "put forward" in its Chinese translation, but not after the verb phrase as it is in English, therefore, it is in N position.

(3.64) ST: <u>Because our world is imperfect</u>, we need the United Nations.

TT: *因为我们的世界不完美，所以我们需要联合国。*

EG: <u>Because we ASSOC world not perfect</u> so we need united nation

BT: <u>Because our world is imperfect</u>, we need the United Nations.

The Chinese translation of the original adverbial clause in (3.64) is in the same position as it is in the original English sentence. The adverbial clause of the ST in (3.64) will be considered in Y position.

(3.65) ST: I believe they were achievable, <u>if the political will was there.</u>

TT: *我相信<u>如果有政治意愿，</u>他们是可以实现的。*

EG: I believe <u>if have politics will</u> they be can achieve NOM

BT: I believe <u>if there was the political will</u>, they were achievable.

In (3.65), the adverbial clause of the ST is placed after the main clause while the translation of the adverbial clause is put before the main clause to conform to Chinese grammar. According to Pan (1997: 246), in Chinese, if an adverbial clause is placed after the main clause, It will have two features: first, it will have a strong flavor of translation and be regarded as an import from English; second, although, semantically speaking, the adverbial clause can be added intentionally to explain something, and is usually linked with the main clause with an em dash "—", it will still sound foreign and unnatural to a Chinese audience.

Pan's view is shared by Li and Thompson (see Section 3.2.2.4) as shown in (3.66) from Li and Thompson (1981: 632).

(3.66) ST: *Tā <u>suīrán</u> méi qián, <u>kěshì</u> tā háishì hěn kāngkǎi.*

EG: 3sg although not money, but 3sg still very generous

TT: Although s/he has no money, s/he's still very generous.

According to Li and Thompson (1981: 632), *suīrán* (although) is a linking element in the first clause, therefore, it is a forward-linking element and *kěshì* (but) is a linking element in the second clause, so it is a backward-linking element.

According to Li and Thompson (ibid), *jiǎrú* (if) is a forward linking element in a Chinese sentence, therefore, it always appears in the first clause as shown in example (3.67) from Li and Thompson (ibid).

(3.67) ST: *<u>Jiǎrú</u> xià yǔ, wǒmén jiù zài wūlǐ chī-fàn.*

EG: <u>If</u> descend rain, we then at indoors eat-food

TT: <u>If</u> it rains, we'll eat indoors.

Obviously, the if-clause of the English sentence in (3.65) is in a different position from the if-clause in the Chinese sentence in example (3.67), and as mentioned above, the adverbial clause in example (3.65) is considered in N position.

When it comes to SI of N-position English adverbials, it is very likely that word order restructuring will occur to generate a natural, smooth and grammatical error-free

interpretation, however, restructuring often requires simultaneous interpreters to delay the articulation of what has been received and comprehended by storing information in memory. This can easily overload their working memory, which may lead to errors in the interpretation. In order to find whether there is a correlation between the position of adverbials and SI performance, I will compare the interpretations of Y-position adverbials with those of N-position adverbials in Chapter 4.

3.3 English noun phrases (NPs)

3.3.1 Introduction to English NPs

According to Quirk (1972: 127), an English NP is the part in a sentence typically playing the role of subject, object or complement. Quirk (1972) divides English NPs into two general categories, the basic NPs and the complex NPs. The basic phrase comprises "pronouns and numerals and of nouns with articles or other closed-system items that can occur before the noun head, including predeterminers like *all*, determiners like *these*, 'ordinals' like *last* and qualifiers like *few*". The complex NP consists of three components, "the head", "the premodification" (occurring before the head) and "the postmodification" (occurring after the head) (1972: 857-858).

3.3.2 Head noun

According to Quirk (1972: 128-129), head nouns can be proper nouns and common nouns. Common nouns can be further divided into count nouns, mass nouns and nouns with dual membership. Furthermore, both count and mass nouns can be divided into concrete (material) and abstract (immaterial) nouns, such as *tower* and *anxiety*.

According to Quirk (1972: 160), "proper nouns are names of specific people (*Shakespeare*), places (*Milwaukee*), countries (*Australia*), months (*September*), days (*Thursday*), holidays (*Christmas*), magazines (*Vogue*), and so forth". They have "unique reference" and do not have the characteristics of common nouns. Quirk (ibid) particularly points out that proper nouns "lack articles", or if they have articles, they lack article contrast, e.g. *The Hague*, not *Hague* or *A Hague*.

Quirk (1972: 128) defines count nouns as nouns with definite and indefinite articles and admitting plural forms, such as *car*, *the car* (definite article), *a car* (indefinite article)

and *cars* (the plural form), while he defines mass nouns as nouns with zero article, definite article and indefinite quantifier but without plural forms, for instance, *bread* (zero article), *the bread* (definite article) and *some bread* (indefinite quantitative). Furthermore, he mentions that there is one group of nouns with the characteristics of both count nouns and mass nouns, such as *cake* (zero article), *a cake* (indefinite article), *the cake* (definite article), *some cake* (indefinite quantitative) and *cakes* (the plural form).

3.3.3 Premodification

Premodification occurs before the head noun.

3.3.3.1 Determiners

Determiners constitute "a set of closed-system items[32]" including *the*, *a*, *an*, *no*, *what*, *this*, *that*, *every*, *each*, *either*, *some, these and those*. Quirk (1972: 137) stresses that all these determiners "are mutually exclusive with each other", which means only one of them can occur before the noun head: *a *the boy*.

According to Quirk (1972: 139), apart from these determiners, there is a group of items occurring before the head of the NP called "closed-system premodifiers". The closed-system premodifiers include predeterminers, ordinals, and quantifiers.

3.3.3.1.1 Predeterminers

Predeterminers, as the name implies, are elements which occur before the determiners, although as Quirk (1972: 140) mentions, two predeterminers, *all* and *both*, can also succeed the head as shown in (3.68) quoted from Quirk (1972: 141).

(3.68) *The students all/both passed their exams.*

All other predeterminers including *all*, *both*, *half*, multipliers like *double*, *four times* and fractions like *one-third* occur only before articles or demonstratives; moreover, *all*, *both*, *half* and fractions also have *of*-construction, whereas multipliers do not. For instance,

(3.69) *All (of) the meat*   (3.70) *Half (of) the time*

Example (3.69) and (3.70) are quoted from Quirk (ibid).

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[32] "Closed-system items" refer to "the sets of items are closed in the sense that they cannot normally be extended by the creation of additional members" (Quirk 1972: 46) and some parts of speech such as articles, demonstratives, pronouns, prepositions, conjunctions and interjections are all closed-system items (Quirk 1972: 46-47).

3.3.3.1.2 Ordinals

According to Quirk (1972: 143), ordinals, in contrast to predeterminers, are postdeterminers which follow determiners of NPs and occur before quantifiers and adjectives, including the ordinal numbers like *first*, *second* and also *other*, *another*, *next* and *last*.

3.3.3.1.3 Quantifiers

Cardinal numbers and quantifiers (Quik 1972: 143-146) occur after determiners and before adjectives. Cardinal numbers indicate the number of things, such as *one*, *two*, *three*. Quantifiers include closed-system quantifiers such as *many* (*more* and *most*) and *several*, open-class quantifiers such as *of*-phrases with *lot*, *number* or *plenty* as their head, for instance, *a great number of*, typical partitives like *a loaf of bread* and general partitives like *a bit of* in *a bit of* trouble.

　　　　To sum up, in basic NPs, several elements can occur in sequence before the head noun, including predeterminers, determiners, ordinals, cardinals, quantifiers, and open-class premodifiers.

3.3.3.2 Open-class premodifiers

Compared with components of closed-system premodifiers such as predeterminers, determiners, ordinals, cardinals, and closed-system quantifiers, open-class premodifiers are more complex, more variable and more inflectional. They include adjectives, participles, inflected genitives, nouns, adverbial phrases and sentences which, however, are doubtfully acceptable according to Quirk (1972: 903). The following examples are quoted from Quirk (1972: 902-3).

　　　　(3.73) *I visited his <u>delightful </u>cottage.*　　(Adjective as premodifier)

　　　　(3.74) *I visited his <u>crumbling</u> cottage.* (Present participle as premodifier)

　　　　(3.75) *I visited his <u>completed</u> cottage*.　 (Past participle as premodifier)

　　　　(3.76) *I visited his <u>fisherman's</u> cottage.* (Genitive as premodifier)

　　　　(3.77) *I visited his <u>country</u> cottage.* (Noun as premodifier)

　　　　(3.78) *I visited his <u>far-away</u> cottage.* (Adverbial phrase as premodifier)

　　　　(3.79) *I visited his <u>what-do-you-call-it </u>cottage.* (Sentence as premodifier)

3.3.4 Postmodification

According to Quirk (1972: 860), postmodification can achieve greater explicitness than premodification. It has three forms, listed here in order of decreasing explicitness: the finite relative clause, the non-finite clause and the prepositional phrase.

3.3.4.1 Finite relative clause

Quirk (1972: 861) explains that "[p]art of the relative clause's explicitness lies in the specifying power of the relative pronoun" which shows "agreement with the head" and indicates "its status as an element in the relative clause structure". There are varied forms of relative pronoun depending on its relation to the head noun and its status in the relative clauses. For instance, "*whose*" is a pronoun in a genitive relation to a head noun (Quirk 1972: 863); "*who*" and "*whom*" are usually in the role of subject and object in the relative clause (ibid); "*where*", "*when*" and "*why*" are used as "adjunct of place, time and cause in the relative clauses"(ibid); "*such/as…as*" and (comparative form) "*than*" are relative pronouns indicating "qualification and comparison" (1972: 868). Two other very frequently used pronouns are "*that*" and "*which*". Of these, "*that*" can only be used in restrictive relative clauses whereas "*which*" can be used in both restrictive and non-restrictive relative clauses; moreover, in restrictive relative clauses "that" and "which" can be omitted ("zero pronoun"), if they are in the role of object; however, "zero pronoun" does not appear in non-restrictive relative clauses. Example (3.80)-(3.89) quoted from Quirk (1972: 862-871) show how these relative pronouns work.

(3.80) *The woman whose daughter you met is Mrs. Brown*; (The woman is Mrs Brown; you met *her* daughter)

(3.81) *The girl who spoke to him…*; (*who* works as the subject in the relative clause)

(3.82) *The girl whom he spoke to…*; (*whom* acts as the object in the relative clause)

(3.83) *That is the place where he was born*; (*where* is the adjunct of place, and can be replace by *in which*)

(3.84) *That is the period when he lived here*; (*when* is the adjunct of time and can be replaced by *during which*)

(3.85) *That is the reason why he spoke*; (*why* is the adjunct of reason)

(3.86) *Such girls as he knew were teachers*; (*such…as* indicates qualification)

(3.87) *He smoked <u>more</u> cigarettes <u>than</u> he bought*; (*more…than* indicates comparison)

(3.88) *The milk (which) I bought has gone sour*; (in restrictive relative clauses, *that/which* can be omitted if they act as object)

(3.89) *He got lost on Sowndon, <u>which</u> was enveloped in fog*; (in this non-restrictive clause, *which* acts as subject in the relative clause and cannot be omitted)

In addition, Quirk (1972: 874) points to the appositive clause, which resembles the finite relative clause and functions as a postmodifier. The characteristic of appositive clauses is that "a factive abstract noun", such as "*fact*", "*belief*", "*news*", is followed by "*that*", which then plays a different role in the finite clause from its role in finite relative clauses, as shown in (3.90) from Quirk (1972: 874).

(3.90) *The fact <u>that</u> he wrote a letter to her suggests that he knew her*; (*that* is a linking word in the appositive clause)

3.3.4.2 Non-finite clauses

In addition to the finite relative clauses and appositive clauses, non-finite clauses can also act as postmodifiers. These include present participle clauses, past participle clauses and infinite clauses. Example (3.91)-(3.93) are quoted from Quirk (1972: 876-878).

(3.91) *The man <u>writing the obituary</u> is my friend.* (Present participle clause).

(3.92) *An obituary <u>written by my friend</u> appeared last week.* (Past participle clause)

(3.93) *The man <u>to consult</u> is Wilson.* (Infinite clause)

Quirk (1972: 860) points out that because tense is not shown in non-finite clauses they are less explicit than finite clauses as shown in (3.94) and (3.95) which are quoted from Quirk (ibid).

(3.94) *The girl <u>who stood in the corner</u>*

The above sentence can be rewritten in a non-finite clause without showing the tense of the subject as follows:

(3.95) *The girl <u>standing in the corner</u>*

However, although a non-finite clause does not show tense, it can still convey its message in a more explicit way than a prepositional phrase. Example (3.95) can be re-expressed in a prepositional phrase as in (3.96) quoted from Quirk (ibid), and it is noticeable that the information on the girl's posture has been omitted.

(3.96) *The girl <u>in the corner</u>*

3.3.4.3 Prepositional phrases

Despite their lesser explicitness than finite relative clauses and non-finite clauses, according to Quirk (1972: 883), the use of prepositional phrases as noun-phrase postmodification is "three or four times more frequent than" the use of finite and non-finite clauses as noun-phrase postmodification.

Quirk (1972: 885) mentions that *of* is the most frequently used preposition in noun postmodification. Apart from *of*, there are simple prepositions like *to*, *by*, *beyond*, *before*, *after*, *from*, *on*, *with, without, as*, and *like*, complex prepositions like *in case of* and *on board*, and participial-formed prepositions like *pending*.

The position of a prepositional phrase, according to Quirk (1972: 334), is usually decided by the syntactic function of the prepositional phrase. If a prepositional phrase functions as a postmodifier of a NP, it usually succeeds directly the element it postmodifies, as in the following sentence quoted from Quirk (ibid)

(3.97) *The people <u>on the bus </u>were singing.*

A sentence may have more than one prepositional phrase with the same function, and with regard to the sequence of postmodifying phrases, the basic rule is that "phrases are placed in order of their closeness of relationship to the head", according to Quirk (1972: 336).

In conclusion, this section has discussed the NP in English from the perspective of its three crucial components, and its structures. NPs which only have premodification are called simple NPs, whereas complex NPs have both premodification and postmodification. The section also addressed the components of pre- and postmodifiers. Most premodifiers can coexist but must occur in a fixed sequence. The three components of postmodification usually occur in the NP independently, which means a NP is likely to have a finite relative clause or a non-finite clause or a prepositional phrase as postmodification but not to have all of them together.

3.3.5   Contrastive analysis and possible challenges to SI

According to Quirk (1972), in English, the modification of a head noun can be divided into two categories, namely, premodification and postmodification, according to its position in

99

the NP. The most striking difference between English NPs and Chinese NPs is that English has, whereas Chinese does not have postmodification, according to Li and Thompson (1981) and Ross and Ma (2006) (Chinese NPs will be discussed in detail in Section 3.6). Darbyshire (1967: 115) also states that adjectival clauses in English "function mostly as post modifiers of the heads of nominal segments" which means that adjectival clauses in English are usually put on the right side of the nominal segments, obeying the principle of Right Branching Direction (RBD), whereas Chinese tends to adhere to the principle of Left Branching Direction (LBD) (Ye 2001: 28).

The focus of this thesis is on the impact of grammatical differences on SI, and on the basis of the major grammatical differences mentioned above, English NPs can be divided into three categories, which I shall refer to as NP1s, NP2s and NP3s, dependent on whether they have premodification only (NP1s), postmodification only (NP2s) or both pre- and postmodification (NP3s).

As Chinese nouns are only premodified, therefore, according to Peng (1995: 362), in the process of translation from English into Chinese, English postmodification is often "re-positioned" to premodify the translated Chinese head noun. However, English postmodification may also be translated into a compound sentence, an independent sentence or an adverbial.

In the translation of NPs from English into Chinese, an issue that should be discussed is the translation of English articles. According to Peng (1995: 360), English articles are often omitted in translation into Chinese as Chinese has no corresponding class of item. According to Tsai (1995: 244), "Chinese, like Latin, requires no articles, definite or indefinite, to point to a noun. It is, therefore, both wasteful and ugly to pollute a piece of translation (or original writing in Chinese) with a plethora of equivalents of both these articles". In order to illustrate the point, Tsai (ibid) provides two instances as illustrated in (3.99) from Tsai (ibid) with my own EG and BT and in (3.100) from Tsai (ibid).

(3.98) ST: He is <u>a good</u> <u>man</u>.

TT: *他是<u>（一）个好人。</u>*

EG: he be <u>(one) CL good</u> <u>man</u>

BT: He is <u>a good</u> <u>man</u>.

According to Tsai (ibid), 一 (one) seems to be a translation of "a", and it is not

exactly wrong to have it in the translation; however, the Chinese convention, which is more natural, is to use the classifier (CL) 个 without (one) 一.

(3.99) ST: He has <u>the unusual</u> <u>capacity</u> <u>for making friends</u>.[33]

According to Tsai (ibid), the Chinese equivalent for "the" in example (3.100) is 那 or 那个 (that) but it is not required in the translation. Tsai (ibid) states that it is a phenomenon of Europeanization and "translators with blind faith in English grammar who do not guard against unnecessary words in Chinese always retain their equivalents".

Consequently, although English articles are a type of premodification, NPs only premodified by articles will not be further discussed in the current research.

Now let us return to the main types of NPs, namely NPs with premodification only (NP1s) as in (3.101), NPs with postmodification only (NP2s) as in (3.102) and NPs with both pre and postmodification (NP3s) as in (3.103). These three examples are from the experimental ST, and the TT, the EG and the BT of each example are my own.

(3.100) ST: <u>our interdependent</u> <u>world</u>

　　　　TT: *<u>我们相互依存的</u><u>世界</u>*

　　　　EG: <u>we each other depend NOM</u> <u>world</u>

　　　　BT: <u>our interdependent</u> <u>world</u>

The ST in (3.101) is an NP1. "Our interdependent" premodifies the head noun "world" in the ST, and the Chinese translation of the ST is also a NP with premodification.

(3.101) ST: <u>the failures</u> <u>of the Human Rights Commission</u>

　　　　TT: *<u>人权委员会的</u><u>失败</u>*

　　　　EG: <u>human right commission ASSOC</u> <u>failure</u>

　　　　BT: <u>the failures</u> <u>of the Human Rights Commission</u>

The original phrase in (3.102) is an NP2. "of the Human Rights Commission" postmodifies the head noun "the failures" in the ST and the postmodified NP is translated into a premodified one in Chinese.

(3.102) ST: <u>deep divisions</u> <u>among Member States</u>

　　　　TT: *<u>成员国之间严重的</u><u>分歧</u>*

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[33] The example is from Tsai (1995: 244). It would be more natural in English to use "an" before "unusual capacity" than "the" which was used by the original author.

EG: <u>member state ASSOC middle</u> <u>serious NOM</u> <u>division</u>

BT: <u>deep</u> <u>division</u> <u>among member states</u>

The source NP in example (3.103) is an NP3 with a premodifier "deep" and a postmodifier "among member states" and its Chinese translation is an NP with only premodification. In the target NP, the translation of the English premodifier "deep" remains as a premodifier "serious" and the English postmodifier "among member states" is translated into a premodifier of the Chinese head noun.

Given the limited time and limited processing capacities of simultaneous interpreters, they are very likely to prefer to preserve the word order of the original text with minimal changes. In the case of NP1s as illustrated in (3.101), interpreters can easily follow the original word order, while in the case of NP2s and NP3s as illustrated by example (3.102) and (3.103) respectively, interpreters must either reorganise the original NPs by changing the position of postmodification or resort to other means, such as translating a NP into a compound sentence, an independent sentence or an adverbial depending on the meaning of a specific sentence. Therefore, it is very likely that postmodification in an English NP will put pressure on interpreters' working memory, which may lead to flaws in interpreting output. In Chapter 4, the interpretations of NP1s will be compared with those of NP2s and NP3s respectively in order to identify whether the presence of postmodification has a significant impact on the SI into Chinese of English NPs.

3.4 English passives

3.4.1 Introduction to English passives

According to Quirk (1972: 801) "voice is a grammatical category which makes it possible to view the action of a sentence in two ways without change in the facts reported". He mentions that the active-passive relation can be analysed at both the verb-phrase level and the clause level.

At the verb-phrase level, the passive voice consists of an addition, from the point of view of the active voice, of a form of the auxiliary BE and the past participle of the head verb. For instance, in *he is examined* [quoted from Quirk (1972: 73)], *is* is the third personal singular present form of the auxiliary BE and *examined* is the past particle of the

main verb "examine".

At the level of the clause, subject and object are rearranged in terms of their positions and functions and the preposition *by* is introduced to act as a linkage between these two clause elements during the process of passivization. The process of voice transformation can be illustrated in (3.104) and (3.105) which are quoted from Quirk (1972: 802):

(3.103) *John kissed Mary*

(3.104) *Mary was kissed by John.*

Sentence (3.104) is in the active voice and sentence (3.105) is in the passive voice. *John* is the active subject in the first sentence and becomes an optional agent introduced by the preposition *by* in the second sentence; *Mary* is the active object in the first sentence and becomes passive subject in the second sentence. It is also shown that during the process of active-passive transformation, the 3rd person singular past form of auxiliary BE, *was*, and the preposition *by* are added in the second sentence which is in the passive voice.

According to Quirk (1972: 808-811), English passives fall into one of three groups: a) agentive passives with or without expressed agents; b) quasi-passives in which passive verb phrases have both "verbal and adjectival properties", quasi-agents are introduced by other verb phrasal prepositions such as "*about, at, over, to, with*" instead of "*by"*, and prepositional complements function as quasi-passive agents; and c) non-agentive passives or intensive active complement constructions in which the past participles function as adjectives and which cannot be transformed into active voices or have agents attached. These three categories can be further illustrated in (3.106)-(3.108) respectively. Examples are from Quirk (1972: 808).

(3.105) *Agentive passives with or without expressed agents*

(3.106 a) *This violin was made by my father. (With an agent)*

(3.106 b) *This difficulty can be avoided in several ways. (Without an agent)*

(3.106) *Quasi-passives*

    John was interested in linguistics.

(3.107) *Non-agentive passives*

    The modern world becomes more highly industrialized and mechanized.

Based on this process of voice transformation, we can generalise the typical

constructions of passives in English as shown in (3.109) and (3.110), according to Quirk (1972: 808).

> (3.108) NP1+ Auxiliary+verb+ (by+ NP 2)
>
> This violin was made by my father. (The example is from Quirk 1972: 808)
>
> (3.109) NP 1+ Auxiliary+verb
>
> This difficulty can be avoided in several ways. (The example is from Quirk 1972: 808)

3.4.2 Introduction to Chinese passives

Having mentioned the typical constructions of English passives in the previous section, the typical constructions of Chinese passives are presented as in (3.111) and (3.112) from Li and Thompson (1981: 505/493).

> (3.110) NP1+BEI+ (NP2)+verb
>
> ST: *Qìqiú   bèi   fēng   chuīzǒu LE*
>
> EG: Ballon   BEI   wind   blow away PFV/CRS
>
> TT: The balloon was blown away by the wind.
>
> (3.111) NP1+BEI+verb
>
> ST: *Wǒ   bèi   qiǎng   LE*
>
> EG: I   BEI   rob   PFV/CRS
>
> TT: I was robbed.

Apart from the two passive structures with the Chinese morpheme *bèi* as the passive coverb, there are three other passive markers including *jiào* which is a verb meaning *call*, *be named* or *order*, *gěi* which is a verb meaning *give* and *ràng* which is a verb meaning *let* or *allow*. *Bèi* is a dependent and meaningless coverb in the passive voice, whereas the other three particles are independent and have meanings on their own. Another difference between *bèi* and the three other particles is that the latter cannot occur in passive sentences in which agents are absent, according to Li and Thompson (1981: 506). The following three examples from Li and Thompson (ibid) illustrate how these three particles are used in the passive voice.

> (3.113) NP1+BEI+NP2+verb
>
> (3.113 a) *wǒ   gěi   tā   tōu le liǎng kuài   qián*
>
> (3.113 b)   *jiào*

(3.113 c)   *ràng*

    I   *BEI* *3sg*   *steal PFV two dollar money*

    I had two dollars stolen by him/her.

Moreover, there are two passive variants containing two particles in one passive, as shown in (3.114 a) and (3.114 b) from Li and Thompson (1981: 507).

(3.114) NP1+ BEI1+NP2+ BEI2+verb

(3.114 a) *Qín cháo*   *jiào*   *Hàn cháo*   *gěi miè*   *LE*

(3.114 b)   *ràng*

    Qin dynasty   *BEI1*   *Han dynasty BEI2*   *overthrow*   *PFV/CRS*

    The Qin dynasty was overthrown by the Han dynasty.

All the seven variants above are known as *bèi* constructions, which are used to present passive meaning. In addition, another construction known as the *shì…de* construction can also function as a link between the passive subject and the agent, introducing the agent, as illustrated in (3.115) from Li and Thompson (1981: 500).

    NP1+SHI+NP2+verb

(3.115) *nèi* *fú huà*   *shì*   *tā*   *huà*   *de*

    That CL painting be   *3sg*   *paint*   *NOM*

    That painting was painted by him.

In sum, the Chinese passive can be constructed in eight forms. There are four frequently used passive markers, such as *bèi* which can act as a passive voice coverb with or without the agent and *jiào*, *ràng*, and *gěi* which can only occur in the passive with the presence of the agent. No matter which particle is used to introduce the agent and no matter how these particles are combined in the passive, the main verb always occurs in sentence-final position.

3.4.3 Contrastive analysis and possible challenges to SI

The current research mainly focuses on the impact of grammatical differences between English and Chinese on SI; however, it is worth mentioning the difference in the use of passives in English and Chinese.

According to Ross and Ma (2006), the passive is more frequently used in English than in Chinese. For instance, a sentence like "it is said that" in English is usually expressed as "people say" in Chinese. The explanation for the less frequent usage of

105

passives in Chinese than in English can be found in Li and Thompson (1981: 493) and Shi (2010: 91). According to Li and Thompson (1981: 493) and Shi (2010: 91), the typical Chinese passives with a clear passive voice maker BEI implies unfortunate or unpleasant experiences on the part of recipients. Therefore, according to Xu (2009: 435), before translating English passives into Chinese, it is essential to know whether the passives imply pleasant experiences on the part of recipients or unpleasant experiences. However, even though Chinese does not use passives as often as English does, it still has passives and the grammatical differences between English and Chinese passives discussed below can still pose a challenge to SI.

According to Biber et al. (1999: 935), and Xiao, McEnery and Qian (2006: 124), passives can be divided into two groups in terms of the presence of agents: passives with agents are called "long passives" and those without agents "short passives". The terms "long passive" and "short passive" will be used here and will be referred to as "LP" and "SP" for the sake of convenience.

The typical constructions of English LPs and Chinese LPs are presented as in examples (3.116) and (3.117) respectively, according to Quirk (1972: 808) and Li and Thompson (1981: 505).

(3.116) NP1+ Auxiliary+verb+ (by+NP2)

This violin was made by my father.

(3.117) NP1+BEI+ (NP2)+verb

ST: *Qìqiú*   *bèi fēng*   *chuīzǒu LE*

EG: Ballon   BEI   wind   blow away PFV/CRS

TT: The balloon was blown away by the wind.

As shown in the above examples, the two NPs introduced by the preposition "by" in English and by the passive marker BEI in Chinese respectively function as agents in LPs. Chinese and English are structurally different in terms of the position of agents. The agent is placed before the verb in Chinese while the agent is placed after the verb and connected to the verb with the preposition "by" in English. This view is also shared by Xiao, McEnery and Qian (2006: 142), according to whom "it is also apparent that the agent in the LP normally follows the passivized verb in English but occurs before the verb in Chinese."

Both English and Chinese passives can occur without agents. These short passives

(SPs) are illustrated in (3.118) and (3.119) respectively.

> (3.118) <u>NP1+ Auxiliary+verb</u>
>
> <u>This difficulty can be avoided</u> in several ways.
>
> (3.119) <u>NP1+BEI+verb</u>
>
> ST: <u>*Wǒ*</u>   <u>*bèi   qiǎng   LE*</u>
>
> EG: <u>I</u>   <u>BEI   rob   PFV/CRS</u>
>
> TT: <u>I was robbed.</u>

In examples (3.118) and (3.119), the syntactic structures of Chinese and English passives are almost the same. Xiao, McEnery and Qian (2006: 142) note that English SPs differ from LPs in that they do not include the agent or the preposition "by", while in Mandarin SPs, given BEI's "double role of marking passive constructions as well as introducing the agent", there is no agent, but BEI remains as the passive marker.

Given the grammatical differences discussed above, this research will focus on the syntactic differences between passives with and passives without agents (LPs and SPs respectively) in Chinese and English as illustrated in (3.116)-(3.119) to see whether the existence of agents has a significant impact on SI; in other words, whether the SIs of the instances of LPs and those of the instances of SPs are significantly different (see Chapter 4).

3.5   Chinese coverb phrases (CPs)

3.5.1   Introduction to Chinese coverbs and verbs

Traditionally, Chinese had a class of prepositions (A) and a class of verbs (B). According to Li and Thompson (1981: 360), some verbs have undergone a period of grammatical transition into prepositions; therefore, a class of prepositions with verbal origins (C) came into existence.

Wang (1947) was the first to introduce the original Chinese term for coverbs, *fù dòngcí* (subordinate verbs), which indicates that coverbs in a clause or sentence depend on the main verbs to deliver a complete meaning. However, this is just part of the story. The fundamental reason why the new term "coverb" was coined is that these morphemes sometimes functions as verbs on their own and sometimes function as prepositions supporting the main verbs.

According to Li and Thompson (1981: 360), some verbs have gone farther in the process of transition than others; therefore, some verbs (C1) have been completely transformed into prepositions and do not function as verbs anymore; while the others (C2) have not been completely transformed into prepositions and can still play the role of verbs in some cases (see Table 3.3).

Table 3-3: Chinese coverbs

Traditional Mandarin	A: Prepositions		B: Verbs
Grammatical Transition	↓		
Modern Mandarin	A: Original prepositions	C: Coverbs=Prepositions with verbal origins	B: Verbs
		C1: do not function as verbs any more	C2: can still function as verbs	

This raises the question of how and whether it is possible to draw a line between coverbs and verbs. According to Li and Thompson (1981: 364-367), the criterion of deciding whether a verb-like item is a coverb or a verb is that the verb-like item can be considered a coverb if it cannot be interpreted as a verb at least in some cases.

According to Li and Thompson (1981: 364-365), there are coverbs that cannot be used as verbs in any context such as *bèi* (the marker of an agent in a passive sentence)*, bǎ* (the marker of the Chinese BA construction)*, cóng* (from) and *hé* (with). These cannot function as verbs independently and only occur verbs as shown in (3.120)-(3.125) which are quoted from Li and Thompson (ibid).

(3.120) *bèi* (the marker introducing an agent in a passive sentence) (the verb has been underlined)

ST: *wǒ bèi   māma   pīpíng   LE*

EG: *I   BEI   mother criticize   PFV/CRS*

TT: I was underlined criticized by mother.

(3.121) ST: ＊*wǒ bèi   māma*

EG: *I   BEI   mother*

Example (3.121) is ungrammatical in Chinese and *bèi* cannot work

without a verb.

(3.122) *nǐ děi <u>cóng</u> gè fāngmiàn kàn*

　　　 you must from every angle look

　　　 You must look at it from every angle.

*(3.123) * nǐ děi <u>cóng</u> zhèr*

　　　　 you must from here

Example (3.123) is ungrammatical in Chinese as *cóng* has no verbal use.

(3.124)bié <u>hé</u> wǒ kāiwánxiào

　　　 don't with I joke

　　　 don't joke with me.

(3.125) * *bié <u>hé</u> wǒ*

　　　　 don't with I

Example (3.125) is ungrammatical in Chinese as well as *hé* cannot work without a

verb.

Li and Thompson (1981: 365-366) state that there are certain coverbs such as *zài*

(at), *gěi (to, for)* and *dào* (to), which can function as verbs, as shown in the following

examples quoted from Li and Thompson (ibid).

(3.122) *zài* (at) (the verb has been underlined)

　　　 ST: *Lǐsì <u>zài</u>   hǎi   biān*

　　　 EG: *Lisi   <u>at</u>   ocean   side*

　　　 TT: *Lisi   <u>is</u>   by the ocean.*

(3.123) ST: *tā zài guō li <u>fàng</u> shuǐ*

　　　 EG: *3sg at   pot in <u>put</u>   water*

　　　 TT: *S/He <u>put</u> water in the pot*

In (3.122), *zài* (at) can be interpreted as "be in" and can function as a verb

independently, while in (3.123), *zài* (at) can only be interpreted as "in" and it functions as a

preposition working with the verb *fàng* (put); in this case, *zài* (at) is a coverb.

3.5.2 Introduction to Chinese Coverb Phrases (CPs)

According to Po-Ching and Rimmington (2004: 98-99), coverbs are transitive verbs which indicate location, destination or instrument, and they accompany other verbs which express specific actions. Coverbs, in fact, "express concepts very similar to those expressed by prepositions in English". Li and Thompson (1981: 360) agree that "coverbs function as prepositions" adding that "a coverb and its noun form a phrase that modifies the verb of the sentence. A coverb must always occur in a sentence with a verb." According to Li and Thompson (1981: 356), a coverb structure in a sentence should generally be constructed as illustrated in (3.124) from Li and Thompson (ibid). As shown in (3.124), a coverb phrase (CP) "formed by the coverb plus the noun phrase generally precedes the main verb and follows the subject or topic" (Li and Thompson ibid).

Subject/topic+<u>coverb+noun phrase</u>+verb+(NP)

(3.124) ST: *wǒ yào*   <u>*gēn*   *tā*</u>   *shuō huà.*

EG: I   want   <u>with   3sg</u>   talk speech

TT: I   want to talk with him/her.

The CP is illustrated more clearly in the following examples. Examples (3.125)-(3.127) are from the experimental ST and the EG and the TT of each example are my own. In order to focus on the CP, irrelevant parts of the sentences have been deleted.

(3.125) ST: **把**通过发展消除贫困作为中心任务

EG: **BA** through develop eradicate poverty be centre task

TT: make the eradication of poverty through development a priority

The Chinese coverb in (3.125) is 把 (BA), a direct object marker, the CP is 把通过发展消除贫困 (BA through develop eradicate poverty) and the main verb is 作为 (be).

(3.126) ST: **向**全球艾滋病、结核病和疟疾基金捐款 *1400* 万美元

EG: **facing** globe HIV/AIDS、TB and malaria fund donate money 14 million US dollars

TT: donate 14 million US dollars to the Global Fund against HIV/AIDS, TB and Malaria

In (3.126), the coverb 向 *(facing)* indicates an action towards a reference point and its literal meaning is "facing", the CP is 向全球艾滋病、结核病和疟疾基金 (facing globe

110

HIV/AIDS、TB and malaria fund) and the main verb is 捐款 (donate money).

    (3.127) ST: **为和平发展**创造条件

        EG: **for** peace development create condition

        TT: create conditions for peaceful development

In (3.127), the coverb 为 *(for)* is the marker of the benefactive and indirect object construction and its literal meaning is "for", "for the sake of", and "on behalf of", the CP is 为和平发展 (for peace development) and the main verb is 创造 (create).

In addition, according to Li and Thompson (1981: 359), there are three coverbs succeeding verbs, followed by only NPs under certain circumstances, including *zài* (at, in, on); *dào* (to); *and gěi* (to). Example (3.128)-(3.130) are from Li and Thompson (1981: 359).

    (3.128) *Wǒ   <u>zhù **zài** Qīngdǎo</u>.*

        *I   live **at** Qingdao.*

        I live in Qingdao.

    (3.129) <u>*Dú **dào** dì wǔháng.*</u>

        *Read **to** ORD five line*

        Read to the fifth line.

    (3.130) *bǎ nèi ge bēi <u>dì **gěi** wǒ .*</u>

        *BA that CL cup hand **to** I*

        Hand me that cup!

In addition, some coverbs may have sentence-initial positions, such as *chúlè…(yǐwài)* (except); *guānyú* (as to, with regard to, in terms of); *zhìyú* (as to, with regard to, in terms of) (Li and Thompson 1981: 359-360) and *cóng* (from); *(zìcóng)…yǐlái* (since) [Li and Thomspon (1981: 368) and Shi (2010: 296)]. Example (3.131) and (3.132) are from Li and Thompson (1981: 359-360).

    (3.131) <u>*guānyú*</u> *guó wài   de   qíngxíng tā yìdiǎn dōu bùshúxi*

        as to country outside ASSOC situation 3sg a: little all not familiar

        As to conditions abroad, s/he really knows nothing.

    (3.132) *chúle   tā (yǐwài), nǐmén dōu zhàn qǐ lái.*

        Except 3sg   you   all stand rise come

        Except for him/her, all of you stand up!

3.5.3   Contrastive analysis and possible challenges to SI

According to Li and Thompson (1981: 360), CPs function as the modifying items of main verb phrases and are unique to Chinese though as mentioned above they "express concepts very similar to those expressed by prepositions in English" (Po-Ching and Rimmington 2004: 98-99). They can be categorised into three groups according to their position in a sentence, namely, preverbal CPs as shown in (3. 124-3.127) above, postverbal CPs as shown in (3.128-3.130) above and sentence-initial CPs as shown in (3.131-3.132) above.

Pre-verbal CPs must occur with and before their verb phrases (Li and Thompson 1981: 356-358). In terms of dealing with this type of CPs in SI, interpreters hear a coverb which is not the main verb first and then a NP which may include a complicated and long premodification, and the main verb comes after both. In English, in contrast, the main verb usually follows the subject closely and precedes the object in a declarative sentence. Therefore, in SI, the interpreter may have to either wait for the main verb before producing the output, putting strain on their short-term memory, or apply techniques like anticipation or self-correction to handle this difficulty. In other words, CPs of this type are very likely to increase the processing effort and overload working memory, which could result in errors in SIs.

Postverbal CPs which succeed the verb as shown in (3.128-3.130) and sentence-initial CPs which can be treated separately from the rest of the sentence including the verb as they can be separated from the rest with a comma as shown in (3.131-3.132), do not require interpreters to wait for the main verb or verb phrase. Therefore, interpreters are unlikely to meet the problems potentially caused by preverbal CPs when dealing with post-verbal and sentence-initial CPs. I will categorize preverbal CPs as CP2s and post-verbal and sentence-initial CPs as CP1s henceforth. Chapter 4 will examine the interpretations of CPs to see whether CP2s impact differently on SI than CP1s.

3.6   Chinese noun phrases (NPs)

3.6.1   Introduction to Chinese NPs

According to Li and Thompson (1981: 103), a Chinese NP can be defined either "in terms of its function" or "in terms of its form".

From the perspective of its form, Ross and Ma (2006: 49) define a NP as a combination of a head noun and any words describing or modifying the head noun, known as the modifier. Li and Thompson (1981: 104) define a NP in a broader sense as a pronoun such as *tā* (he), a simple noun such as *shū* (book), a compound noun such as *shūzhuō* (book desk), or a head noun with one or more of three other types of elements including "classifier phrases/measure phrases, associative phrases, and modifying phrases".

Li and Thompson (1981: 103) also define a NP in terms of its functions. They (ibid) mention that as a NP is used to "label something", it can function as "a topic, subject, direct object, indirect object, or object of a preposition" or the answer to a question like "what's that?" occurring with a verb in a sentence.

Both Li and Thompson (1981: 104) and Ross and Ma (2006: 49) agree that in Chinese, all noun modifiers must occur in front of the head noun in a NP.

3.6.2 Head noun

Before discussing premodification, this section will examine the head noun in Chinese, as it plays a central role in a NP.

In Chinese, head nouns or nouns play the role of subject and object, and there is no grammatical difference in the form between subject and object in the case of pronouns, as shown in (3.133) and (3.134) which are quoted from Ross and Ma (2006: 22).

> (3.133) *Tā   xué Zhōngwén.*
>
> *He study Chinese*
>
> *He studies Chinese.*
>
> (3.134) *Wǒ xǐhuān Tā.*
>
> *I   like   he.*
>
> *I like him.*

Like English, Chinese has both proper nouns and common nouns which can be divided into concrete nouns like *tǔdì* (land) and abstract nouns like *chénggōng* (success). But unlike English, Chinese does not have a grammatical difference between mass and count nouns.

Moreover, Chinese does not distinguish in the grammar between a singular and a plural form of nouns. Plurality is indicated in Chinese by means of morphemes called plural suffixes like *mén* (a group of) and *qún* (a flock of) following the noun. Alternatively, the

113

number of things can be indicated by applying a number plus a classifier phrase or just a number in front of the head noun. Since there is no distinction between the singular form and the plural form in Chinese, there is no grammatical difference between the forms of predicates in a sentence with a singular subject and a sentence with a plural subject as there is in English.

Differences between English NPs and Chinese NPs lie not only in the head noun but also in the other crucial part of a NP --- modification.

3.6.3 Modification

According to Ross and Ma (2006: 49-50), Chinese noun modification is divided into two categories according to structure. The first type of noun modifier includes a specifier like *zhè* (this), *nà* (that) and *něi* (which), or a number like *yī* (one), *ēr* (two), *sān* (three) and *sì* (four), or a specifier and a number together like *zhè sān* (these three) and *něi liǎng* (which two) with a classifier occurring directly in front of the head noun. A third type of noun modification, according to Ross and Ma (2006: 50), involves modifiers such as nouns, pronouns, adjectives, verbs and phrases that include a verb.

Like Ross and Ma (2006: 49-50), Li and Thompson (1981: 104-105) categorise Chinese noun modification into three groups including "classifier phrases/measure phrases", "associative phrases" and "modifying phrases". The group called "classifier phrase/measure phrases" contains classifiers occurring with a number, for instance, *bǎi* (hundred) and *qiān* (thousand), and/or a specifier such as *zhè* (this), *nà* (that) and *něi* (which), or certain quantifiers such as *jǐ* (how many/ a few), *zhěng* (whole), *mǒu yī* (a certain), and *měi* (every), and measure words modifying a noun which can denote a measure by itself. In the latter situation, a classifier is not needed. According to Li and Thompson (1981: 113), the second group of Chinese noun modification, the "associative phrases", contains NPs modifying another NP called the head noun, linked to the head noun by the particle *de*. This type of associative phrase can either denote a possessive/genitive meaning or a broader associative meaning. The third group is called the "modifying phrase", which can either be "a relative clause or an attributive adjective" (Li and Thompson 1981: 115).

This section will illustrate noun modification with different types of modifiers including 1) a specifier plus a classifier; 2) a number plus a classifier; 3) a specifier plus a number plus a classifier; 4) a number; 5) a noun; 6) a pronoun; 7) an adjective; 8) a stative

114

verb; 9) an action verb; 10) a verb plus an object; 11) a prepositional phrase plus a verb and 12) a subject plus a verb sequence. The following part will look into these twelve categories in detail.

(3.135) *Specifier +classifier+noun.* [Example from Li and Thompson (1981: 105)]

Nèi   tiáo   niú
That   CL   cow
That cow

(3.136) *Number+classifier+noun.* [Example from Li and Thompson (1981: 104)]

Sān   ge   rén
Three   CL   person
Three   people

(3.137) *Specifier   +number+classifier+noun.* [Example   from   Li   and Thompson (1981: 105)]

Nèi   liù   běn   shū
Those   six   CL   book
Those   six books

(3.138) *Number   or   measure   word+noun   (itself   denoting   a   measure).* [Example from Li and Thompson (1981: 105)]

sān tiān
Three day
Three days

According to Ross and Ma (2006: 43), in a Chinese NP modified by a classifier phrase, the modified head noun must have a classifier immediately before the noun, and either a specifier, or a number, or a specifier and a number, will precede the classifier; and when both a specifier and a number exist in a NP, the specifier must precede the number. Therefore, NPs with classifier phrases and measure phrases as premodification can be structured as follows:

a) Specifier +classifier+noun.

b) Number+classifier+noun.

c) Specifier +number+classifier+noun.

d) Number or measure word+noun (itself denoting a measure)

(3.139) *Noun+de+the head noun (Nouns as modifiers).* [Example from Li and Thompson (1981: 114)]

> *Zhōng guó   de   rénkǒu.*
>
> *China   ASSOC   population*
>
> *China's   population*

(3.140)*Pronoun+de+the head noun (Pronouns as modifiers).* [Example from Li and Thompson (1981: 113)]

> *wǒ de chènshān*
>
> *I   GEN   shirt*
>
> *My   shirt*

According to Li and Thompson (1981: 113-114), example (3.139) and (3.140) belong to the group called associative NPs in which a noun or a pronoun is linked with the head noun by the particle *de,* showing either a possessive/genitive relation with the head noun as in example (3.140) or a broader associative relation with the head noun as in example (3.141).

> (3.141)*Adjective+de+the head noun (Adjectives as modifiers).* [Example from Li and Thompson (1981: 119).
>
> *Xiǎo   de   júzi*
>
> *small   NOM   organge*
>
> *An orange that is small*

According to Li and Thompson (1981: 117), a NP with an adjective modifying the head noun as an attributive rather than a predicative is known as an attributive adjective NP.

The next five types of NPs are quite different from the previous seven, being NPs with a premodification including a verb, as shown in example (3.142)-(3.146) which are quoted from Ross and Ma (2006 : 51-52).

> (3.142)*stative verb+de+the head noun (Stative verbs as modifiers).*
>
> *wǒ xǐhuān de chē*
>
> *I   like   NOM car*

116

A car that I like

(3.143) *Action verb+de+the head noun (Action verbs as modifiers)*

xiě de zì

write NOM character

a character that is written

(3.144) *Verb+object+de+the head noun (Verb+object as modifiers)*

Mài shū de rén

Sell book NOM people

The person who sells books

(3.145) *Prepositional phrase+verb+de+the head noun (Prepositional phrase+verb as modifiers)*

Zài gōngyuán lǐ wán de rén

In park play NOM people

People who are playing in the park

(3.146) *Subject+verb+de+the head noun (Subject+verb sequences as modifiers)*

Tā xǐhuān de dōngxi

He like NOM thing

The things that he likes

The five examples from (3.142) to (3.146) present a general picture of the basic forms of those modifiers that include verbs. Ross and Ma (2006: 50) mention that modifiers including a verb plus an object, modifiers including a prepositional phrase plus a verb, and modifiers including a subject plus a verb are the three most frequently used modifying phrases in Chinese. In English, all of these five types of modifiers occur after head nouns, introduced by relative nouns, such as "who", "whom" or "which", or a complementiser as relative clauses, whereas in Chinese, there is no word corresponding to relative pronouns or to the complementiser (Ross and Ma 2006: ibid).

According to Li and Thompson (1981: 575), NPs with premodification including a verb result from the grammatical process of nominalization, in which "a verb, a verb phrase a sentence or a portion of a sentence including a verb can function as a noun phrase". They (ibid) add that different languages display different processes of nominalization, and in

117

Chinese nominalization, the particle *de* "is placed after a verb, a verb phrase, a sentence, or a portion of a sentence including a verb"

All twelve types of NPs have been outlined in this section in a simple form in which only one or at most two elements appear in a NP. However, in a formal speech, it is possible to use several elements in a NP and under these circumstances, according to Li and Thompson (1981: 124), there are generally three types of order to observe. The following three patterns and example (3.147)-(3.149) are quoted from Li and Thompson (1981: 124-125)

a) associative   phrase+classifier/measure   phrase+relative
   phrase+adjective+noun

(3.147) *wŏ- de   nèi - ge   zhù   zài   Měiguó de   hăo péngyou*
         I - GEN   that-CL   live   at   America NOM   good friend
         That good friend of mine who lives in the United States

b) associative phrase+ relative   phrase + classifier/measure   phrase
   +adjective+noun

(3.148) *wŏ- de   zhù   zài   Měiguó de   nèi - ge   péngyou*
         I - GEN   live   at   America NOM   that-CL   friend
         That friend of mine who lives in the United States

c) classifier phrase+associative phrase+noun

(3.149) *nèi – ge fàndiàn –   de   cài*
         that CL restaurant- ASSOC food
         the food of that restaurant

3.6.4   Contrastive analysis and possible challenges to SI

Li and Thompson (1981: 104) and Ross and Ma (2006: 49) agree that modification must occur in front of the head noun in a Chinese NP. According to Quirk (1972: 857), English nouns can be premodified or postmodified or modified in both ways at the same time. Therefore, a striking difference between an English NP and a Chinese NP is that a Chinese NP only has premodification and no postmodification, as shown in (3.150) (The example is from the experimental ST. The EG and the TT are my own):

(3.150) ST: *与发展中国家的金融合作*

<div align="center">EG: <u>with developing country ASSOC finance</u> cooperation</div>

<div align="center">TT: <u>financial</u> cooperation <u>with developing countries</u></div>

In (3.150), *与发展中国家的金融* (with developing countries ASSOC finance) is the premodification of the head noun *合作* (cooperation). In the translation, part of the original Chinese premodification *与发展中国家* (with developing countries) is repositioned as postmodification "with developing countries" of the head noun "cooperation".

I will divide the Chinese NPs into two groups, namely, NP1s and NP2s, according to the position of modification in the translated English NPs, as shown in example (3.151) and (3.152). Both examples are from the ST, and the EG and the TT of each example are my own. If a Chinese NP is translated into English with the original premodification remaining premodification in its English translation, in other words, if the word order of a Chinese NP is preserved in its English translation, it will be regarded as an NP1. If a Chinese NP is translated into English with the original premodification being repositioned to be postmodification in its English translation, in other words, if the word order of a Chinese NP is changed in its English translation, it will be considered as an NP2.

<div align="center">(3.151)ST: <u>*200 个清洁能源和环保项目*</u></div>

<div align="center">EG: <u>200 CL clean energy and environmental protection</u> project</div>

<div align="center">TT: <u>200 clean energy and environmental protection</u> projects</div>

The Chinese NP in example (3.151) is regarded as an NP1. The original premodification *200 个清洁能源和环保* (200 clean energy and environmental protection) can be translated into premodification in its English corresponding NP and the word order of the original Chinese NP is retained in its English translation.

<div align="center">(3.152)ST: <u>*应对气候变化的能力*</u></div>

<div align="center">EG: <u>response towards climate change ASSOC</u> ability</div>

<div align="center">TT: the ability <u>to deal with climate change.</u></div>

In example (3.152), *应对气候变化的* (response towards climate change ASSOC) is the premodification of the head noun *能力* (ability). In the translation, the original Chinese premodification is repositioned to be postmodification "to deal with climate change" in the English TT, therefore, the original Chinese NP is considered as an NP2.

<div align="center">119</div>

Given the limited time and limited processing capacities of simultaneous interpreters, they are very likely to prefer to preserve the word order of the original text with minimal changes. In the case of the first type of NPs (NP1s) as illustrated in (3.151), interpreters can easily follow the original word order; while in the case of the second type of NPs (NP2s) as illustrated in (3.152), interpreters often reposition the original premodification or parts of the original premodification of the Chinese NPs to postmodification in the interpreted English NPs. The current research will try to identify whether Chinese NP2s have a different effect on the SIs of the entire NPs than NP1s.

3.7 Chinese topic-prominent clauses (TCs)

3.7.1 Introduction

According to Tomlin (1986: 87, 180), Croft (1990: 61) and Song (2001: 64, 308), Chinese follows the basic order of SVO as English does, as shown in (3.153) from Shen (2008: 7).

(3.153)	Chinese original:	我	喜欢	音乐。
	Chinese *pinyin:*	*Wǒ*	*xǐhuān*	*yīnyuè*
	Literal English equivalents:	I	like	music
	Grammatical structure:	Subject	verb	object
	English translation:	I	like	music.

However, according to Li and Thompson (1981: 26), Croft (1990: 85), Song (2004: 49), Shen (2008: 35) and Wu (2004: 6, 8), apart from subject-predicate sentence structures often composed of subjects, predicates and objects, there is also a vast number of Chinese sentences which are topic-prominent structures. Li and Thompson (1981: 15), consider "topic-prominence" to be one of the most distinguishing features of Chinese, and one which suggests that the language is of a different type than most other languages. In this language type, "topic" has a similar status as subject and direct object, and is "quite crucial in explaining the structure of ordinary sentences in the language" (Li and Thompson 1981: 16).

Li and Thompson (1981: 15) state that "the topic of a sentence is what the sentence is about. It always comes first in the sentence, and it always refers to something about which the speaker assumes the person listening to the utterance has some knowledge". Furthermore, "a topic can always optionally be followed by a pause in speech, which serves

to set the topic, that which is being talked about, apart from the rest of the sentence". This will be illustrated in (3.154) and (3.155) which are from Li and Thompson (1981: 15). A striking difference between "topic" and "subject" is that "the subject must always have a direct semantic relationship with the verb as the one that performs the action or exists in the state named by the verb, but the topic need not" (Li and Thompson 1981: 15). This will also be shown in (3.154) and (3.155).

(3.154) *Zhāngsān* wǒ yǐjīng   jiàn – guo le

Zhangsan I already   see – EXP CRS

Zhangsan, I've already seen (him).

In (3.154), *Zhāngsān* "Zhangsan" is the topic and is what the sentence discusses. *wǒ* (I) is the subject of the sentence and there is a "direct semantic relationship" between the subject *wǒ* (I) and the verb *jiàn* (see) which describes the action of the subject, however, the topic, *Zhāngsān* (Zhangsan) has nothing to do with the rest of the sentence in terms of grammar.

(3.155) *Zhèi   –   kē   shù* yèzi   hěn dà

This   –   CL   tree leaf   very big

This tree, (its) leaves are very big.

In (3.155), the topic is *Zhèi   –   kē   shù* (this tree) and the subject is *yèzi* (leaves). And in the sentence, *yèzi* (leaves) are very big rather than *Zhèi   –   kē   shù* (this tree). In other words, there is no direct grammatical relationship between the topic and the rest of the sentence.

As Li and Thompson point out (1981: 15), English sentences almost always have an easily identified subject which typically precedes the verb, and there is agreement between the subject and the verb in number. In contrast, in Chinese, the subject is not characterised "by position, by agreement and by any case marker" and sometimes a Chinese sentence may even be constructed without a subject, as shown in (3.156) and (3.157) which are from Li and Thompson (1981: 16).

(3.156) *Zuótiān   niàn – le liǎng –ge zhōngtou – de shū*

Yesterday read – PFV two –CL hour   – GEN book

Yesterday, (I) read for two hours.

(3.157) *Hǎo   lěng   a*

121

very   cold   RF

It's very cold.

In (3.156) and (3.157), it is possible to know who did the reading in (3.156) and what is very cold in (3.157) based on the context of the Chinese sentences. Subjects in Chinese can be omitted in these cases, whereas in English, subjects, including so-called "dummy subjects" such as "it" in "it is cold", have to be present for sentences to be grammatically complete and correct.

According to Chafe (1976: 49), English also has so-called TCs but the topic here is a discourse notion rather than a grammatical one. In English, a topic can be placed in the sentence-initial position to create contrast, in a structure which is quite rare in English, as shown in (3.158) from Chafe (1976: 49).

(3.158) The play, John saw yesterday.

According to Chafe (1976: 49), "the play" is placed in sentence-initial position to emphasize that it was a play that John saw yesterday rather than, for example, a movie; and the second focus of the sentence is "yesterday" to indicate that John saw the play yesterday rather than any other day. This sentence has "two foci of contrast" and the topic "the play" is placed in the initial position of the sentence to be contrastive.

In contrast, topics in Chinese TCs do not need to be contrastive. In other words, topics in English function differently from those in Chinese and topic-prominence is unique to Chinese. According to Chafe (1976: 50), Chinese TCs seem to convey the meaning

in a way that does not coincide with anything available in English. In other words, there is no packaging device in English that corresponds to the Chinese topic device, and hence no fully adequate translation.

3.7.2 Topics and subjects in Chinese sentences

Li and Thompson (1981: 85-86) state that the topic is "what the sentence is about", or it "sets a spatial, temporal, or individual framework within which the main predication holds". The topic can refer to things that are known to the hearer, which are definite as shown in (3.159) from Li and Thompson (1981: 130) or to non-referential NPs with no classifiers, which are generic as in (3.160) from Li and Thompson (1981: 129).

(3.159) *Zhèi – gerén*

      This – CL person

      This person

The NP in (3.159) is a referential NP which "is used to refer to an entity" (Li and Thompson 1981: 126). Furthermore, Li and Thompson (1981: 126, 130) state that referential NPs can be divided into definite and indefinite NPs, and "a definite NPs refers to an entity that the speaker believes is known to the hearer, while an indefinite NP refers to an entity about which the speaker believes the hearer does not already know". The NP in (3.159) is composed of a demonstrative *Zhèi* (this), a classifier *ge* and the head noun *rén* (person). According to Li and Thompson (1981: 130), a NP with a classifier phrase and a demonstrative must be definite because the demonstrative indicates that the entity is known to the hearer.

(3.160) *Māo   xǐhuān   hē   niú – nǎi*

      Cat   like   drink cow – milk

      Cats like to drink milk.

According to Li and Thompson (1981: 129), NPs are categorised into referential NPs which have been illustrated in (3.159) and non-referential NPs which have nothing to do with definiteness. In contrast to referential NPs, non-referential NPs denote "a class of entities rather than any specific member(s) in that class". As shown in (3.160), the NP in the initial position of the sentence, *māo* (cat), does not refer to any particular cat. A non-referential NP occurring in topic position as shown in (3.160) is "sometimes called generic".

According to Li and Thompson (1981: 86), topic has two main features. First, it always occurs at the beginning of a sentence, except that a connector used to connect the sentence with the preceding sentence can occur before it. There may also be a pause or a pause particle such as *a, ya, me, ne or ba*, separating the topic from the rest of the sentence, but "the pause particle is optional" as shown in (3.161) from Li and Thompson (1981: 86).

(3.161) *Nèi – zhī gǒu {a/me/ne},   wǒ yǐjing kàn   – guo le*

      That –CL dog   I already see – EXP CRS

      That dog, I have already seen.

In (3.161), *Nèi – zhī gǒu* (that dog) is the topic and is placed in sentence initial

position.

According to Li and Thompson (1981: 87), the subject of a Chinese sentence has a close semantic relationship, to be more specific, "a doing or being relationship" with the verb of a Chinese sentence (see Section 3.6.1), as shown in (3.162) from Li and Thompson (1981: 87).

> (3.162) *Wǒ xǐhuan chī píngguǒ*
>
> I   like   eat apple
>
> I like to eat apples.

In (3.162), the person doing the liking is *wǒ* (I), and there is a direct being or doing relationship between *wǒ* (I) and the verb *xǐhuan* (like). *wǒ* (I) in this sentence is the subject.

3.7.3   Five Types of Chinese sentences

Although both the topic and the subject of a Chinese sentence should be taken into consideration when we analyse the sentence, there are sentences in which only one or neither occurs. We will look into the different types of combination of topics and subjects in Chinese.

1.   According to Li and Thompson (1981: 88), the first type includes Chinese sentences with both topics and subjects, as shown in (3.163)-(3.168).

> (3.163) *Nèi – zhī gǒu {a/me/ne},   wǒ yǐjing kàn   – guo le*
>
> That –CL dog   I already see – EXP CRS
>
> That dog, I have already seen.

In (3.163) from Li and Thompson (1981: 88), *Nèi – zhī gǒu* (that dog) is definite and is placed at the beginning of the sentence. It is the topic of the sentence, showing what the sentence is about. There is a direct "doing" or "being" relationship between *wǒ* (I) and the verb *kàn* (see) and *wǒ* (I) is the subject of the sentence. In this case, the sentence has both a topic and a subject.

According to Li and Thompson (1981: 95), time and locative phrases in the initial position of sentences as illustrated in (3.164) and (3.165) from Li and Thompson (1981: 95) should also be considered as topics as they meet all the requirements for being topics: "they set the frame within which the rest of the sentence is presented, they are definite, referring to places and times about which the hearer already knows, and they may be followed by pause particle." Shen (2008: 238) states that time phrases (and locative phrases) cannot be

124

topics because "they are not only NPs but also adverbials" and "they are not what the sentences are about", however, according to Li and Thompson (1981: 85), "another way of talking about "what the sentence is about" is to say that a topic sets a spatial, temporal, or individual framework within which the main predication holds". Therefore, although time and locative phrases can serve as adverbials, they still meet all the requirements for being topics and in this thesis, these two types of phrases will be considered as topics.

> (3.164) *Nèi – nián   tā   hěn   jǐnzhāng*
>
> That – year 3sg very anxious
>
> That year s/he was very anxious.
>
> (3.165) *Zài Táiběi   kěyi chī de hěn hǎo*
>
> At   Taipei   can eat CSC very good
>
> (In) Taipei one can eat really well.

The time phrase *Nèi – nián* (that year) in (3.164) and the locative phrase *Zài Taipei* (at Taipei) in (3.165) are both topics in the two examples. One particular reason for paying attention to these types of topics is because we also have time phrases as topics in the experimental ST. It would be very interesting to see how simultaneous interpreters deal with Chinese time phrases as topics of sentences because time phrases as topics can indicate when actions take place; in other words, they may have a major impact on the use of auxiliary verbs, aspects, and tenses in the interpreted English structures as shown in (3.166). [Example (3.166) is from the experimental ST, and the EG and the TT are my own)].

> (3.166) ST: *今后五年，中国将再为发展中国家建设 200 所学校。*
>
> EG: present after five year China will again for developing country build 200 CL school
>
> TT: In the next five years, China will build another 200 schools for developing countries.

The time phrase *今后五年* (present after five year) indicates a future tense of the action in the rest of the sentence. Interpreters will need to maintain a concord between the interpreted time phrase and the tense used in the rest of the sentence in their English interpretations. It may cause a problem for interpreters as the first interpreted topics may disappear from their short-term memory quickly, given the simultaneous mode, which

could lead to inconsistency between time phrases and tenses in their interpretations.

One particular type of sentence, which contains both topics and subjects, has been given special attention; this is called a "double-subject sentence" by Li and Thompson (1981: 93) as shown in (3.167) and (3.168) from Li and Thompson (1981: 92, 93).

> (3.167) *Xiàng   bízi   cháng*
>
> Elephant nose long
>
> Elephants' noses are long.
>
> Or elephants have long noses.
>
> (3.168) *Jiājù   jiù   de hǎo*
>
> Furniture old NOM good
>
> Furniture, old is good.

According to Li and Thompson (1981: 93), this type of sentence was previously thought of as a sentence with two subjects *Xiàng* (elephant) and *bízi* (nose), and therefore, this type of sentence has been called a double-subject sentence. However, if the notion of "topic" is taken into consideration, this type of sentence can be re-defined and categorised as belonging to a subset of topic-comment sentences in which the relationship between topics and subjects is a "part-whole" relationship in which either "the subject is possessed by the topic" as shown in (3.167) or "the topic names a class and the subject names a subset of that class" as shown in (3.168). In this special case of topic-comment sentences, the topics set the frame of what the sentence is about and the subjects have a "doing" or "being" relationship with the verbs.

2.   According to Li and Thompson (1981: 88), the second type includes Chinese sentences in which the subjects and the topics are the same NPs as shown in (3.169) from Li and Thompson (ibid).

> (3.169) *Wǒ xǐhuan chī píngguǒ*
>
> I   like   eat apple
>
> I like to eat apples.

In (3.169), *wǒ* (I) is in a "doing" relationship with the verb *xǐhuan* (like), therefore, *wǒ* (I) is the subject of the sentence. In addition, *wǒ* (I) is definite, occurs at the initial place of the sentence, can be followed by a pause and says what the sentence is about, which means that *wǒ* (I) also meets all the criteria for being the topic. In this case, *wǒ* (I) acts as

the topic as well as the subject.

3.   According to Li and Thompson (ibid: 88), in some cases, Chinese sentences have topics but no subjects and the subjects are understood, as shown in (3.170) from Li and Thompson (ibid).

(3.170) *nèi – běn shū   chūbǎn   LE*

That – CL book   publish PFV/CRS

That book, (someone) has published it.

In (3.170), *nèi – běn shū* (that book) is the topic of the sentence as it is not in a "doing" relationship with the verb *chūbǎn* (publish). However, there is no subject in the sentence because it has to be someone or some institution who publishes a book and a book cannot publish itself. This type of topic-comment constructions are often translated into passives in English. It is interesting to see how the structure is interpreted in simultaneous mode below.

4.   According to Li and Thompson (1981: 89), not all Chinese sentences include a topic and a subject. Two types of sentences have neither subjects nor topics as illustrated in (3.171)-(3.172) from Li and Thompson (1981: 90).

When the subject/topic is understood from the communicative context, usually occurring in answers to questions, it is often omitted.

(3.171) A: *nǐ   kàn – guo Lǐsi   méiyǒu?*

You   see – EXP Lisi   not

Have you seen Lisi?

B: *méi kàn – guo*

not see – EXP

(I)   haven't.

The subject/topic *wǒ* (I) in answer B) is omitted because it was specified as *nǐ* (you) in the question A). The subject/topic does not need to be mentioned when it is understood from the context. Similarly, an imperative or command sentence in Chinese often does not contain the subject/topic as it is always understood that the subject/topic is the hearer, as shown in (3.172).

(3.172) *Jìn – lái*

In – come

127

Come in

5.   Questions to answers and imperative or command sentences can have neither subjects nor topics as they have been understood in the communicative context, as shown in (3.171) and (3.172). Moreover, according to Li and Thompson (1981: 90), another type of Chinese sentences, known as preventative sentences, also includes subjects but no topics, as shown in (3.173) and (3.174) from Li and Thompson (1981: 91).

This type of sentence

is one in which no noun phrase is definite or generic, or in which the definite or generic noun phrase is not what the sentence is about. In such sentences, the subject is usually an indefinite noun phrase, which cannot occur in sentence-initial position and cannot be a topic. Instead, the indefinite subject noun phrase must be placed after the verb (Li and Thompson 1981: 90-91).

(3.173) *Jìn – lái - le yi – ge rén*
Enter – come – PFV one – CL person
A person came in.

(3.174) *Yǒu rén zài dǎ – diànhuà gěi Zhāngsān*
Exist person DUR hit – telephone to Zhangsan
Someone is making a phone call to Zhangsan.

In (3.173), *yi – ge rén* (a person) does not meet the requirements for being a topic as it is neither definite nor generic and is not placed in sentence initial position, but it is the subject of the verb *Jìn– lái* (enter-come). In example (3.174), *rén* (person) is a noun but is placed after the existential verb *yǒu* (exist), and *Zhāngsān* (Zhangsan) is a definite noun but is not what the sentence is about, therefore, neither *rén* (person) nor *Zhāngsān* (Zhangsan) is the topic of the sentence.

3.7.4 Contrastive analysis and possible challenges to SI

Among these five types of sentence, the first type with both topics and subjects could present problems for simultaneous interpreters as topic-prominence is a unique feature which sets Chinese apart from European languages, including English; the second type of Chinese sentence in which the same NP functions as both subject and topic may not be

128

problematic for simultaneous interpreters as the structure of this type of Chinese sentences is similar to that of simple English sentences. The third type of Chinese sentences in which topics are present while subjects are omitted deserves special attention in terms of translation and interpreting as it often involves a process of change from an active voice sentence or subject-less sentence in Chinese to a passive in English. As far as the fourth and fifth types of Chinese sentences are concerned, sentences with neither subjects nor topics and sentences without topics or preventative sentences do not usually occur in formal speech, but only in colloquial language. The current thesis will try to identify whether the topic-prominent clauses (TCs) as shown in the first type and the third type of sentence structures have a significant effect on the SI, compared with subject-prominent clauses (SCs) as shown in the second type of sentences.

3.8 Conclusion

This chapter has been devoted to a contrastive analysis of English and Chinese grammars, especially from the perspective of grammatical asymmetries between English and Chinese in three English grammatical categories, namely English adverbials, English NPs and English passives and three Chinese grammatical categories, namely Chinese CPs, Chinese NPs and Chinese TCs. It has suggested possible obstacles that these differences could pose to SI between these two languages, and formulated hypotheses to be tested in the following chapter.

Chapter 4 Experimental Design and Research Methodology

Overview: Chapter 4 is dedicated to experimental design and research methodology, detailing the recruitment of experimental subjects and the selection of experimental materials, followed by the detailed description of experiment procedures, data manipulation and statistical calculation.

4.1 Introduction

According to Gile (1998: 69-70), research can be divided into "theoretical research" focusing on "the intellectual processing of ideas", and "empirical research" centreing around "the collection and processing of data". Empirical research is further divided into two categories, namely, "observational research" and "experimental research" and in experimental research, the researcher often generates "situations and phenomena" with a view to "the specific purpose of studying them". Since the overarching aim of the current research is to investigate whether and to what extent grammatical differences have an impact on SI, experimental research was employed to generate "situations and phenomena" for this specific purpose. To be specific, an experiment was designed to observe whether any content errors, such as omissions and substitutions, and delivery flaws, such as grammatical errors and self-corrections in simultaneously interpreting from English into Chinese and vice versa, could be associated with specific grammatical aspects of the two languages as manifested in the English and Chinese STs (see also Chapter 3) and, if so, whether professional and student interpreter data would exhibit the same or different patterns.

According to White (2000: 66), qualitative and quantitative research approaches to one topic can be "complementary, with the outcome resulting in a more thorough understanding of the problem under investigation." In an attempt to explore the issue of the impact of grammatical asymmetries on Chinese-English SI from a variety of viewpoints and to enhance the reliability of the results, this research includes a series of qualitative and quantitative reports based on data collected from a SI experiment involving both professional and student interpreters.

My hypotheses are, first, that specific grammatical aspects can cause interpreters to produce errors in both content and delivery in SI from English into Chinese and vice versa; secondly, that there will be quantitative and qualitative differences between the SI performances of the two populations; that is, I expect that interpretations produced by professional subjects will display a lower proportion of content and delivery errors than those produced by student subjects, and that because professionals have developed SI techniques over time and through their experience, they will be able to handle grammatical differences at the levels of word-order and syntax better than students.

In order to test the hypotheses mentioned above, the empirical study will be divided into three parts: a) an intra-group, symmetrical-asymmetrical comparison between the interpretations of symmetrical and asymmetrical structures in terms of content and delivery; b) an inter-group, expert-novice comparison between professionals' and students' interpretations of the structures (both symmetrical and asymmetrical) mentioned above; and c) a retrospective interview investigation of professionals' and students' perceptions of problems caused by grammatical differences and of the strategies they adopt to tackle any difficulties they may experience.

With regard to the first part, the research assesses the interpretations of three major grammatical categories of English, namely English adverbials, English NPs and English passives, and three major grammatical categories of Chinese, namely Chinese CPs, Chinese NPs and Chinese TCs (see Chapter 3). For each category, I compare the content accuracy and delivery appropriateness of interpretations of instances in which the grammatical structures are the same (symmetrical) across the two languages with interpretations of instances in which the grammatical structures differ (are asymmetrical) across the two languages. The second part will be devoted to the comparison between the content accuracy and delivery appropriateness of professionals' and students' interpretations of the six grammatical categories.

For both the intra- and inter-group comparisons mentioned above, the qualitative and quantitative assessment of the interpretations is based on a classification of seven parameters, namely, good in content (CG), omission in content (CO), substitution in content (CS), good in delivery (DG), grammatical error in delivery (DGE), correction in delivery (DC) and complete omission in delivery (DCO).

The third part is a retrospective analysis. All the subjects, both professionals and students, were asked to recall problems or difficullties they encountered in the process of interpreting. Their answers to questions were be audio-recorded and parts of their responses transcribed or summarised for a qualitative analysis.

4.2 Design of the experiment

4.2.1 Research ethics

4.2.1.1 Consent letter

Before the experiment, all the potential subjects received an invitation to participate detailing the purpose, schedule, and procedure of the experiment, the equipment needed on the day, and the participation fee.

4.2.1.2 Research ethics review form

Both the supervisor and the researcher completed, signed and submitted the Research Ethics Review Form of the University.

4.2.1.3 Experimental data

The interpreting output and the post-interpreting interview were audio-recorded and collected on the day. All the data is stored in a laptop. The data will be kept confidential, the names of the subjects will not appear anywhere in the thesis and I will take all possible measures to ensure that the subjects will not be identifiable. All the experimental data will be kept for at least 10 years.

4.2.2 Subjects

As mentioned above, all the subjects were briefed about the purpose and the details of the experiment beforehand. The reason for that is partly that, according Gile (1997b: 120) reporting viewpoints expressed by Covington at a workshop, it can be difficult to gain access to subjects for interpreting experiments because interpreters do not know what interpreting research is about. Also, according Gile (1997b: 120) reporting viewpoints expressed by Kalina and Lambert at a workshop, "once their students had been introduced to interpreting research, they were more willing to cooperate", and this was indeed also the case in my

experiment. Nevertheless, I still experienced difficulty gaining access to professional subjects (see below).

One of my research questions is whether the SI outputs of trainees and professional interpreters are differently affected by grammatical differences between Chinese and English. The original intention was to invite twelve trainees and twelve professional interpreters to take part in the experiment. However, it proved difficult to obtain the agreement of twelve professional interpreters for three main reasons: First, as mentioned by Gile (1997b: 120) reporting viewpoints expressed by Isham at a workshop, "interpreters often seem to think that they are being assessed for quality, whereas this is not the case". The starting point of the experiment is to look at the content accuracy and delivery appropriateness of the interpreting output produced by all the subjects, however, more importantly, it is to investigate the differences between experts and novices and to provide recommendations for training and teaching based on professionals' practice, experience and techniques. However, a number of professional interpreters did not want to be recorded, in case the recordings might affect their interpreting career and damage their reputation. Since recordings were crucial to the experiment, it was not possible to compromise on this prerequisite. Secondly, many professional interpreters were too busy to participate in the experiment at the relevant time. Thirdly, the high fees charged by professional interpreters made it impossible to have such a large sample size, so the number of professionals was reduced to nine. I predicted that there would be clear differences between the professional interpreters' data and the student interpreters' data, in which case the 4:3 student to professional ratio would not affect the results of the research negatively.

All the subjects had Chinese as their native language and English as their strongest foreign language. The nine professional subjects were at least five years from graduation, and their working diaries recorded at least 80 days of SI per year; the group of twelve student subjects comprised trainees who were following a one-year MA interpreting programme in a UK university and had been trained as simultaneous interpreters for roughly four months. I felt that this was not enough time for them to become anywhere near professional, but long enough for them to have acquired a basic idea of the nature and requirements of the interpreting activity. Both professional and student subjects were offered a participation fee. The table below provides data about the experimental population.

Table 4-1: Information on the research population

Relevant information	Population	
Level of expertise	Professional	Student
Number of subjects	9	12
Mean age	37	24
Average interpreting experience	≈130 days (max:180 days; min:80 days); at least 5 years	No real life experience
Average years of active use of English for learning and working purposes	15 years	5 years

4.2.3 Experimental materials

Given that the subject groups included both student and professional interpreters and given the factors that might affect SI (see Section 1.3), the choice of experimental materials was afforded careful attention in terms of content of the speeches, format of the research materials, speed of delivery and accent of the speakers.

The two source speeches chosen, one in Chinese and the other in English, had been delivered at two high-level conferences. The Chinese ST, titled *Towards the Attainment of the Millennium Development Goals* was delivered by H. E. Wen Jiabao, the former Premier of the State Council of the People's Republic of China, at the UN High-Level Plenary Meeting on the Millennium Development Goals on 22 September, 2010 in New York. The English ST was addressed to the UN 2005 World Summit by the former UN Secretary-General, Kofi Annan on 14 September, 2005 in New York.

Content: the content of the speeches is general, without specific terminology or specific background knowledge requirements, and therefore suitable for all subjects.

Format: the original video recordings of both speeches were used to simulate a real-life experience, since, according to Kurz (2002: 71), both linguistic and non-linguistic information and non-verbal cues such as "a view of the conference room and the speakers" should be provided to interpreters through video recording if the situation is not live.

Pace: the Chinese ST, a 9.42-minute speech with 1620 Chinese characters was presented by a male speaker at a rate of approximately 172 syllables/characters per minute;

the English ST, a 14.4-minute speech with 1603 English words, was delivered by a male speaker at a rate of roughly 111 words per minute (wpm). According to Gerver (1969), Seleskovitch (1978a), and Lederer (1981), for interpretation to be effective, the optimal speech rate for English speeches should be between 100 and 120 wpm. According to Li (2010), for interpretation to be effective, the optimal speech rate for Chinese speeches is between 150-180 syllables/characters per minute. The speech rates of the experimental speeches fall within these ranges.

Accent: the speaker of the English text has a slight non-native accent, which, however, never obscures meaning; the speaker of the Chinese text uses almost standard Putonghua. This was confirmed by the feedback on the experimental speeches provided by all the subjects (see below).

The suitability of the experimental materials was confirmed by data collected from the subjects after the experiment by means of a post-interpreting questionnaire (see Appendix II) plus a short post-interpreting interview that was audio-recorded. This showed that 92% of the subjects considered the English speech to be a general speech while 8% believed it a general speech with some specific terms. 92% thought the speech was delivered at a medium and acceptable rate while 8% thought it was slow. 58% thought the English speaker had a slight but acceptable accent while 42% thought the speaker did not have a non-standard accent, or at least they did not think their interpreting was affected by his accent. As for the Chinese speech, 75% considered it a general speech, 17% believed it a general speech with some specific terms and 8% regarded it as a subject-specific speech. 67% thought the speech was delivered at a medium and acceptable rate while 33% thought it was delivered at a relatively slow rate. 75% thought the Chinese speaker presented in standard Chinese or Putonghua while 25% thought the speaker had a slight but acceptable non-standard accent. Overall, the information obtained from all the subjects after the experiment on the appropriateness of the research materials shows that both experimental speeches were well selected given the research purposes.

4.3 Procedure

4.3.1 Pilot study

As empirical research can be time consuming and expensive, a pilot study was carried out.

An interpreting trainee who had received English-Chinese SI training in a UK university for roughly a year but had little real-life SI experience was selected as the subject for the pilot study and her output was audio-recorded by the researcher and transcribed for analysis. As only one interpreter took part in the pilot study, errors associated with the focal grammatical structures (see Chapter 3) in the output of the pilot study were only qualitatively analysed and the results suggested that it was very likely that there was a correlation between grammatical differences and the interpreter's performance in terms of content accuracy and delivery appropriateness.

4.3.2 SI experiment

Before the experiment, all the subjects were told the titles and length of the speeches, and given information about the speakers and the duration and the venue of the experiment.

The experiment was in three parts:

1) All the subjects were asked to fill in a pre-experiment questionnaire (see Appendix I) which asked for personal data, including age, gender, training in SI, and working experience in SI (see Section 4.2.2 for detailed information on the research population).

2) All the subjects simultaneously interpreted two speeches, one in Chinese and the other in English from video-recordings of real-life events. They interpreted one speech first, and then took a short break of 15 minutes because normally, simultaneous interpreters work in pairs and take turns every 15 to 20 minutes to guarantee the quality and effectiveness of interpretation. After the 15-minute break, they interpreted the other speech. The order of the two speeches was decided according to subjects' preference and it differed among subjects. Both English and Chinese outputs were audio-recorded by a single-track voice-recorder.

3) All the subjects were asked to fill in a post-experiment questionnaire (see Appendix II) designed to obtain their opinions on the appropriateness of the choice of experimental materials, such as the content of the two speeches, the speech rate and the accent of the two speakers (see Section 4.2.3).

As Vik-Tuovinen (2002: 63-64) points out, "concurrent introspection or thinking aloud" is often employed in translation studies, however, this approach is impossible for research into SI given the differences between translation and SI and the features of SI such

as simultaneity (see Section 1.2.1). Instead, introspection after interpreting ("retrospection") is appropriate for "investigating the process of interpreting" and for obtaining subjects' thoughts and the strategies they have adopted or prefer to adopt. According to Vik-Tuovinen's report (2002: 63) of Kalina's (1998: 151-159) original work in German, interpreters may not be conscious of or remember the decisions they make during the process of interpreting, and may have reasons for not commenting or explaining their performance even though they remember everything, so retrospection is not reliable. In my experiment, however, the subjects' comments and answers to questions will be supplementary data to a large quantity of statistical data obtained from their performance, and intended only to gauge their thoughts about the experimental texts, the major challenges the two texts presented and any strategies adopted to cope with those challenges, for which purpose a retrospective interview is appropriate. The transcriptions of both STs were available for the subjects to check, and their answers were audio-recorded. The subjects' answers to any leading questions asked accidentally to encourage them to speak were not included in the analysis.

I was present throughout the experiment. After the completion of the experiment, the audio-recorded SI output was transmitted to a laptop and then manually transcribed for analysis. The audio-recorded interviews were also transmitted to the laptop, and parts of the interviews which were the most relevant and useful to the research were also transcribed or summarised and translation of the interviews into English was provided when necessary. The pre- and post- questionnaires were collected for analysis.

4.4   Data manipulation

4.4.1   Grammatical categories investigated

As mentioned in Chapter 3, the SI of three grammatical features in English and three in Chinese, namely, English adverbials, English NPs, English passives, Chinese CPs, Chinese NPs, and Chinese TCs, are the focus of the research. A contrastive grammatical description of the features in question is to be found in the third chapter, which identifies the symmetrical and asymmetrical relationships between each category in one language and its nearest equivalent structure in other language. This section will focus on the occurrence of the features in the experimental inputs and outputs.

4.4.1.1 English adverbials

The contrastive analysis in Section 3.2.3 has divided English adverbials including both adverbs and adverbial clauses into two groups, namely Y-position adverbials which have same positions as their corresponding Chinese translations in English and Chinese sentences respectively and N-position adverbials which have different positions from their corresponding Chinese translation in English and Chinese sentences respectively. The researcher then analysed the English source speech and categorized all the adverbials into two groups based on the above classification criterion. The experimental English speech has 45 Y-position adverbials (symmetrical structures) and 49 N-position adverbials (asymmetrical structures) (see Appendix V). Each of the 9 professional and 12 student subjects produced a group of interpretations of 45 Y-position adverbials and a group of interpretations of 49 N-position adverbials. This means that the total number of interpretations of Y-position adverbials is 945 (professional: 9×45=405; student: 12×45=540) and the total number of interpretations of N-position adverbials is 1029 (professional: 9×49=441; student: 12×49=588) as shown in the table below.

Table 4-2: Information on interpretations of English adverbials

	Y-position	N-position
ST	45	49
9 professionals	405	441
12 students	540	588
21 subjects	945	1029

The intra-group or symmetrical-asymmetrical comparison will be carried out between the interpretation of instances of Y-position adverbials and that of instances of N-position adverbials with professionals' output presented first followed by the students'. These sets of data are presented separately, since one of my hypotheses is that level of expertise will have an impact on the interpreting performance; the inter-group comparison or the expert-novice comparison will be carried out between the professionals' and the students' SIs of each type of adverbial (Y-position adverbial first and then N-position adverbial) since the other hypothesis of this study is that grammatical differences will also have an impact on

interpreting performance.

4.4.1.2 English NPs

The contrastive analysis in Section 3.3.5 has divided English noun phrases into three groups, namely NP1s, pre-modified NPs, NP2s, post-modified NPs and NP3s, pre- and post-modified NPs. The researcher then analysed the English source speech and categorized all the NPs into three groups based on the above classification criterion. The experimental English speech has 84 premodified only NPs (NP1s) (symmetrical structures), 52 postmodified-only NPs (NP2s) (asymmetrical structures) and 30 NPs with both types of modification (NP3s) (asymmetrical structures) (see Appendix V on the classification of English adverbials for reference). Each one of the 9 professionals and 12 students produced a group of SI of 84 NP1s, a group of 52 NP2s and a group of 30 NP3s, which makes the total number of SIs of NP1s 1764 (professional: 9×84=756; student: 12×84=1008), that of NP2s 1092 (professional: 9×52=468; student: 12×52=624) and that of NP3s 630 (professional: 9×30=270; student: 12×30=360) as shown in the table below.

Table 4-3: Information on interpretations of English NPs

	NP1	NP2	NP3
ST	84	52	30
9 professionals	756	468	270
12 students	1008	624	360
21 subjects	1764	1092	630

The intra-group comparison will be carried out between the interpretations of the symmetrical structures (NP1s) and those of the asymmetrical structures (NP2s and NP3s respectively) with professional's output first followed by students' output; the inter-group comparison will be carried out between the interpretations of professionals and those of students of NP1s, NP2s and NP3s respectively.

4.4.1.3 English passives

The contrastive analysis in Section 3.4.3 has divided English passives into two groups, namely SPs, passives without agents, and LPs, passives with agents. The researcher then

analysed the English source speech and categorized all the passives into two groups based on the above classification criterion. The experimental English speech has 20 passives in total, among which 15 are agent-less (SPs) (symmetrical structures) and 5 include agents (LPs) (asymmetrical structures) (see Appendix V on the classification of English adverbials for reference). Each of the 9 professionals and 12 students produced a group of interpretations of 15 SPs and of 5 LPs. This means that the total number of interpretations of SPs is 315 (professional: $9\times15=135$; student: $12\times15=180$), and that of interpretations of LPs is 105 (professional: $9\times5=45$; student: $12\times5=60$) as shown in the table below.

Table 4-4: Information on interpretations of English passives

	SP	LP
ST	15	5
9 professionals	135	45
12 students	180	60
21 subjects	315	105

The intra-group comparison will be carried out between the interpretations of the symmetrical structures (SPs) and those of the asymmetrical structures (LPs) with the professionals' output presented first followed by the students' output; the inter-group comparison will be carried out between the SIs of the professionals and those of students of SPs and LPs respectively.

4.4.1.4 Chinese CPs

The contrastive analysis in Section 3.5.3 has divided Chinese CPs into two groups, namely CP1s, post-verbal and sentence-initial CPs, and CP2s, pre-verbal CPs. The researcher then analysed the English source speech and categorized all the CPs into two groups based on the above classification criterion. The experimental English speech has 3 sentence-initial CPs, known as CP1s in this research (symmetrical structures) and 22 preverbal CPs, known as CP2s in this research (asymmetrical structures) (see Appendix V on the classification of English adverbials for reference). Each of the 9 professionals and 12 students produced a group of interpretations of 3 CP1s and 22 CP2s, which makes the total number of interpretations of CP1s 63 (professional: $9\times3=27$; student: $12\times3=36$), and CP2s 462

140

(professional: 9×22=198; student: 12×22=264) as shown in the table below.

Table 4-5: Information on interpretations of Chinese CP phrases

	CP1	CP2
ST	3	22
9 professionals	27	198
12 students	26	264
21 subjects	63	462

The intra-group comparison will be carried out between the interpretations of the symmetrical structures (CP1s) and those of the asymmetrical structures (CP2s) with the professionals' output presented first followed by the students' output; the inter-group comparison will be carried out between the interpretations of professionals and those of students of CP1s and CP2s respectively.

4.4.1.5 Chinese NPs

The contrastive analysis in Section 3.6.4 has divided Chinese NPs into two groups, namely NP1s, the word order of which is changed in their English translations and NP2s, the word order of which remains the same in their English translations. The researcher then analysed the English source speech and categorized all the NPs into two groups based on the above classification criterion. In the experimental Chinese speech, there are 70 NP1s (symmetrical structures) and 45 NP2s (asymmetrical structures) (see Appendix V on the classification of English adverbials for reference). 21 participants, of whom 9 were professionals and 12 were students, interpreted the experimental Chinese speech. Each participant produced interpretations of 70 NP1s and interpretations of 45 NP2s. Overall, 21 participants produced 1470 interpretations of NP1s (professional: 9×70=630; student: 12×70=840) and 945 of NP2s (professional: 9×45=405; student: 12×45=540) as shown in the table below.

Table 4-6: Information on interpretations of Chinese NPs

	NP1	NP2
ST	70	45

9 professionals	630	405
12 students	840	540
21 subjects	1470	945

The intra-group comparison will be carried out between the interpretations of the symmetrical structures (NP1s) and those of the asymmetrical structures (NP2s) with the professionals' output presented first followed by the students' output; the inter-group comparison will be carried out between the interpretations of professionals and those of students of NP1s and NP2s respectively.

4.4.1.6 Chinese TCs

The experimental speech has three types of sentence structures: 17 sentences with both topics and subjects in which the topics differ from the subjects; 22 structures with both topics and subjects in which the topics coincide with the subjects; and 1 structure with a topic only. There are quasi-imperative structures in the speech as well, but they will not be considered here, because a) these structures share the topics/subjects of the previous paragraph or previous sentence although they are placed in a separate paragraph or sentence, whereas my focus is only on topics, subjects and their closest verbs; b) the focus is on the interpretations of topics, subjects and their closest verbs, and if we include these quasi-imperative structures in the analysis, it would not be easy to determine whether the omissions of topics or subjects are errors in content or appropriate interpretations given the nature of imperative structures. Finally, there is no presentative structure, which is a structure with subject only in the source speech, but as the main purpose of my research is to identify the impact of grammatical differences between Chinese and English on SI between them, this absence is of little consequence, since the subject-only structure is shared between Chinese and English. In contrast, according to Li and Thompson (1981: 85), topic-prominence is a key feature which sets Chinese "typologically apart from many other languages."

Based on the contrastive analysis in Section 3.7.4 and the analysis above, the researcher analysed the English source speech and categorised sentence structures into two groups: the symmetrical group including 22 sentence structures with topics which coincide with subjects (SCs); and the asymmetrical group including 1 sentence structure with a topic only and 17 sentence structures with topics which are different from the subjects (TCs) (see

Appendix V on the classification of English adverbials for reference). Each one of the 21 participants, of whom 9 were professionals and 12 were students, produced a group of interpretations of 22 SCs and a group of interpretations of 18 TCs. Overall, 21 participants produced 462 interpretations of SCs (professional: 9×22=198; student: 12×22=264) and 378 interpretations of TCs (professional: 9×18=162; student: 12×18=216).

Table 4-7: Information on interpretations of Chinese SCs and TCs

	SC	TC
ST	22	18
9 professionals	198	162
12 students	264	216
21 subjects	462	378

The intra-group comparison will be carried out between the interpretations of the symmetrical structures (SCs) and those of the asymmetrical structures (TCs) with the professionals' output presented first followed by the students' output; the inter-group comparison will be carried out between the SIs of professionals and those of students of SCs and TCs respectively.

4.4.2 Evaluation parameters

Error analysis will be carried out to assess the interpretations of all the grammatical structures mentioned above. This section will review the literature on error analysis (hereafter EA) in general and in SI in particular, and seek to elaborate the typology of errors in SI and outline the evaluation parameters in the current research.

4.4.2.1 Importance of error analysis (EA) in language acquisition and in SI

According to Corder (1981: 1) and Dulay, Burt and Krashen (1982: 138), the justification of error analysis (EA) is twofold. First, on theoretical grounds, EA is part of the methodology of investigating the language acquisition process; on pedagogical or practical grounds, EA which provides a good understanding of the nature of error, is an essential pre-condition of eliminating errors.

According to Lambert and Moser-Mercer (1994: 9), EA in SI has been seen as a

highly controversial but highly significant subject, through which researchers in this area can perceive and understand how the SI process works. The current thesis also adopts EA as a method of analysing errors made by simultaneous interpreters in order to perceive how the SI process works and also to establish whether and to what extent errors in SI are associated with specific linguistic features as mentioned above.

4.4.2.2 Identification of error in SI

According to Corder (1981: 10), errors are generally divided into two types, namely, errors of competence and errors of performance. Errors of competence related to a learner's grasp of the language are systematic and reflect the learner's "transitional competence" at a particular stage in the process of language acquisition. However, all the interpreting subjects in my research are high-level users of both English and Chinese rather than learners of the two languages and are competent enough and even proficient in the usage of both languages and in the translation between them; so no errors made by them are classified as errors of competence.

However, even though the interpreters are aware of the rules of L2, errors can still occur when they do not use the rule consistently under the pressure of time and saturation of processing capacity, for instance, when they do SI during which time, memory and processing capacity are all limited. According to Corder (1981: 10), errors which are "the product of chance circumstances" such as memory lapses and tiredness are called errors of performance (also known as mistakes) which are unsystematic and of no great value to the process of language acquisition. However, my research is centred on SI, the advanced level of language conversion, rather than language acquisition; and time restrictions, memory lapses and fatigue associated with grammatical differences can cause errors in SI; therefore errors of performance are of interest in my study and are, if they can be systematically related to other variables, of value to research into SI.

4.4.2.3 Sources of error in SI

According to Riccardi (2002: 116), student interpreters are still improving their foreign language as well as their native language while learning interpreting. Compared with student interpreters, professionals can be regarded as advanced language users, which means that both groups are still in the process of language improvement. Therefore, the

144

performance of interpreters is also subject to various sources of errors encountered by language learners, such as the interference of their mother tongues and the differences between the SL and the TL. Gile (1995a: 166) also agrees that interference caused by language differences can be a problem trigger in the process of SI. According to Gile (1995a: 174 italics in original), problems in SI including "deterioration of the *content* of the target-language speech" such as "errors and omissions", and "deterioration of its *delivery*", in "linguistic output, voice and intonation" arise from the saturation of processing efforts of interpreters (see Section 2.1.2).

As mentioned in Section 2.1.2, according to Gile (1995a: 174), grammatical differences are a major trigger of problems in SI because they challenge the processing capacity of the Short-term Memory Effort, Production Effort and Listening and Analysing Effort. For instance, if two languages are very different in syntax, the interpreter will have to store a certain amount of source information before encoding it into the TL, which can lead to breakdown of his short-term memory, delay production, and cause deterioration of listening and analysis capacity and hence of the interpretation as a whole, causing, for example, omission and misinterpretation. In the case of striking grammatical differences, interpreters resort to anticipation in order to relieve the stress on short-term memory. However, anticipation may be wrong, especially in the case of student interpreters who lack experience in the application of anticipation. According to Gile (1995a: 166), interpreters may try to take full advantage of similarities between two languages to facilitate and accelerate the interpretation. However, there are no two languages which have absolutely the same grammatical structures and Gile (1995a: 166-167) warns that it is even more risky for interpreters to deal with two languages with seemingly similar grammatical structures. First, "following the source-language structure and lexical choices in one's target-language speech is risky: the interpreter may get stuck at a certain point" when grammatical differences do appear; secondly, interpreters may act like robots and copy the grammatical structures of the SL rather than conveying meaning to the audience; thirdly, gross interference can lead to "grammatical errors, mispronunciations and faux amis" (two words that look similar but are different in meaning and connotation); fourth, superficial grammatical structures may distract interpreters' attention from grasping the real meaning of the speech, which can lead to errors such as miscomprehension and misinterpretation. In

conclusion, grammatical differences are a major problem trigger in SI, which should be given enough attention and consideration while analysing errors in the SI output.

4.4.2.4 Typology of Errors in SI

Lambert and Moser-Mercer (1994: 9) regard Barik's (1969) research into the classification of departures of TTs from STs as ground-breaking and as offering "the most comprehensive coding scheme" for omissions, additions and errors in the SI output. Barik's (1969) research is based on a French-English SI study on six interpreters among whom two were interpreting students, two bilinguals without SI experience and two SI professionals. Barik (1994: 121-122) divides deviations in content from the original speech in SI output into three main groups: omissions, additions and errors.

Barik (1994: 122-125) breaks the category, excluding omissions due to repetitions and false starts made by the speaker, into four sub-categories, according to type and seriousness, namely a) a "skipping omission" is the "omission of a single word or short phrase" without altering grammatical constructions or causing serious loss of meaning; b) a "comprehension omission" is an omission caused by the interpreter's failure of comprehension, which leads to the omission of part of the speech and causes a more serious loss of meaning than the previous sub-category; c) a "delay omission", though it is similar to "comprehension omission" in terms of the output, is likely to be an intended omission made in order to catch up with a new sentence rather than an omission caused by failure of comprehension; d) a "compounding omission" is the combination of several units by omitting parts of the speech, which can easily lead to the alteration of meaning of the original text. Apart from these four sub-categories, there are other sub-categories of omissions which are acceptable in SI, for instance, "omission of connective", "omission of superfluous and often untranslatable material such as *well, now, you see* in English", "omission of definite articles", and "omission of specification". These sub-categories are not included in the group, "omission", by Barik (1994: 124-125) because they do not really constitute a departure of the interpreted version from the original version and do not affect conveyance of the meaning of the original speech.

According to Barik (1994: 125-127), like omissions, additions (disregarding additions that are repetitions and false starts) can be divided into four sub-categories including a) "qualifier additions" which are additions "of a qualifier or a qualifying phrase

146

not in the original version"; b) "elaboration additions" which are additions "in the form of an elaboration or other straight addition to the text"; c) "relationship additions" which are additions "of a connective or of other material which results in a relationship of elements or of sentences not present in the original"; and d) "closure additions", which are additions of something unsubstantial in order to close a sentence due to rephrasing, omission or misinterpretation of part of the original speech.

Barik (1994: 127) also excludes some sub-categories of addition, for instance, "additions of connective *and*" for linking purpose; "additions of specification"; "translation of language-specific items not required in the target language" such as definite articles; "additions of prepositions or other item resulting in an ungrammatical structure but not affecting the meaning"; and "additions of extraneous material or comment not related to the text".

Omissions may be intentional, or may be caused by not hearing, and additions may be attributed to interpreters' personal habits. Therefore, to a large extent, they do not reflect interpreters' competence, because that is normally assessed by comparing TTs with STs, and there is no TT in the case of omissions and no ST in the case of additions. This may be why Barik (1994: 127) does not include omissions and additions in the group of errors. By contrast, Gile (1999) places errors and omissions under the same umbrella because both have a negative effect on the SI output and are indicators of deviations from the ST. He hypothesises that interpreters work "close to processing capacity saturation, which makes them vulnerable to even small variations in the available processing capacity for each interpreting component" (Gile 1999: 153). Gile (1999) asked 10 professionals to interpret the same ST twice, and focused on problem triggers, for instance, proper names, numbers and technical terms, which may challenge the limit of interpreters' processing capacity and cause problems in SI. He found that in the repeat test, the interpreters made errors/omissions in segments which they had interpreted correctly the first time. Pym (2008: 83-105), for his part, analyses the data collected from the experiment by Gile (1999) and only focuses on omissions. According to Pym (2008: 97), decisions relating to omissions are not only linked to interpreters' cognitive processing capacities but also to contextual factors such as "the aims of the discourse, the strategies of the speakers and the variable risks of the text items (2008: 84)". The findings of Pym's (2008) analysis are that a)

147

low-risk omissions occurred in the first and repeat performance with similar frequency but in different places; b) interpreters still made low-risk omissions when they did not come across any challenges posed by the ST; c) high-risk omissions were repaired by interpreters in the repeat performance when they had spare processing capacity. These findings show that non-omission, which is an ideal, is only strived for by interpreters when they deal with high-risk contextualization while sometimes omission is unavoidable given the aims of the discourse and communication. Given these findings, Pym (2008: 98) agrees with Gile's view (1999) that non-omission is "an ideal from within the profession" and "[t]o posit that omissions are in the same bag as errors is not evident to us, on the outside of the profession, speaking from a concern with communication acts in general, but it would seem to be transparently logical within the profession, and to that extent cannot be wrong". However, Pym (2008: 99) also thinks that interpreters should minimise the amount of omission because a) significant omissions are likely to be caught by the audience, jeopardizing the audience's trust in the interpreter; b) the speaker is more familiar with the context than the interpreter, therefore, he or she is in a better position to judge "the distribution of communicative risk" and c) "[i]n essence, this is a strategy of risk transfer. After all, if the included segment goes wrong, the speaker took that risk first, and should thus suffer the primary consequences". To sum up, Pym's findings, omissions should be distinguished from errors as omissions are unavoidable in SI, but they should be distinguished from errors as somehow they are unavoidable given the aims of discourse and communication as discussed above. Meanwhile, let us return to Barik's analysis (1994) and his concept of errors.

In terms of errors in SI, Barik (1994: 127-133) divides the category into five groups. Group A: "mild semantic error" is an inaccurate or awkward translation of lexical elements of a sentence which does not affect the rest of the sentence, and keeps the meaning of the original expression well preserved. Group B: "gross semantic error" is an inaccurate translation of lexical elements of a sentence which leads to a change of meaning, but is limited to specific lexical elements and does not involve the rest of the sentence. Group C: "mild phrasing change" occurs when the interpreted version is not quite the same as the original version but the gist of the speech is preserved. This type of error is normally acceptable given that one interpreter may make a different choice of words from another.

Group D: "substantial phrasing change" occurs in situations in which interpreters rephrase the ST to a large extent but do not seriously alter the gist of the speech. Group E: "gross phrasing change" involves a considerable difference between the original speech and the interpreted speech, which may be caused by one of the following factors: mistranslation of the source speech; making up something based on parts of the speech; entire change of meaning due to missing out some parts; entire misunderstanding of some parts which may result in the opposite meaning of the original speech. Also Group E includes 'meaningless or confused translations, reversals of meaning, transforming a question into a statement, etc.' (1994: 131-132).

To summarise, Barik (1994: 132) divides errors into different classes according to their nature and seriousness in a comprehensive way, however, he (1994: 132) also stresses that his coding system needs to be improved as it is just an initial step in systematizing translation deviations in SI.

Altman (1994: 26) mentions that Barik's (1969) classification and identification of deviations are "considered by some as over-restrictive. He reserves the word *error* (italics in original) for substitutions of material by the interpreter which are at considerable variance with the original version, a definition which (for the author) includes semantic inaccuracies and phrasing changes but excludes omissions and additions". According to Gerver[34] (1969/2002: 54), "discontinuity" is a more appropriate term than "error" to describe certain differences between the ST and the TT because substitutions and corrections are different in nature from omissions, repetitions, additions and distortions which are treated as errors. Gerver (2002: 54) classifies discontinuities into the following groups: "omissions of words", "omissions of phrases", "omissions of longer stretches of input of eight words or more", "substitutions of words", "substitutions of phrases", "corrections of words", and "corrections of phrases".

Pio's (2003) research into the relation between ST delivery rate and quality in SI points out that Gerver's (1969/2002) EA does not focus on aspects of delivery fluency such as phonation, number of filled pauses, repetitions, corrections or false starts. Pio (2003) categorises errors into two major groups. The first covers discontinuities of meaning

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[34] Gerver (1969/2002) is reprinted from "The Proceedings of the Second Louisville Conference on Rate and/or Frequency Controlled by Speech (1969)".

between the ST and the TT caused by omissions of SI words and segments due to the saturation of interpreters' processing capacity rather than intended omissions aiming at a better TT; substitutions caused by synthesis, paraphrasing, or replacement with entirely new ideas; additions of new information which changes the meaning of the ST; and logical-time sequence errors which are failures of interpreters to re-express the logical relations among clauses, phrases, or sentences of the ST and the time sequence of information delivered by the speaker. The other category includes factors affecting the fluency of interpretation, such as pronunciation/phonation errors, unfilled pauses which reveal that the interpreter had difficulty in dealing with the ST, filled pauses, repetitions, corrections and false starts.

Kopczynski (1980), Altman (1994) and Pio (2003) believe that the judgment of inappropriateness of SI output should take both linguistic deviations and communicative obstacles into consideration. Altman (1994) points out that errors in SI output should be examined both through a language oriented comparison of the interpreted text with the original text to identify deviations in content, and in a communicative way given that the major task of an interpreter is to facilitate communication between the speaker and the audience and the communicative function weighs even more than the linguistic perspective in the evaluation process. Based on this viewpoint, Altman (1994) categorises errors in terms of type and seriousness, claiming that errors are cases in which there is an obstacle to the communication between the speaker and the audience. In Altman's research, five final-year undergraduates were asked to simultaneously interpret speeches from French into English, which was their mother tongue. Altman (1994: 28-31) classifies their errors into four groups, namely, "omissions"," additions", "inaccurate renditions of individual lexical items" and "inaccurate renditions of longer phrases".

According to Altman (1994: 28-33), omissions are related to either delay in processing the previous ST or loss of the ST input or lexis itself; additions can range from using two words with similar meanings together, to adding misleading information due to wrong anticipation; inaccurate renditions of individual lexical items can be replacements that are semantically similar, which are regarded as minor errors, or replacements of specific items by general items which constitute major errors. Inaccurate renditions of longer phrases can be related to wrong anticipation, combination of several units into one, or misinterpretation due to misunderstanding of the original speech. Altman (1994: 32)

further explains that the identification of errors should take the contextual and situational factors into consideration as show in the example below quoted from Altman (1994: 32).

(4.1) …la Commission de l'énergie et des technologies nouvelles.

INT. A: … the Commission on Energy and Research and Development.

INT. B: …the Commission on Energy, Research and Technology.

As Altman (1994: 32) points out, there are two interpretations in (4.1). Before the interpreting tasks, all the subjects were "made fully aware of the circumstances under which the speech had originally been delivered: the speaker was reporting to the European Parliament on behalf of the Committee on Energy, Research and Technology." Interpreter B successfully drew upon the prior knowledge by delivering the correct interpretation but Interpreter A delivered a slightly incorrect version. Both subjects "re-introduced the word *research* (italics in original)."

Altman (1994: 35-37) excludes two cases of mistakes from the group of errors: "lack of TL fluency" and "loss of rhetorical effect". The former category includes minor grammatical mistakes, such as disagreement between the subject and the verb in singular or plural form and the misuse of tense; awkward, word-for-word translation; bumpy and hesitating delivery; and self-corrections thanks to monitoring the output. Altman (1994: 36-37) adds that "lack of TL fluency" is a crucial criterion to distinguish interpreting experts from novices. One of Altman's examples of "loss of rhetorical effect" is a change from a rhetorical question into a statement as shown in (4.4) quoted from Altman (1994: 36).

(4.2) Ne erait-il pas temps que…?

INT: It is high time that…

According to Altman (1994: 36), because the subject did not interpret the original text into a rhetorical question, the interpretation "lacks … an immediacy which is achieved not only through the use of the interrogative form itself, but also by means of the consequent change in intonation pattern." Altman (1994: 37) states that the success of communication is a useful but not the only valid tool to analyse errors. Her research is limited due to the small sample size, the only language pair being French-English, and the fact that the researcher was the only observer. In order to provide a more systematic way to analyse errors, it would be necessary to carry out an investigation into different language

pairs and to include as many participants in the experiment as possible.

Another way to analyse errors is devised by Chang (2005). Chang (2005) explored the impact of language direction on the performance and strategy use of ten professional Chinese-English interpreters, six of whom had Chinese as their dominant language while the remaining three either had English as their dominant language or mastered English and Chinese equally well. The output of the SI was analysed from two perspectives, namely, "a propositional analysis of the semantic content" and "an error analysis of the linguistic quality" (Chang 2005: vii), which will be touched upon in detail later on. The EA of the linguistic quality includes two parts: "*presentation errors*" including incomplete sentences and self-corrections and "*language use errors*" including grammatical errors and lexical or word usage errors (Chang 2005: 47 italics in original)

The first focus of Chang's (2005) analysis is propositional analysis of the semantic content. In Chang's study, professional interpreters with English as their second language rendered much fewer propositions when interpreting from Chinese (A language) into English (B language) than when they interpreted in the other direction, whereas previous studies (Tommola and Laakso 1997, Tommola and Heleva 1998) had shown that student interpreters or untrained bilinguals rendered pretty much the same number of propositions in different language directions. According to Chang, there are two reasons behind this phenomenon. First, professional interpreters may be better able to realise their weaknesses in their B language or their less-dominant langue than students; second, given that kind of micro-awareness of their own weaknesses, professionals may forgo segments of minor importance and tend to resort to strategies like generalization and condensation for better quality output. Also, in term of the speech delivery rate, Chang (2005) finds that although there is no significant difference in their performance between the interpreting directions, interpreters do perform better when speeches are delivered at a slower pace than faster.

The second focus of Chang's (2005) error analysis is on linguistic quality including language use errors and presentation errors. Chang (2005) also found that professionals with Chinese as their dominant language made many more language use errors when interpreting from Chinese to English than when interpreting from English into Chinese, However, in terms of presentation errors including self-corrections and incomplete sentences, there was no significant difference between the two language directions

In terms of the impact of language direction on strategy use, Chang (2005) obtains insightful views of professional interpreters through a post-experiment interview. According to these professionals, they become more and more aware of the fact that interpreting is an act of communication and their use of strategies for retaining communicative effect in different language directions may have evolved as they gained more experience from real-life conference interpreting and from bi-directional interpreting. According to Chang (2005), professional interpreters tend to omit segments of minor importance, retain those of great importance, and resort to meaning-based interpreting such as generalization when problems occur in the production in their B language. Also, Chang (2005) finds that when interpreting from Chinese to English, given the differences between these two languages, interpreters, regardless of their A language, tend to adopt more comprehension and anticipation strategies and to resort to a transformation strategy for the sake of the same communication effects. The reason behind these strategies is that professional interpreters pay close attention to the audience's expectations of "fluency in delivery, avoidance of prolonged pauses and logical cohesion in the target texts" (Chang 2005: 125).

According to Gile (1995b), errors in SI output analysis should not only include content errors such as omissions and substitutions, but also delivery errors such as grammatical errors and corrections. Therefore, my analysis of SI output will focus on both the content and delivery errors mentioned by the scholars whose work I discuss above. In the analysis, the term "error" will be adopted and I will make a primary distinction between errors in content and errors in delivery. The first category includes omissions of relevant parts including skipping omissions, comprehension omissions, delayed omission and compounding omissions (see above and also Barik 1969, 1994), and substitutions, including inventions, misinterpretations of relevant words, phrases, clauses and sentences and also including the addition[35] of information which does not exist in the ST and causes change of meaning (see Barik 1969). The second category, errors in delivery, includes grammatical errors such as incomplete sentences and unacceptable and easily spotted

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[35] Additions in SI will be treated differently from those in translation and CI. Given the restrictions on time in the simultaneous mode, pure and massive additions do not seem to be possible but completely changing the original meaning by substituting the ST with something else is possible, therefore, additions are included in the substitution sub-category, rather than being considered in a separate group.

mistakes in grammatical structures due to word-for-word interpretation and interference between the two languages (see Chang 2005) and self-corrections including false starts (see Altman 1994). Pauses will not be included in the assessment, as "pauses can have a range of meanings, and it is not easy to separate psychological factors (such as waiting for information) from linguistic ones (different organization of the respective languages)" (Oléron and Nanpon 1965/2002: 46). Furthermore, it would not be easy to measure pauses as the output was recorded with single-track recorders. The table below outlines the two assessment categories. All the STs of the examples in the table below are from the experimental STs, the SIs are the subjects', the EGs and the BTs are my own. For each of the six grammatical categories investigated, there will be a specific description of evaluation parameters (see qualitative analysis in Chapter 5).

Table 4-8: Evaluation parameters

Parameters in content	
Parameter	Example
Good[36]	ST…stemming <u>the spread of</u> <u>disease</u>… SI: …*防止<u>疾病的扩散</u>*… EG: prevent <u>disease</u> <u>ASSOC spread</u> BT: …prevent <u>the spread of</u> <u>disease</u> The original English NP "the spread of disease" is postmodified and was translated into *疾病的扩散* "the spread of disease" in Chinese. It is a good translation.
Omission	ST: <u>The challenges of our time</u> <u>must be met</u> <u>by action.</u> SI: *<u>必须要有所行动</u>。* EG:<u> must need have action</u> BT: <u>Must</u> <u>take action.</u> The ST is a LP. In the SI, the recipient "the challenges of our time" is omitted. It is a case of omission in content.

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[36] Though the sub-group good in content does not include any errors in content, it is still necessary to have a group of good content as a comparison to errors in content; the same reason applies to the sub-group good in delivery in Category B.

Substitution	ST: I believe they were achievable, <u>if the political will was there.</u> SI: *我相信*这些是可以获得的，*只要我*们的政治领导人能够合作。 EG: I believe these be can gain NOM only need we ASSOC politics lead people can cooperate BT: I believe these were achievable <u>as long as our political leaders were cooperative.</u> The original English if-clause is in N position. "if the political will was there" was translated into *只要我*们的政治领导人能够合作 (as long as our political leaders were cooperative). The meaning was changed; therefore, it is a substitution.
Parameters in delivery	
Good	ST: *向发展中国家提供形式多样、真诚无私的援助* EG: <u>facing developing country provide form various sincere selfless NOM assistance</u> TT: <u>provide various forms of sincere and selfless assistance</u> for developing countries SI: <u>offer help to developing countries</u> in many ways The original Chinese coverb is *向* (facing), and the main verb is *提供* (provide). In the SI, the original main verb phrase *提供形式多样、真诚无私的援助* (provide various forms of sincere and selfless assistance) was interpreted into "offer help…in many ways". The meaning was slightly changed but the grammar of the interpretation is correct.
Grammatical error	ST:*未来五年是实施千年发展目标的关键阶段。* EG: <u>future five year be</u> implement millennium development goal ASSOC key period TT: <u>The future five years will be</u> the crucial period for implementing the Millennium Development Goals. SI: <u>In the next five years will be</u> a key stage for us to reach the Millennium Development Goal.

	In the original SC, the subject is 未来五年 (the future five year) and the verb is 是 (be). In the SI, possibly because the subject is a time phrase, it was interpreted into an adverb "in the next five years" and its relationship with the verb phrase suggests that it is a subject, however, English subjects cannot be place adverbs like this, and it is obviously ungrammatical. It is a grammatical error in delivery.
Self-correction	ST: *提供长期、稳定、可预期的资金援助* EG: provide long-term stability can expect NOM fund assistance TT: provide long-term, stable and assured financial assistance SI: provide more help provide more long-term, and expectable financial aid The original head noun 援助 (assistance) is premodified by 长期 (long-term), 稳定 (stable), 可预期的 (assured) and 资金 (financial). The original NP was first interpreted into "more help" and then re-interpreted into "more long-term and expectable financial aid". It is a repetition of the meaning of the head noun; therefore, it is regarded as a correction in delivery.
Complete omission[37]	This sub-group includes the complete omissions of the investigated grammatical structures (for instance, the omission of an entire English passive including the recipient, the passive verb phrase and the agent if there is one or the omission of a complete Chinese NP including both the premodification and the head noun).

4.4.3 Subjectivity in evaluation

Barik (1994: 132) mentions that his error coding system is subjective in terms of the classification and delineation of categories and the decisions about which events fit into which categories. According to Barik (1994: 121), "[t]he coding system is necessarily subjective to a large extent since it was developed by one person only (the writer), though in consultation with another qualified person, and there was substantial agreement between the two judges in the codes assigned to a few sample texts. Still, it may be of some value to

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[37] Complete omissions were not included in the original categorization, however, in order to distinguish complete omissions from the other two sub-groups in delivery: self-corrections and grammatical errors, this sub-group is added under Category B.

interpreters and to other researchers interested in the issue". Nevertheless, as long as the coding system is concerned with "meaning or meaning equivalence", subjectivity is not avoidable (Barik 1994: 132).

Altman (1994: 26) also admits that the evaluation of SI output is subjective but detailed classification of errors and thorough analysis can be very helpful to reduce the danger of subjectivity to a minimum.

In my research, I strive to minimise the danger of subjectivity. First, a very detailed error coding system is established based on a comprehensive review of literature on this topic; second, every category of error is illustrated with examples from the SI output; third, after the experiment, I interviewed all the participants on the causes of some errors or problems they had encountered in the process of SI and the interview was audio-recorded to support my evaluations; fourth, I have consulted my supervisors, one of whom is a native speaker of Chinese.

4.4.4 A note on statistics

4.4.4.1 Introduction

According to Gile (1998: 72), "statistical hypothesis-testing is the most frequently used approach in experimental research" into interpreting (Gran and Taylor 1990, Lambert and Moser-Mercer 1994, Tommola 1995, Gile 1998) and

> the procedure involves the selection of a sample of subjects who perform a task or are submitted to certain conditions in a 'controlled environment' in order to test a hypothesis on the basis of a 'statistical test' ('Chi square', 't test', 'F test', analysis of variance, etc.) showing 'significance' or 'non-significance' of measured and calculated values. The hypothesis is then either rejected or 'not rejected'.

Therefore, in order to establish whether the impact of grammatical differences on SI is significant or not and whether professionals and students display a difference in terms of their interpreting performance, two types of statistical tests will be adopted, one is the paired t-test for intra-group comparison and the other is the independent t-test for inter-group comparison. Both inferential tests are designed to establish whether my null

hypotheses should be accepted or rejected. The detailed procedures of this experiment are outlined in the two sections below.

4.4.4.2 Intra-group comparison

Hypothesis I: Compared with symmetrical structures, asymmetrical structures can cause interpreters to produce errors in both content and delivery in SI from English into Chinese and vice versa.

In order to test the hypothesis above, the interpretations of the symmetrical and asymmetrical structures investigated will be assessed in terms of the seven evaluation parameters mentioned above and then an intra-group comparison will be carried out. I would like to take English adverbials, the first grammatical category mentioned above, to illustrate the four stages of the process of statistical calculation, namely 1) the analysis of ST, 2) the output analysis of interpretations produced by both professionals and students, 3) data manipulation before SPSS entry, and 4) SPSS entry, calculation and output. The same procedure applies to the other five grammatical categories.

Stage I: Analysis of ST

As mentioned in Section 4.4.1.1, adverbials, both adverbs and adverbial clauses of the experimental English speech, were divided into two groups. One group includes 45 Y-position adverbials (symmetrical structures) and the other 49 N-position adverbials (asymmetrical structures) (see Appendix V).

Stage II: Output Analysis of Interpretations Produced by Both Professionals and Students

Professional and student interpreters' interpretations of both Y-position and N-positon adverbials were analyzed based on three content parameters, namely CG (good in content), CO (omission in content), CS (substitution in content), and four delivery parameters, namely DG (good in delivery), DGE (grammatical error in delivery), DC (correction in delivery), and DCO (complete omission in delivery) (see Appendix VI, the output analysis of interpretations produced by student subject 1 and professional subject 21 respectively).

Stage III: Data Manipulation before SPSS Entry

The numbers of instances of each parameter were then calculated based on the analysis mentioned in Stage I and were entered in tables (see Table A and Table B in Appendix VII and the results of the analysis of student subject 1 and professional subject 21

158

were bolded and highlighted in yellow). The numbers mentioned in Stage III were then converted to percentages (See Table C and Table D in Appendix VII and the percentages of the analysis of student subject 1 and professional subject 21 were bolded and highlighted in yellow).

Stage VI: SPSS Entry, Calculation and Output

The percentages in Table C and D were entered into SPSS predictive analytics software. Given the fact that there are two populations who differ in terms of the level of expertise, professionals and students, I dealt with the data produced by professionals and students separately. For intra-group comparison between the interpretations of symmetrical and those of asymmetrical groups, SPSS selected the professionals' data first, and ran the paired t-test which was used for matched data[38]. The paired t-test compared the mean percentages and the standard deviations of both groups and also produced a P-value (see Table 1 and 2 in Appendix VIII). The key information bolded and highlighted in yellow in Table 1 and 2 were selected and entered into Table 5.1 in Chapter 5 for discussions. Then SPSS ran the paired t-test with students' output and produced Table 3 and 4 in Appendix VIII and the key information bolded and highlighted in yellow in Table 3 and 4 were selected and entered into Table 5.2 in Chapter 5 for discussions. Only if the P-value is less than 0.05 ($P < 0.05$), can we conclude that there is a statistically significant difference between the two groups.

4.4.4.3 Inter-group comparison

Hypothesis II: Though they may be affected by grammatical differences, professional subjects will display a lower proportion of content and delivery errors than those produced by student subjects and cope with problems caused by these differences better due to their experience and well-developed SI strategies.

To seek evidence for the second hypothesis, the interpretations of professionals and students will be assessed in terms of the seven evaluation parameters mentioned above and then inter-group comparison will be conducted. I would like to continue to use English adverbials to illustrate the statistical procedure. For inter-group comparison between the

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[38] For instance, each subject needed to produce the SI for a group of 45 Y-position adverbials and also for a group of 49 N-position adverbials, which means the SI of the two different groups was produced by the same participant. In this case, the data of the two groups are called matched data, and a paired t-test is the appropriate choice.

interpretations of professional interpreters and those of student interpreters, after the first three stages of the statistical procedure and the SPSS data entry as mentioned in Section 4.4.4.2 and SPSS selected the data on interpretations of symmetrical structures first, ran the independent t-test which was used for unmatched data[39]. The independent t-test compared the mean percentages and the standard deviations of professional and student groups and also produced a P-value (see Table 5 and 6 in Appendix VIII). The key information bolded and highlighted in yellow in Table 5 and 6 were selected and entered into Table 5.17 in Chapter 5 for discussions. Then SPSS ran the independent t-test with the data on interpretations of asymmetrical structures and produced Table 7 and 8 in Appendix VIII and the key information bolded and highlighted in yellow in Table 7 and 8 were selected and entered into Table 5.18 in Chapter 5 for discussions. Only if the P-value is less than 0.05 ($P<0.05$), can we conclude that there is a statistically significant difference between the two groups. The same process of statistical calculation was applied to both intra- and inter-group comparisons of the other five grammatical categories.

4.5 Conclusion

This chapter started with the design of the experiment including the necessary measures taken by the researcher to meet the research ethics requirements, the recruitment of experiment subjects and the selection of experimental materials. It then moved onto the detailed procedures of the pilot study and the main experiment. The third section of the chapter focused on data manipulation and statistical calculation including the occurrence of symmetrical and asymmetrical structures in the experimental source speeches and that of the SIs of symmetrical and asymmetrical structures in the target speeches, a classification of errors in SI based on previous research into error analysis in SI, a detailed description of evaluation parameters and the process of statistical calculation in the current research.

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[39] For instance, each student interpreter needed to produce the SI for a group of 45 Y-position adverbials and each professional interpreter also needed to produce the SI for a group of 45 Y-position adverbials, which means the two groups of SIs of Y-position adverbials produced by two different participants. In this case, the data of the two groups are called unmatched data, and an independent t-test is the appropriate choice.

Chapter 5 Data Analysis and Discussions

Overview: Chapter 5 focuses on the analysis and discussion of data produced by professional and student interpreters and consists of three main parts including an intra-group comparison between the SIs of similar and those of dissimilar structures in order to identify whether grammatical differences have a significant impact on English-Chinese SI, an inter-group comparison between the SIs produced by experts and those by novices in order to establish whether level of expertise has a significant impact on SI and a retrospective interview to seek professional and student interpreters' perceptions of challenges posed by grammatical differences if there are any as well as to establish whether or not professionals will cope with grammatical differences in SI in a different manner from students by adopting certain strategies.

5.1 Introduction

This chapter will be mainly devoted to the analysis of interpretations and interviews produced by the subjects, and will be divided into three parts including 1) an intra-group, symmetrical-asymmetrical comparison, 2) an inter-group expert-novice comparison, and 3) a retrospective interview.

In the first part, we will focus on the analysis of six groups of symmetrical and asymmetrical structures as mentioned in Chapters 3 and 4, namely, (i) English Y-position vs. N-position adverbials, (ii) English noun phrases 1 (NP1s) vs. noun phrases 2 (NP2s) and noun phrases 3 (NP3s), (iii) English short passives (SPs) vs. long passives (LPs), (iv) Chinese coverb phrases 1 (CP1s) and coverb phrases 2 (CP2s), (v) Chinese noun phrases 1 (NP1s) vs. noun phrases 2 (NP2s), and (vi) Chinese subject-prominent clauses (SCs) vs. topic-prominent clauses (TCs). The analysis will focus on content accuracy and delivery appropriateness, in terms of the seven parameters mentioned in the previous chapter, namely, good in content (CG), omissions in content (CO), substitutions in content (CS), good in delivery (DG), grammatical errors in delivery (DGE), corrections in delivery (DC) and complete omissions in delivery (DCO). Within each one of the six contrastive groups mentioned above, an intra-group comparison will be carried out in order to investigate the impact of asymmetrical structures on SI. As there are two populations differing in the level

of expertise, we will deal with professionals' output first and then with students' output.

Apart from the intra-group comparison to identify the impact of grammatical differences on SI, an inter-group comparison will be carried out to establish the impact of level of expertise on SI. As asymmetrical structures are likely to have an impact on SI, compared with symmetrical structures, we will look at the comparison between professionals' and students' interpretations of asymmetrical structures and then at the comparison between professionals' and students' interpretations of symmetrical structures.

The two groups of comparisons will be followed by a discussion of interviewees' thoughts about their interpreting performance, challenges they encountered during interpreting and strategies they adopted to cope with those challenges, as reported during the retrospective interviews.

5.2   Intra-group analysis

5.2.1   English Y-position vs. N-position adverbials

5.2.1.1 Predictions

The prediction is that compared with Y-position adverbials, N-position adverbials will create problems for simultaneous interpreters (see Chapter 3), and this prediction is supported by the results:

1. The percentage of interpretations of Y-position adverbials which are good in content (CG) and good in delivery (DG), is higher than that of interpretations of N-position adverbials which are good in content (CG) and good indelivery (DG).

2. Interpretations of Y-position adverbials display fewer omissions (CO) and substitutions (CS) in content than those of N-position adverbials.

3. Interpretations of Y-position adverbials display fewer grammatical errors (DGE) and corrections (DC) in delivery than those of N-position adverbials.

5.2.1.2 Evaluation

According to Quirk (1972: 268), an English adverb is a part of speech that can modify verbs, adjectives (including numbers), clauses, sentences and adverbs. Adverbial clauses which are subordinate clauses to main clauses also have adverbial functions, providing information on place, time, manner, cause, comparison, degree, purpose, condition, result

162

and concession, according to Quirk (1972: 743). In the analysis below, my assessment of content accuracy will focus on the interpretation of adverbials themselves and also the semantic relationship between the adverbials and the parts they modify, which will be illustrated with examples from the experimental output[40]. In Section 5.2.1.2, adverbials will be underlined as adverbials.

5.2.1.2.1 Parameter A, CG

If an adverbial (an adverb or an adverbial clause) is interpreted correctly in terms of content and the semantic relationship between the adverbial and the part it modifies is interpreted correctly, it is considered as a good translation in content. As this section focuses on the interpretation of an adverbial and its semantic relationship with the part it modifies in a sentence, the interpretation of the rest of the sentence will not be assessed.

(5.1)　　Stu12 (Y-position)

ST: In recent months, a Democracy Fund has been created.

SI: *在最近几个月，民主改革基金建立了。*

EG: At closest few CL month Democracy Reform Fund establish PFV/CRS

BT: In recent months, Democracy Reform Fund has been created.

The original English adverb "[i]n recent months" has the same position as its translation in Chinese, therefore, it is a Y-position adverbial and this interpretation is good in content.

(5.2)　　Pro21 (N-position)

ST: And you will signal your support for a strategy to make sure that we fight terrorism in a way that makes the international community stronger and terrorists weaker, not the other way around.

SI: *同时你又会表明你们支持一个战略，要使我们在打击恐怖主义的时候，必须要使得国际社会更加的强大，恐怖分子越来越虚弱，而不是相反。*

EG: meanwhile you again will show you support one CL strategy will make we at fight terrorism NOM moment must need make international community COMP

163

NOM strong terrorists COMP weak but not opposite

BT: Also, you will signal your support for a strategy to make sure when we fight terrorism, <u>we will make the international community stronger, and terrorists weaker and weaker, not the other way around.</u>

The original English adverbial is in N position which is not available for such adverbials in Chinese. In Chinese, such an adverb is usually placed between the subject, in this case "we", and the verb phrase, in this case "fight terrorism". This causes difficulties for SI, given the limitations of time and interpreters' processing capacity. In this case, the interpreter segmented the sentence into two shorter clauses with the original meaning preserved. It is good.

5.2.1.2.2 Parameter B, CO

If an adverbial (an adverb or an adverbial clause) was completely omitted, it is considered an omission in content. However, even partial omission of an adverbial is an error in interpretation; it will be regarded as a substitution rather than an omission because the current thesis is concerned with changes to the grammatical units we are focusing on and in this case, the grammatical unit is the entire adverbial.

(5.3)   Stu3 (Y-position)

ST<u>: If properly utilized</u>, it can be a unique marriage of power and principle, in the service of all the world's peoples.

SI: *我们不能只是建立一个原则，而远离各位的支持。*

EG: we no can only establish one CL principle but far leave you ASSOC support

BT: we can not only establish a principle, but stay away from your support.

In this case, the original English if-clause in Y position was omitted; therefore, it is an omission.

(5.4)   Stu4 (N-position)

ST: Action must be collective <u>if it is to be effective.</u>

SI: *行动必须是共同协作的。*

EG: Action must be common coordinate NOM

BT: Action must be coordinated.

164

In (5.4), the original English if-clause is in N position and is placed after the main clause "[a]ction must be collective", however, a Chinese if-clause is supposed to be placed before the main clause if the sentence is to sound natural and grammatically acceptable to listeners. One possible reason for the omission of an N position adverbial is that the interpreter hears the English main clause first and interprets it into Chinese and then hears the subordinate clause, at which point restructuring would be necessary but would take more time than available. In such a case, omission may be the last resort, though this type of omission is not recommended in interpreting; therefore, it is an omission.

5.2.1.2.3 Parameter C, CS

If an adverbial (an adverb or an adverbial clause) is not interpreted accurately in terms of content, it is considered as a substitution in content. A partial omission of an adverbial---an omission of parts of an adverbial rather than the complete omission of the adverbial---will be regarded as a substitution.

(5.5)   Stu11 (Y-position)

ST: <u>To help you, the Member States, chart a more hopeful course,</u> I appointed the High-level Panel.

SI: *来帮助你，各个成员国，面对挑战，我召开了一次高级会议。*

EG: <u>come help you every CL member state face challenge</u> I call open PFV/CRS one CL high level conference

BT: <u>To help you, all the Member States, meet challenges,</u> I held a high-level conference.

The original English adverbial is in Y position. "[t]o help you, the Member States, chart a more hopeful course" was interpreted into *来帮助你，各个成员国，面对挑战* ([t]o help you, all the Member States, meet challenges). The meaning was slightly changed; therefore, it is a substitution.

(5.6)   Stu6 (N-position)

ST: I believe they were achievable, <u>if the political will was there.</u>

SI: *我相信这些是可以获得的，只要我们的政治领导人能够合作。*

GS: I believe these be can gain NOM <u>only need we ASSOC politics lead people can cooperate</u>

BT: I believe these were achievable <u>as long as our political leaders were cooperative.</u>

The original English if-clause is in N position. "[I]f the political will was there" was translated into *只要我们的政治领导人能够合作* (as long as our political leaders were cooperative). The meaning was changed; therefore, it is a substitution.

5.2.1.2.4 Parameter E, DGE

If the interpretation of an adverbial (an adverb or an adverbial clause) is ungrammatical, it is considered as a grammatical error in delivery. If the interpretation of the adverbial is grammatically correct, but its structural position is not available in the TL, it will also be regarded as a grammatical error in delivery.

    (5.7)   Stu7 (Y-position)

    ST: <u>[N]o matter how difficult agreement is</u>, there is no escaping the fact that…

    SI: *不管有多么困难，这些协议的实现，但是事实是...*

    EG: <u>no matter have how difficult these agreement ASSOC realization</u> but fact be

    BT: <u>No matter how difficult, the realization of these agreements,</u> but the fact is…

The original Y-position adverbial "no matter how difficult agreement is" was interpreted into two separate segments 不管有多么困难 (no matter how difficult) and 这些协议的实现 (the realization of these agreements) and these two segments do not have a clear logical relation in the interpretation. It is ungrammatical in Chinese.

    (5.8)   Stu1 (N-position)

    ST: …I will be giving you more details <u>in the near future.</u>

    SI: …*我将给你们细节，**在不久的将来***

    EG: I will give you detail <u>at not long NOM future</u>

    BT: …I will give you details<u>. In the near future</u>

"In the near future" in the ST is an adverb in N position, in other words, its corresponding Chinese translation usually premodifies the whole sentence in Chinese. In

terms of content, it is correct, however, the interpreter preserved the grammatical structure when s/he interpreted into Chinese and ended up with a complete sentence "I will give you details" and an incomplete sentence "in the near future". It is ungrammatical in Chinese.

5.2.1.2.5 Parameter D, DG

(5.9)　　Stu 8 (Y-position)

ST: <u>To help you, the Member States, chart a more hopeful course</u>, I appointed…

SI: *为了帮助各位成员国来应对各种危机*，我认为…

EG: <u>To help you member state come meet all type challenge</u> I think

BT: <u>To help you, the Member States, meet all kinds of challenges</u>, I think

Semantically speaking, the original Y-position "[t]o help you, the Member States, chart a more hopeful course" was misinterpreted into 为了帮助各位成员国来应对各种危机 ([t]o help you, the Member States, meet all kinds of challenges), but in terms of delivery, the interpretation has no grammatical error or correction. It is good in delivery.

(5.10)　　Stu 7 (N-position)

ST: Two years ago, speaking <u>from this podium</u>, I said that…

SI: 两年之前，<u>在这个大厅里边</u>，我说过…

EG: Two year ASSOC before <u>at this CL big hall inside</u> I said

BT: Two years ago, <u>in this big hall</u>, I said that…

The original N-position adverbial "from this podium" was interpreted into 在这个大厅里边 (in this big hall), however, in terms of delivery, the interpretation is grammatically acceptable and correction-free. It is good in delivery.

5.2.1.2.6 Parameter F, DC

Correction in delivery including repetitions and restarting can be both corrections in the interpretations of adverbials (adverbs or adverbial clauses) and corrections in the interpretations of the closest parts that the adverbials modify.

(5.11)　　Pro21 (Y-position)

ST: <u>Precisely because our world is imperfect</u>, we need the United Nations.

SI: *<u>因为我们在这样的一个世界中，它不是完美的世界，所以我们就需要联合</u>*

国。

EG: <u>because we at this NOM one CL world middle it not be perfect NOM world</u> so we just need united nation

BT: <u>Because we are in such a world, and it is not a perfect world,</u> we really need the United Nations.

The original Y-position adverbial "precisely because our world is imperfect" was first interpreted into *因为我们在这样的一个世界中* (because we are in such as world), and then *它不是完美的世界* (and it is not a perfect world) was added by the interpreter in order to deliver the original meaning. It is regarded as a self-correction.

(5.12)   Pro16 (N-position)

ST: You will make clear your willingness to take timely and decisive and collective action <u>through the Security Council.</u>

SI: *那大家会清楚地表明，大家决定采取及时，集体的措施，<u>通过安理会来采取这样的一种措施。</u>*

EG: You will clearly show you decide take timely collective NOM action <u>through Security Council</u> come take this NOM one kind action

BT: You will make it clear that you decide to take timely and collective action, and to take such kind of action <u>through the Security Council</u>.

"Through the Security Council" modifies "take timely and decisive and collective action" and its Chinese translation should occur before the verb phrase in Chinese. Therefore, the interpreter briefly added *采取这样的一种措施* (to take such kind of action) after *通过安理会* (through the Security Council) in SI as a correction.

5.2.1.2.7 <u>Parameter G, DCO</u>

As the analysis of interpreting of adverbials focuses on only one item, either an adverb or an adverbial clause, if this is omitted, it is a complete omission in content and will cause a complete omission in delivery as well; therefore, Parameter B (omission in content) and Parameter G (complete omission in delivery) are treated as the same scenario in the analysis of the interpretations of English adverbials.

5.2.1.3 Results analysis and discussions

As mentioned in Chapter 4, the intra-group comparison between Y position (Y) and N position (N) was done through a Paired T-test with professionals' data first followed by the students' data. The analysis in Table 5-1 below is based on the test on data produced by professionals.

Table 5-1: Professional: Y-N analysis

Parameter	Position	Mean Percentage	Standard Deviation	P-value
CG	Y	58.02	12.74	<0.001 (0.000)
	N	39.68	10.31	
CO	Y	17.51	8.19	>0.05 (0.069)
	N	21.76	11.26	
CS	Y	24.44	5.78	<0.01 (0.001)
	N	38.54	6.87	
DG	Y	77.02	8.37	<0.001 (0.000)
	N	60.24	10.74	
DGE	Y	2.70	2.89	<0.001 (0.000)
	N	10.66	2.43	
DC	Y	2.70	2.42	<0.001 (0.000)
	N	10.60	5.57	
DCO	Y	17.51	8.19	>0.05 (0.069)
	N	21.76	11.26	

As shown in Table 5.1, in terms of content accuracy, the proportion of Y-position adverbials which were accurately interpreted (M=58.02, SD=12.74) is higher than that of N-position adverbials (M=39.68, SD=10.31) and the difference is significant (P<0.001). With regard to content errors, interpretations of Y-position adverbials display fewer omissions (M=17.51, SD=8.19) and fewer substitutions (M=24.44, SD=5.78) than interpretations of N-position adverbials (Omissions: M=21.76, SD=11.26; Substitutions: M=38.54, SD=6.87). However, the effect of position on omissions is insignificant (P>0.05) while that on substitutions is significant (P<0.01).

169

From the perspective of good delivery, the percentage of Y-position adverbials which are interpreted well (M=77.02, SD=8.37) is higher than that of N-position adverbials (M=60.24, SD=10.74) and the difference is statistically significant (P<0.001). Interpretations of Y-position adverbials included fewer grammatical errors (M=2.70, SD=2.89) and fewer corrections (M=2.70, SD=2.42) than interpretations of N-position adverbials (Grammatical Errors: M=10.66, SD=2.43; Corrections: M=10.60, SD=5.57). The correlation between position and grammatical errors and corrections is significant (Grammatical Errors: P<0.001; Corrections: P<0.001).The results on complete omissions in delivery are the same as those on omissions in content.

The analysis in Table 5-2 below is based on the test on data produced by students.

Table 5-2: Student: Y-N analysis

Parameter	Position	Mean Percentage	Standard Deviation	P-value
CG	Y	41.48	8.86	<0.001 (0.000)
	N	26.01	7.60	
CO	Y	22.22	10.03	>0.05 (0.076)
	N	26.37	9.74	
CS	Y	36.31	8.66	<0.01 (0.002)
	N	47.62	6.12	
DG	Y	67.23	7.84	<0.001 (0.000)
	N	40.48	8.02	
DGE	Y	7.96	6.32	<0.001 (0.000)
	N	21.94	9.60	
DC	Y	2.94	1.97	<0.001 (0.000)
	N	13.60	5.65	
DCO	Y	22.22	10.03	>0.05 (0.076)
	N	26.37	9.74	

As shown in Table 5.2, in terms of content accuracy, more Y-position adverbials were accurately interpreted (M=41.48, SD=8.86) than N-position adverbials (M=26.01, SD=7.60) and the difference is significant (P<0.001). With regard to content errors,

interpretations of Y-position adverbials include fewer omissions (M=22.22, SD=10.03) and fewer substitutions (M=36.31, SD=8.66) than those of N-position adverbials (Omissions: M=26.37, SD=9.74; Substitutions: M=47.62, SD=6.12). However, the effect of position on omissions is insignificant (P>0.05) while that on substitutions is significant (P<0.01). Surprisingly, the correlation between position and omissions and substitutions in the student data is consistent with that in the professionals' data.

In terms of good delivery, the proportion of Y-position adverbials which are interpreted well (M=67.23, SD=7.84) is higher than that of N-position adverbials (M=40.48, SD=8.02) and the difference is statistically significant (P<0.001). Interpretations of Y-position adverbials generated fewer grammatical errors (M=7.96, SD=6.32) and fewer corrections (M=2.94, SD=1.97) than those of N-position adverbials (Grammatical Errors: M=21.94, SD=9.60; Corrections: M=13.60, SD=5.65). The correlation between position and grammatical errors and corrections is significant (Grammatical Errors: P<0.001; Corrections: P<0.001). The results on complete omissions in delivery are the same as those on omissions in content.

In conclusion: the grammatical position of adverbial components seems to have a significant impact on the interpreting performance of all the participants, both professionals and students, in terms of content accuracy and delivery appropriateness. If the position of adverbials in English is not a permitted position in Chinese, both professionals and students make more substitutions in content, more grammatical errors, and more corrections in delivery.

5.2.2 English NP1s vs. NP2s and NP3s

5.2.2.1 Predictions

The hypothesis is that postmodification in NP2s and NP3s poses challenges to simultaneous interpreters and the expected results are that:

1. The percentage of interpretations of NP1s with good content (CG) and good delivery (DG) will be significantly larger than both that of NP2s and that of NP3s.

2. The interpretations of NP1s will display fewer content omissions (CO) and content substitutions (CS) than those of NP2s and those of NP3s.

3. The interpretations of NP1s will display fewer grammatical errors (DGE) and

171

corrections (DC) in delivery than both those of NP2s and those of NP3s.

4. The percentage of the interpretations of NP3s displaying good content (CG) and good delivery (DG) will be smaller than that of simple NPs (NP1s and NP2s), however, the difference between NP2s and NP3s will not be as significant as that between NP1s and NP3s, because the key problem lies in postmodification which NP2s and NP3s both have.

5. The interpretations of NP3s will display more content omissions (CO) and content substitutions (CS) than those of simple NPs (NP1s and NP2s), however, the difference between NP2s and NP3s will not be as great as that between NP1s and NP3s for the same reason as in 4).

6. The interpretations of NP3s will display more grammatical errors (DGE) and corrections (DC) than those of simple NPs (NP1s and NP2s); however, the difference between NP2s and NP3s will not be as large as that between NP1s and NP3 for the same reason as stated in 4) above.

5.2.2.2 Evaluation

The assessment will focus on changes of premodification, head nouns, and postmodification from the perspective of the seven parameters mentioned above. Disturbance at the NP may cause problems elsewhere because of the extra effort given to the NP, but I will not examine this phenomenon, since I would like to maintain a clear focus on the NP alone. In Section 5.2.2.2, premodifications are underlined as premodifications; head nouns are underlined as head nouns; and postmodifications are underlined as postmodifications.

5.2.2.2.1 Parameter A, CG

If both a head noun and its modification are interpreted correctly in terms of content, the interpretation is considered good in content.

(5.13)   Stu3 (NP1)

ST: I put forward, six months ago, a balanced set of proposals for decisions at this Summit.

SI: *我在六个月前提过，我们在这次峰会上所要做的决定。*

EG: I at six CL month ago mention PFV/CRS we at this summit on need make NOM decision

172

BT: I put forward, six months ago, the decisions that we are going to make at this Summit.

The original English NP "six months" is only premodified by number and was translated into 六个月 (six months). Here, the classifier 个 was added and the plural form was translated into a singular form to follow Chinese grammatical conventions, so they are not classified as substitutions. According to Peng (1995: 360), Chinese classifiers rarely have equivalents in English, and an appropriate Chinese classifier is often added in the Chinese translation of an English NP. With regard to depluralization, "there is no need to indicate whether a noun is in the singular or in the plural in Chinese" (Tsai 1995: 246) and an English NP in plural form is often translated into a singular Chinese NP. So this interpretation is good in content.

(5.14)   Pro18 (NP2)

ST:…stemming the spread of disease…

SI: …*防止疾病的*扩散…

EG: prevent disease ASSOC spread

BT:…prevent the spread of disease…

The original English NP "the spread of disease" is only postmodified and was translated into *疾病的*扩散 (the spread of disease) in Chinese. It is a good translation.

(5.15)   Pro20 (NP3)

ST: …basic principles – of democracy, of human rights, of rule of law…

SI: …*基本的民主的原则*，人权的原则，法制的原则…

EG: basic NOM democracy ASSOC principle human right ASSOC principle rule of law ASSOC principle

BT: …basic principles of democracy, human rights and rule of law…

The original English NP has both a premodifier "basic" and three postmodifiers "of democracy, of human rights, of rule of law" and all the postmodifiers were re-positioned as premodifiers in its Chinese translation to follow Chinese conventions. The original meaning is well preserved, and it is a good translation.

5.2.2.2.2 Parameter B, CO

If a head noun or its modification or both are omitted, it is considered an omission in content.

(5.16)   Stu3 (NP1)

ST: The Organization remains fully engaged in <u>conflict resolution</u>, peacekeeping, <u>humanitarian assistance</u>, defence of human rights, and development around the world.

SI: *联合国高度参与（   ），维和，**人道和**发展世界发展的各项工作。*

EG: United Nations highly participate (   ) peacekeeping <u>humanitarian</u> and development world development ASSOC all kind work

BT: The United Nations highly participates in (   ), peacekeeping, <u>humanitarian</u> and development, all the work relating to development around the world.

There are two premodified NPs in the ST, one is "conflict resolution" and the other is "humanitarian assistance". The first is completely omitted in the Chinese translation and the second is partially omitted. Both are regarded as omissions in content.

(5.17)   Stu1 (NP2)

ST: …meet <u>the threats we face</u> and seize <u>the opportunities before us</u>

SI: *…应对**挑战**，创造**机会***

EG: meet <u>challenge</u> create <u>opportunity</u>

BT: …meet <u>challenges</u> and create <u>opportunities</u>

There are two postmodified NPs in the ST. The first, "the threats we face", was translated into "challenges". In this case, the head noun "threats" was changed into *挑战* (challenges) and it could be counted as a substitution, however, the postmodifier "we face" was omitted, so it is regarded as a partial omission in content. The second modified NP "the opportunities before us" was translated into *机会* (opportunities) and the postmodifier was omitted as well. All of these are regarded as omissions in content.

(5.18)   Pro16 (NP3)

ST: …<u>a unique marriage of power and principle</u>

SI: …<u>*一个强大机制*</u>

174

EG: one CL strong system

BT: …a strong system

The original English NP is both pre and postmodified, but the postmodification was omitted in the Chinese translation. It is an omission in content.

5.2.2.2.3 Parameter C, CS

If a head noun or its modification or the entire NP is replaced by something else or is not interpreted accurately in terms of content, it is considered a substitution in content.

(5.19)   Pro20 (NP1)

ST: The clear danger…

SI: *非常明显的危险...*

EG: very clear NOM danger

BT: the very clear danger…

The original NP is only premodified by "the clear" but the premodification is interpreted into *非常明显的* (the very clear) in Chinese with the meaning slightly changed. It is a substitution.

(5.20)   Pro14 (NP2)

ST: …a convention against nuclear terrorism…

SI: ...*这个反对核扩散的公约...*

EG: this CL against nuclear proliferation NOM convention

BT: …this convention against nuclear proliferation…

The original English NP is postmodified. As mentioned in Section 3.3.5, articles need not be represented by any Chinese forms and representing them is unnatural in Chinese. In this example, "a" has been translated into 这个 (this), adding meaning (definiteness and proximal deixis) to the original text. The postmodifier "against nuclear terrorism" was translated into 反对核扩散 (against nuclear proliferation) and the meaning was changed. Therefore, it is a substitution.

(5.21)   Stu5 (NP3)

ST: the early reactions of Member States as well as my own conviction that our work

175

must be based on respect for human rights

SI: *我们成员国的一些反应和我们的条件，我们的工作必须要基于人权。*

EG: <u>we member state ASSOC some response</u> and <u>we ASSOC condition, we ASSOC</u> <u>work must need base on human right</u>

BT: <u>some reactions of our member states</u> and <u>our condition that our work must be based</u> <u>on human rights.</u>

There are two pre and postmodified NPs in the ST. The first one "the early reactions of Member States" was interpreted into *我们成员国的一些反应* (some reactions of our member states); the premodifier "early" was interpreted into *一些* (some) and the head noun "Member States" was interpreted into *我们成员国* (our member states). This translation is considered a substitution. In the translation of the second NP "my own conviction that our work must be based on respect for human rights", the premodifier "my own" was changed into *我们的* (our), the head noun "conviction" was changed into *条件* (condition) and the postmodifier "that our work must be based on respect for human rights" was changed into *我们的工作必须要基于人权* (our work must be based on human right). It seems that "respect for" in the postmodifier was omitted and it should be counted as an omission, however, this is a partial omission within the postmodifier and the postmodifier is still partially preserved but replaced by something else, so this is also regarded as a substitution.

5.2.2.2.4 Parameter D, DG

If a head noun, its premodification, and its postmodification have all been interpreted grammatical correctly and the SIs conform to the conventions of Chinese grammar, the interpretations are regarded as good deliveries.

(5.22)   Stu7 (NP1)

ST: …speaking from <u>this podium</u>…

SI: ...*在<u>这个大厅</u>里边，我说过*...

EG: at <u>this CL big hall</u> inside I say PFV/CRS

BT: …In <u>this big hall</u>, I said…

The original English NP is only premodified. Although the head noun "podium" is

176

translated into 大厅 (big hall), there is no grammatical error in delivery in the translation. It is good in delivery.

(5.23)   Pro17 (NP2)

ST: …renew <u>negotiations on this vital issue</u>…

SI: … ***在**这个问题上进行谈判*…

EG: <u>at this CL problem on</u> carry out <u>negotiation</u>

BT: …carry out <u>negotiations on this issue</u>…

The original NP is only postmodified. Part of the postmodifier "vital" was omitted but there is no error in grammar in the translation, therefore, it is an example of appropriate delivery.

(5.24)   P21 (NP3)

ST: …to improve <u>our success rate in building peace in war-torn countries</u>...

SI: ...***我**们同时要让**那些***战乱国家重建和平...

EG: we meanwhile need let <u>those war chaos country again build peace</u>

BT: …meanwhile, we need to <u>rebuild peace in those war-torn countries</u>…

The English NP has both pre- and postmodification. It is obvious that in the translation, the premodifier and the head noun were omitted, but again, there is no error in the grammar of the Chinese translation. It is good in delivery.

5.2.2.2.5 <u>Parameter E, DGE</u>

If a head noun, or its premodification, or its postmodification has not been interpreted grammatical correctly, or if the interpretation of the original entire NP does not follow the grammatical conventions of Chinese, the interpretation will be considered as a grammatical error in delivery.

(5.25)   Stu4 (NP1)

ST: …if <u>another Rwanda</u> looms

SI: ...***如果有**另外一个*这样的

EG: if have <u>another one CL this NOM</u>

BT: …if there is <u>another one like this</u>

In the translation, the original head noun "Rwanda" was substituted by *这样的* (like this). As "Rwanda" has never been mentioned before, the translation does not make sense and appears to be an incomplete Chinese sentence. It is regarded as a grammatical error in delivery.

(5.26)   Stu5 (NP2)

ST: <u>a convention against nuclear terrorism</u> has been finalised.

SI: ***会议<u>关于恐怖主义</u>已**经完结。*

EG: <u>conference about terrorism</u> already finalise

BT: <u>The conference on terrorism</u> has already been finalised.

Putting aside content accuracy of this translation, it starts with a head noun **会议** (the conference), followed by a modifier *关于恐怖主义* (on terrorism), which conforms to the structure of the original English NP. It seems to be two separate and fragmented parts because Chinese NPs can only be premodified, therefore, the translation is ungrammatical in Chinese.

(5.27)   Pro15 (NP3)

ST: The coming years will test <u>our resolve to halve poverty by 2015</u>.

SI: ***在今后几年**，将对**我<u>们的决断</u>做出**测试，**到 2015 年我**们可以完成工作。*

EG: At following few year, will to <u>we ASSOC resolution</u> make out test. <u>By 2015 year we can finish work</u>

BT: In the coming years will test <u>our resolution</u>. <u>We can finish our work by the year 2015.</u>

The original English NP is logical and complete. The head noun "resolve" is premodified by "our" and postmodified by "to halve poverty by 2015". In the translation, there is no modifying relationship between the head noun and the postmodifier, and the head noun and the postmodifier are translated into two separate segments *我们的决断* (our resolution) and *到 2015 年我们可以完成工作* (we can finish our work by the year 2015). The translation does not convey the logic as the ST does, so it is regarded as a grammatical error in delivery.

178

5.2.2.2.6 Parameter F, DC

Corrections in delivery include repetitions, restarts or corrections of errors in the interpretations of a head noun, or its premodification, or its postmodification, or the entire NP.

(5.28) Stu9 (NP1)

ST: …the United Nations…

SI…*美国*、*联合国*...

GS…the United States、the United Nations…

BT… the United States、the United Nations…

It is very noticeable that the original English NP "the United Nations" was first translated into *美国* (the United States) and then was corrected afterwards. It is a correction in delivery.

(5.29) Pro20 (NP2)

ST: You will condemn terrorism in all its forms and manifestations, committed by whomever, wherever, for whatever purpose.

SI: *那你们会谴责各种形式的这个恐怖主义，不管是谁，在哪，为了什么目标，进行的恐怖主义活动.*

EG: Then you will condemn all kind NOM this CL terrorism no matter who at where for what objective carry out NOM terrorism activity

BT: You will condemn all kinds of terrorism, terrorism activities committed by whomever, wherever, for whatever purpose.

The presence of two postmodifiers in the original English NP increases difficulty in SI because the short-term working memory does not allow simultaneous interpreters to wait before starting to interpreting until they have heard the entire NP, and it is likely that interpreters will interpret segment by segment in cases like this. The first postmodifier "in all its forms and manifestations" was re-positioned to premodify the translated Chinese NP and the interpreter also changed the second postmodifier "committed by whomever, wherever, for whatever purpose" into a premodifier by repeating the head noun *恐怖主义活动* (terrorism activities) after it to make it sound complete and grammatically correct in

179

Chinese. I classify this repetition of the head noun as a correction.

(5.30)   Pro18 (NP3)

ST: the sweeping and fundamental reform that I and many others believe is required.

SI: 一个基础性的一个变革或是非常重要的一个变革，这种变革恰恰是我们需要的。

EG: one CL fundamental NOM one CL reform or very important NOM one CL reform, this kind reform just BE we need NOM

BT: a fundamental reform or a very important reform, the kind of reform is just what we need.

The original NP has both pre and postmodification; also it has two parallel premodifiers "sweeping" and "fundamental". It seems that the interpreter was struggling to deliver a complete interpretation and to avoid fragmentation; the head noun "reform" was delivered three times as 变革 (reform) in translation. It is obviously an example of repetition or correction.

5.2.2.2.7 Parameter G, DCO

The scenario on complete omissions in delivery includes the omissions of entire NPs, which has been illustrated in Parameter B, Omission in content, and will not be repeated here.

5.2.2.3 Results analysis and discussions

As mentioned in the previous chapter, the intra-group comparison was done through a Paired T-test with professionals' data first followed by students'. The analysis in Table 5-3 is based on the test on data produced by professionals.

Table 5-3: Professional: NP1-NP2 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	45.22	8.67	<0.001 (0.000)
	NP2	17.73	6.86	
CO	NP1	30.96	9.59	<0.01 (0.001)

	NP2	42.10	12.61	
CS	NP1	23.80	6.39	<0.001 (0.000)
	NP2	40.18	6.63	
DG	NP1	79.22	8.50	<0.05 (0.034)
	NP2	73.71	8.87	
DGE	NP1	1.07	1.26	<0.001 (0.000)
	NP2	6.44	2.65	
DC	NP1	1.73	1.48	<0.01 (0.008)
	NP2	6.62	3.99	
DCO	NP1	18.40	7.55	>0.05 (0.091)
	NP2	14.98	6.95	

As shown in Table 5.3, in terms of content accuracy, there are more NP1s (M=45.22, SD=8.67) interpreted accurately than NP2s (M=17.73, SD=6.86) and the difference is significant (P<0.001). In terms of content errors, interpretations of NP1s display fewer omissions (M=30.96, SD=9.59) and fewer substitutions (M=23.80, SD=6.39) than those of NP2s (Omissions: M=42.10, SD=12.61; Substitutions: M=40.18, SD=6.63). Also, the effects of the position of modifiers on omissions and substitutions are both significant (Omissions: P<0.01; Substitutions: P<0.001).

With regard to good delivery, the percentage of NP1s which were interpreted well (M=79.22, SD=8.50) is higher than that of NP2s (M=73.71, SD=8.87) and the difference is statistically significant (P<0.05). Interpretations of NP1s display fewer grammatical errors (M=1.07, SD=1.26) and fewer corrections (M=1.73, SD=1.48) than interpretations of NP2s (Grammatical Errors: M=6.44, SD=2.65; Corrections: M=6.62, SD=3.99). The correlation between the position of modifiers and grammatical errors and corrections is significant (Grammatical Errors: P<0.001; Corrections: P<0.01). Although interpretations of NP1s display more complete omissions in delivery (M=18.40, SD=7.55) than those of NP2s (M=14.98, SD=6.95), the correlation between position and complete omissions in delivery is insignificant (P>0.05).

To summarise the analysis of data produced by professionals, the comparison of the interpretations of NP1s and NP2s suggests that English postmodification in NP2s has a

significant impact on the interpreting performance of professional interpreters in terms of content accuracy and delivery appropriateness and causes more omissions, more substitutions in content, and more grammatical errors, more corrections in delivery.

The analysis in Table 5-4 is based on the test on data produced by professionals.

Table 5-4: Professional: NP1-NP3 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	45.22	8.67	<0.001 (0.000)
	NP3	14.80	10.68	
CO	NP1	30.96	9.59	<0.01 (0.004)
	NP3	45.92	14.82	
CS	NP1	23.80	6.39	<0.01 (0.002)
	NP3	39.24	10.37	
DG	NP1	79.22	8.50	<0.01 (0.005
	NP3	69.61	8.57	
DGE	NP1	1.07	1.26	<0.01 (0.001)
	NP3	8.89	4.42	
DC	NP1	1.73	1.48	<0.001 (0.000)
	NP3	15.19	5.81	
DCO	NP1	18.40	7.55	<0.001 (0.000)
	NP3	8.14	6.90	

As shown in the Table 5.4, in terms of correctness in content, the percentage of NP1s which were accurately interpreted (M=45.22, SD=8.67) is higher than that of NP3s (M=14.80, SD=10.68) and the difference is significant (P<0.001). In terms of content errors, interpretations of NP1s display fewer omissions (M=30.96, SD=9.59) and fewer substitutions (M=23.80, SD=6.39) than those of NP3s (Omissions: M=45.92, SD=14.82; Substitutions: M=39.24, SD=10.37). The effects of the presence of postmodification on omissions and substitutions are both significant (Omissions: P<0.01; Substitutions: P<0.01).

From the perspective of good delivery, the percentage of NP1s which were

interpreted well (M=79.22, SD=8.50) is higher than that of NP3s (M=69.61, SD=8.57) and the difference is statistically significant (P<0.01). Interpretations of NP1s generated fewer grammatical errors (M=1.07, SD=1.26) and fewer corrections (M=1.73, SD=1.48) than those of NP3s (Grammatical Errors: M=8.89, SD=4.42; Corrections: M=15.19, SD=5.81). The correlation between the presence of postmodification and grammatical errors and corrections is significant (Grammatical Errors: P<0.01; Corrections: P<0.001).Probably due to the length of NPs, interpretations of NP1s display more complete omissions in delivery (M=18.40, SD=7.55) than those of NP3s (M=8.14, SD=6.90) and the difference is significant (P<0.001).

To summarise, the comparison of the interpretations of NP1s and NP3s suggest that the presence of English postmodification in NP3s has a statistically significant effect on professionals' interpretations as well in terms of content accuracy and delivery appropriateness and generated more omissions, substitutions in content, grammatical errors and corrections in delivery. Interestingly, possibly when NP3s are relatively long and complex, their interpretations display fewer complete omissions in delivery than NP1s.

The analysis in Table 5-5 is based on the test on data produced by professionals.

Table 5-5: Professional: NP2-NP3 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP2	17.73	6.86	>0.05 (0.204)
	NP3	14.80	10.68	
CO	NP2	42.10	12.61	>0.05 (0.454)
	NP3	45.92	14.82	
CS	NP2	40.18	6.63	>0.05 (0.834)
	NP3	39.24	10.37	
DG	NP2	73.71	8.87	>0.05 (0.240)
	NP3	69.61	8.57	
DGE	NP2	6.44	2.65	>0.05 (0.259)
	NP3	8.89	4.42	
DC	NP2	6.62	3.99	<0.01 (0.005)
	NP3	15.19	5.81	

DCO	NP2	14.98	6.95	<0.05 (0.028)
	NP3	8.14	6.90	

As shown in Table 5.5, the proportion of NP2s which were accurately interpreted (M=17.73, SD=6.86) is larger than that of NP3s (M=14.80, SD=10.68), but the difference is not significant (P>0.05). With regard to content errors, interpretations of NP2s display fewer omissions (M=42.10, SD=12.61) and more substitutions (M=40.18, SD=6.63) than those of NP3s (Omissions: M=45.92, SD=14.82; Substitutions: M=39.24, SD=10.37). However, the effects of the existence of premodification and the complexity of NPs on omissions and substitutions are insignificant (Omissions: P>0.05; Substitutions: P>0.05).

In terms of good delivery, the percentage of NP2s which were interpreted well (M=73.71, SD=8.87) is higher than that of NP3s (M=69.61, SD=8.57), however, the difference is insignificant (P>0.05). Interpretations of NP2s include fewer grammatical errors (M=6.44, SD=2.65) and fewer corrections (M=6.62, SD=3.99) than those of NP3s (Grammatical Errors: M=8.89, SD=4.42; Corrections: M=15.19, SD=5.81). However, the correlation between the existence of premodification and the complexity of NPs and grammatical errors is insignificant while that between position and corrections is significant (Grammatical Errors: P>0.05; Corrections: P<0.01). Probably due to the length and complexity of NPs, interpretations of NP2s display more complete omissions in delivery (M=14.98, SD=6.95) than those of NP3s (M=8.14, SD=6.90) and the difference is significant (P<0.05).

In summary, the comparison of the interpretations of NP2s and NP3s strongly suggests that the presence of English premodification in NP3s does not have a significant impact on professionals' interpretations in terms of content accuracy and delivery appropriateness, but only caused more corrections and fewer complete omissions possibly when NP3 are relatively long and complex.

The analysis in Table 5-6 is based on the test on data produced by students.

Table 5-6: Student: NP1-NP2 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	32.35	7.30	<0.001 (0.000)

	NP2	9.93	5.49	
CO	NP1	39.19	7.60	<0.05 (0.046)
	NP2	44.72	8.80	
CS	NP1	27.65	6.62	<0.001 (0.000)
	NP2	45.35	8.14	
DG	NP1	75.00	9.44	<0.05 (0.012)
	NP2	64.89	8.78	
DGE	NP1	2.00	1.39	<0.001 (0.000)
	NP2	17.67	6.70	
DC	NP1	2.30	1.57	<0.01 (0.004)
	NP2	9.29	7.15	
DCO	NP1	21.14	9.54	<0.01 (0.001)
	NP2	10.61	5.08	

As shown in Table 5.6, the proportion of NP1s which were accurately interpreted in terms of content (M=32.35, SD=7.30) is higher than that of NP2s (M=9.93, SD=5.49) and the difference is significant (P<0.001). With regard to content errors, interpretations of NP1s display fewer omissions (M=39.19, SD=7.60) and fewer substitutions (M=27.65, SD=6.62) than those of NP2s (Omissions: M=44.72, SD=8.80; Substitutions: M=45.35, SD=8.14), and the effects of position on omissions and substitutions are both significant (Omissions: P<0.05; Substitutions: P<0.001).

The percentage of NP1s which were interpreted well in terms of delivery (M=75.00, SD=9.44) is higher than that of NP2s (M=64.89, SD=8.78) and the difference is statistically significant (P<0.05). Interpretations of NP1s include fewer grammatical errors (M=2.00, SD=1.39) and fewer corrections (M=2.30, SD=1.57) than those of NP2s (Grammatical Errors: M=17.67, SD=6.70; Corrections: M=9.29, SD=7.15). The correlation between position and grammatical errors and corrections is significant (Grammatical Errors: P<0.001; Corrections: P<0.01). Interpretations of NP1s display more complete omissions in delivery (M=21.14, SD=9.54) than those of NP2s (M=10.61, SD=5.08) and the difference is significant (P<0.01).

In summary, the comparison of the interpretations of NP1s and NP2s shows that

English postmodification in NP2s has a significant impact on the interpreting performance of student interpreters in terms of content accuracy and delivery appropriateness and caused more omissions, more substitutions in content, more grammatical errors, and more corrections in delivery, but fewer complete omissions in delivery.

The analysis in Table 5-7 is based on the test on data produced by students.

Table 5-7: Student: NP1-NP3 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	32.35	7.30	<0.001 (0.000)
	NP3	2.50	3.52	
CO	NP1	39.19	7.60	<0.001 (0.000)
	NP3	55.83	9.87	
CS	NP1	27.65	6.62	<0.001 (0.000)
	NP3	41.39	9.25	
DG	NP1	75.00	9.44	<0.01 (0.001)
	NP3	55.55	10.68	
DGE	NP1	2.00	1.39	<0.001 (0.000)
	NP3	26.67	14.35	
DC	NP1	2.30	1.57	<0.001 (0.000)
	NP3	14.99	5.78	
DCO	NP1	21.14	9.54	<0.001 (0.000)
	NP3	4.43	4.78	

As shown in Table 5.7, more NP1s (M=32.35, SD=7.30) than NP3s (M=2.50, SD=3.52) were accurately interpreted and the difference is significant (P<0.001). Interpretations of NP1s display fewer omissions (M=39.19, SD=7.60) and fewer substitutions (M=27.65, SD=6.62) than those of NP3s (Omissions: M=55.83, SD=9.87; Substitutions: M=41.39, SD=9.25), and the effects of the presence of postmodification on omissions and substitutions are both significant (Omissions: P<0.001; Substitutions: P<0.001).

In terms of good delivery, more NP1s were interpreted well (M=75.00, SD=9.44)

186

than NP3s (M=55.55, SD=10.68) and the difference is statistically significant (P<0.01). To be more specific, interpretations of NP1s include fewer grammatical errors (M=2.00, SD=1.39) and fewer corrections (M=2.30, SD=1.57) than those of NP3s (Grammatical Errors: M=26.67, SD=14.35; Corrections: M=14.99, SD=5.78). The correlation between the presence of postmodification on the one hand and grammatical errors and corrections on the other is significant (Grammatical Errors: P<0.001; Corrections: P<0.001).Possibly when NP3s are relatively long and complex, interpretations of NP1s generated more complete omissions in delivery (M=21.14, SD=9.54) than those of NP3s (M=4.43, SD=4.78) and the difference is significant (P<0.001).

The comparison of the interpretations of NP1s and NP3s, suggests that the presence of English postmodification in NP3s can significantly affect students' interpretations in terms of content accuracy and delivery appropriateness and produced more omissions, substitutions in content, grammatical errors and corrections in delivery. Interestingly, possibly when NP3s are relatively long and complex, their interpretations display fewer complete omissions in delivery than NP1s. Interestingly, these results are consistent with those of the professional group.

The analysis in Table 5-8 is based on the test on data produced by students.

Table 5-8: Student: NP2-NP3 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP2	9.93	5.49	<0.01 (0.001)
	NP3	2.50	3.52	
CO	NP2	44.72	8.80	<0.01 (0.009)
	NP3	55.83	9.87	
CS	NP2	45.35	8.14	>0.05 (0.291)
	NP3	41.39	9.25	
DG	NP2	64.89	8.78	<0.05 (0.010)
	NP3	55.55	10.68	
DGE	NP2	17.67	6.70	>0.05 (0.066)
	NP3	26.67	14.35	
DC	NP2	9.29	7.15	>0.05 (0.053)

	NP3	14.99	5.78	
DCO	NP2	10.61	5.08	<0.01 (0.001)
	NP3	4.43	4.78	

As shown in Table 5.8, more NP2s (M=9.93, SD=5.49) were accurately interpreted than NP3s (M=2.50, SD=3.52) and the difference is significant (P<0.01). Interpretations of NP2s generated fewer omissions (M=44.72, SD=8.80) and fewer substitutions (M=45.35, SD=8.14) than those of NP3s (Omissions: M=55.83, SD=9.87; Substitutions: M=41.39, SD=9.25), and the effect of the complexity of NPs on omissions is significant (P<0.01) while that on substitutions is insignificant (P>0.05).

In terms of good delivery, more NP2s (M=64.89, SD=8.78) were interpreted well than NP3s (M=55.55, SD=10.68) and the difference is statistically significant (P<0.05). Interpretations of NP2s display fewer grammatical errors (M=17.67, SD=6.70) and fewer corrections (M=9.29, SD=7.15) than those of NP3s (Grammatical Errors: M=26.67, SD=14.35; Corrections: M=14.99, SD=5.78), however, the correlation between complexity of NPs on the one hand and grammatical errors and corrections on the other is insignificant (Grammatical Errors: P>0.05; Corrections: P>0.05).Probably due to the length and complexity of NPs, interpretations of NP2s generated more complete omissions in delivery (M=10.61, SD=5.08) than those of NP3s (M=4.43, SD=4.78) and the difference is significant (P<0.01).

The comparison of the interpretations of NP2s and NP3s suggests that the complexity of NP3s has a significant impact on students' interpretations in terms of content accuracy and delivery appropriateness, but only cause more omissions in content and fewer complete omissions in delivery when the NP3s are especially long and complex.

In conclusion, postmodification (which is not permitted in Chinese NPs) in English NPs seems to have a significant impact on the interpreting performance of professional and student interpreters in terms of content accuracy and delivery appropriateness. The presence of postmodification either in simple (NP2s) or complex NPs (NP3s) correlates with more omissions, more substitutions in content, more grammatical errors, and more corrections in delivery. Another interesting finding is that the more complex the NPs are, the fewer complete omissions in interpretations there will be.

5.2.3 English SPs vs. LPs

5.2.3.1 Predictions

My hypothesis is that instances of LPs may cause problems in SI so that:

  1. In terms of content (CG) and delivery (DG), the percentage of good interpretation of SPs is higher than that of LPs.

  2. Interpretations of SPs will display fewer omissions in content (CO) and substitutions in content (CS) than those of LPs.

  3. Interpretations of SPs will include fewer grammatical errors in delivery (DGE) and fewer corrections in delivery (DC) than those of LPs.

5.2.3.2 Evaluation

In terms of the assessment of the interpretations of English passives, I would like to focus on changes of recipients, agentive verb phrases and agents. I will look into what kinds of changes are made in these items from the perspective of seven parameters as mentioned above. In Section 5.2.3.2, recipients, agentive verb phrases and agents are underlined as recipients, agentive verb phrases and agents respectively.

5.2.3.2.1   Parameter A, CG

In this circumstance, recipients, agentive verb phrases and agents if there are any were all interpreted accurately in terms of content, although there were occasional slight changes which did not substantially change the meaning of the ST.

 (5.31) Stu9 (SP)

 ST: …on implementing what has been agreed

 SI: …*要执行**同意的事情***

 EG: need implement agree NOM thing

 BT: …to implement things that have been agreed on

  The ST is a SP. "[W]hat has been agreed" in English was interpreted into *同意的事情* (things that have been agreed on) in Chinese, and the original meaning is well preserved. It is good.

 (5.32) Pro20 (LP)

ST: The challenges of our time must be met by action.

SI: *(我们都) 必须要通过行动来解决我们所面临的挑战。*

EG: (we all) must need through action come solve we face NOM challenge

BT: (we all) must take action to meet the challenges confronting us.

The original sentence is a LP and the original agent is "by action". In the interpretation, the agent "by action" was placed before the verb "meet", which is one of the Chinese ways of expressing passive. In the interpretation of the original passive, *必须要通过行动来解决我们所面临的挑战* (must take action to meet the challenges confronting us) is an imperative. According to Xu (2009: 434) and Xu (2003: 91), English passives can be translated into Chinese imperative sentences which are subject-less sentences. In order to make the Chinese smoother, the interpreter added a generic reference *我们都* (we all) as the subject in the TT, which makes no substantial change to the original meaning, therefore, it is regarded as a good translation.

5.2.3.2.2 Parameter B, CO

If recipients or agentive verb phrases or agents or the entire passive structures have clearly been omitted, the interpretation will be considered to display an omission.

(5.33)   Stu1 (SP)

ST: A convention against nuclear terrorism has been finalised.

SI: *以反对，反恐*

EG: to against against terror

BT: to against, fight against terrorism

The original sentence is a SP. In the SI, the agentive verb phrase is omitted. This is a case of omission.

(5.34)   Pro17 (LP)

ST: The challenges of our time must be met by action.

SI: *我们目前的挑战必须能够得到解决。*

EG: We current NOM challenge must can gain solve

BT: Our current challenges must be solved.

In 5.36), the original sentence is a LP with the agent "by action". In the SI, the agent

190

was omitted. According to the experiment findings, among all the professionals' and students' interpretations of LPs, there are 45 omissions, of which 18 or 40% are omissions of agents, 9 or 20% are omissions of recipients, 9 or 20% are omissions of agentive verb phrases, 4 or 8.9% are omissions of both agents and verbs, 4 or 8.9% are omissions of both agents and verbs and 1 or 2.2% is the omission of the entire passives. It is obvious that the omission of agents is the most frequent of all the omission types in the interpretations of LPs, which could possibly be attributed to the grammatical differences mentioned above. One possibility is that the interpreter first interpreted the recipient and the verb phrase of an English passive into Chinese and then heard the agent whose interpretation should be placed before the verb phrase in Chinese, however, it was too late to restructure the interpretation or to make any major correction, and therefore, the agent was simply omitted.

(5.35)　　Stu3 (SP)

ST: Have the patience to persevere, and the vision needed to forge a real consensus

SI: *要有耐心*,（　　）*去达成共识*

EG: must have patience (　　) to arrive succeed consensus

BT: Should have patience (　　) to forge a real consensus

The original passive voice phrase "the vision needed" is a SP but it was completely omitted in the interpretation. This is a case of omission.

5.2.3.2.3 Parameter C, CS

If recipients or agentive verb phrases or agents have been substituted by something else, either close to or far away from the original meaning, but not omitted, the interpretation will be counted as substitution.

(5.36)　　Stu1 (SP)

ST: These achievements will be locked in.

SI: *这些成果都是杰出的*。

EG: this some achievement all be outstanding NOM

BT: These achievements are all outstanding.

The original sentence is a SP. In the interpretation, although the recipient was interpreted correctly, the agentive verb phrase "will be locked in" was interpreted into *都*

是杰出的 (are all outstanding), therefore, it is a substitution.

  (5.37)   Stu9 (LP)

ST: Weapons of mass destruction pose a grave danger to us all, particularly in <u>a world threatened by terrorists</u>.

SI: *这样大规模杀伤武器带来巨大的危险，也威胁我们的世界。特别是**<u>那些被恐怖主义威胁的国家</u>**。*

EG: This kind large scale kill harm weapon bring huge NOM danger also threaten we ASSOC world particular be <u>those BEI terrorism threaten NOM country</u>

BT: These weapons of mass destruction pose a grave danger and threaten our world, particularly <u>those countries threatened by terrorism.</u>

The original phrase is a LP. In the interpretation, the meanings of the agentive verb "threatened" and the agent "terrorists" are, to a large extent, preserved, however, the recipient "a world" was interpreted into *那些...国家* (those countries) and the meaning is slightly changed; therefore, it is a substitution.

5.2.3.2.4 Parameter D, DG

If recipients, agentive verb phrases and agents have all been interpreted grammatical correctly and the SIs of the original passives conform to the characteristics of Chinese grammar, the interpretations are regarded as good deliveries.

  (5.38)   Stu6 (SP)

ST: <u>A Democracy Fund has been created</u>.

SI: *<u>一个民主基金成立了。</u>*

EG: <u>one CL democracy fund found PFV/CRS</u>

BT: <u>A Democracy Fund has been established</u>.

The original sentence is a SP and in the interpretation, the passive was interpreted into a subject-less sentence. According to Ye (2001: 94), when an English passive is translated into Chinese, the Chinese passive marker BEI can be omitted, which is an advantage for interpreters from English into Chinese as they don't need to add BEI to their interpretations all the time, therefore, despite being without BEI, the above sentence is still grammatically correct.

192

According to Li and Thompson (1981: 493) and Shi (2010: 91), the typical Chinese passives with a clear passive voice maker BEI implies unfortunate or unpleasant experiences on the part of recipients. And according to Xu (2009: 435), before translating English passives into Chinese, it is essential to know whether the passives imply pleasant experiences on the part of recipients or unpleasant experiences. If they indicate pleasant experiences, it is very likely that the Chinese passives with a clear passive voice maker BEI is not the appropriate choice for translation; if they imply unpleasant experiences, BEI constructions can be used in translation. However, according to Xu (2009: 440), there are a few exceptions as shown in example (5.39) below.

(5.39)   ST: George W. Bush <u>was nominated</u> as the Presidential candidate.

TT1: ***布什**获总统候选人**提名**。*

EG1: <u>bush obtain</u> president candidate <u>nominate.</u>

BT1: <u>Bush has obtained the nomination</u> of the Presidential candidate.

TT2: ***布什被提名**为总统候选人。*

EG2: <u>Bush BEI nominate</u> become president candidate.

BT2: <u>Bush was nominated</u> as the Presidential candidate.[41]

Xu (2009: 441) states that in example (5.39), TT1 is a possible and acceptable translation while some translators may also translate the ST into TT2, the typical Chinese passives are still, to a large extent, used of unfortunate or unpleasant experiences. As a matter of fact, Xu (2009: 441) emphasizes that in order to avoid the inappropriate use of passives in Chinese, we will have to give up possibilities like TT2. However that may be, in SI, the translation method applied in TT2 may be preferable as the grammatical structure is well preserved; but since there are a very few exceptions to the rule that passives in Chinese tend to connote negativity, simultaneous interpreters need to bear this in mind to avoid inappropriate usage.

Returning to example (5.38), nothing unfortunate or unpleasant happens to "a Democracy Fund" in the original English passive, therefore, the Chinese BEI-less passive construction is an appropriate choice. Xu (2009: 434) calls this type of Chinese passive

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[41] The ST in example (5.39) is from Xu (2009: 441), TT1 in example (5.39) is from Xu (2009: 441), EG1 and BT1 of TT1 are my own, and TT2 in example (5.39) is from Xu (2009: 441), EG2 and BT2 of TT2 are my own.

construction "recipient-subject sentences", though in Xu (2003: 92), it is called "object-first structures", and Xiao, McEnery, and Qian (2006: 142), call it "notional passives", but neither of these names indicates the key characteristic of Chinese, according to Li and Thompson (1981), namely that Chinese is a topic-prominent language. Both "recipient" and "object" are identified on the basis of a direct semantic relationship with verb phrases, given that recipients often appear in passives along with passive verb phrases and objects also often appear along with verb phrases. However, in its Chinese translation, "a Democracy Fund" does not have a direct semantic relationship with the verb "establish", therefore, it is not appropriate to simply define "a Democracy Fund" as a recipient or an object in the Chinese sentence. According to Li and Thompson (1981), in Chinese, an element which does not have this kind of direct semantic relationship with the verb in a sentence is called "topic", as illustrated in example (5.40).

(5.40)　　　ST: *Zhèi kē shù yèzi hěn dà.*

　　　　　　EG: This CL tree leaf very big

　　　　　　BT: this tree, (its) leaves are very big.[42]

In example (5.40), "this tree" does not have a direct semantic relationship with the verb "are". "This tree" is what the sentence is about but it is neither a recipient nor an object. As illustrated by this example, "topic" is a more appropriate name than "recipient" or "object" to define this particular element in Chinese.

Topics may appear with subjects that stand in a being or doing relationship with the verbs, or may appear without subjects, in which case the sentences are called subject-less sentences. Therefore, according to Li and Thompson (1981), the term "subject-less structures" is more appropriate than Xu's (2009: 434) "recipient-subject sentences" and Xu's (2003: 92) "object-first structures".

(5.41)　　　Pro16

ST: You will agree to establish <u>a Peace Building Commission backed by a support office and a fund.</u>

　　　SI: *你们也是希望能够<u>由这个支持办公室和资金支持</u>，来开展<u>这方面的工作</u>。*

EG: you also hope can <u>by this CL support office and fund support</u> come carry out <u>this aspect ASSOC work</u>

BT: You also hope to carry out this kind of work with the support of this support office and fund.

The original sentence is a LP. Putting aside the accuracy of content, grammatically speaking, the sentence has no errors.

5.2.3.2.5 Parameter E, DGE

This scenario includes cases in which the interpretation of recipients or agentive verb phrases or agents is ungrammatical, or the SIs of the original passives are not acceptable according to Chinese grammar. These will be considered as grammatical errors in delivery.

(5.42)   Stu2 (SP)

ST: And you will put in place a framework for a far-reaching Secretariat and management reform, which must be followed up and implemented.

SI: *你*们还可以插入框架进行管理，*改革必须被坚持并且被实施。*

EG: You also can insert framework carry out management reform must BEI insist and BEI implement

BT: And you will put in place a framework for management. Reform must be continued and implemented.

The original English sentence is a SP. In the interpretation, the typical indicator of Chinese passive, BEI, was used; however, in this case, the interpretation was ungrammatical as BEI is usually used to indicate unfortunate or unpleasant experiences as mentioned in Section 3.4.3 above, and in this case, there is nothing unfortunate or unpleasant involved. Moreover, the interpretation has a strong flavour of translation, which makes the interpretation sound foreign. It is ungrammatical.

(5.43)   Pro14 (LP)

ST: The challenges of our time must be met by action.

SI: *我*们的时代的挑战必须要通过我们的行动来应对它。

EG: we ASSOC time ASSOC challenge must need through we ASSOC action come deal with it

BT: the challenges of our time must be met by our action it.

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[42] The ST in example (5.40) along with the EG and the BT is from Li and Thompson (1981: 15).

The original sentence is a LP. In the interpretation, the recipient "the challenges of our time" was interpreted correctly first, however, at the end of the Chinese interpretation, 它 (it) was added, which seems to recall *我们的时代的挑战* (the challenges of our time), but it makes the interpretation ungrammatical. This type of error could be related to the grammatical difference between English and Chinese. In an English LP, the agent "by action" comes after the verb phrase "must be met", while in the Chinese LP, the verb phrase "must be met" comes after the agent "by action", therefore, the interpreter may just want to make the verb-object phrase complete by adding an object after the verb, but s/he might have forgotten what had just been interpreted.

5.2.3.2.6 Parameter F, DC

The scenario includes repetitions, restarts, and corrections in the interpretations of recipients or agentive verb phrases or agents.

(5.44) Stu4 (SP)

ST: [T]hese achievements will be locked in.

SI: *这些努力，这些成功会更加的好。*

EG: These effort these success can COMP good

BT: These efforts, these achievements will be better.

The original sentence is a SP. The recipient "these achievements" was interpreted into *这些努力* (these efforts) first but was changed back to *这些成功* (these achievements) afterwards; therefore, it is a correction of the interpretation of the recipient in delivery.

(5.45) (LP)

ST: You will condemn terrorism in all its forms and manifestations, committed by whomever, wherever, for whatever purpose.

SI: *大家会谴责各种各样的恐怖主义，致力于，不管是谁，不管是以什么目的从事的恐怖活动。*

EG: Everyone will condemn every kind every type NOM terrorism committed to no matter BE who no matter BE for what purpose carry out NOM terrorist activity

BT: You will condemn all kinds of terrorism, committed to, terrorist activities committed by whomever, for whatever purpose.

196

The original structure is a LP and in the interpretation, the agentive verb phrase "committed" was first interpreted into 致力于 "committed to" and then reinterpreted into 从事 "carry out". Also, the original recipient "terrorism in all its forms and manifestations" was partially repeated as 恐怖活动 "terrorist activity". Both the reinterpretation and the partial repetition are regarded as a case of correction in delivery.

5.2.3.2.7 <u>Parameter G, DCO</u>

The scenario includes cases in which the entire passive has been omitted, as illustrated in Parameter B, Omission in content.

5.2.3.3 Results analysis and Discussions

As mentioned in Chapter 4, the long passive (LP)-short passive (SP) analysis was done through a Paired T-test with professionals' data first followed by students'.

The analysis in Table 5.9 is based on the test on data produced by professionals.

Table 5-9: Professional: LP-SP analysis

Parameter	Agent	Mean percentage	Standard Deviation	P-value
CG	LP	12.98	16.20	<0.01 (0.009)
	SP	40.47	19.87	
CO	LP	35.19	26.94	<0.05 (0.029)
	SP	15.86	12.77	
CS	LP	51.86	25.60	>0.05 (0.497)
	SP	43.66	10.98	
DG	LP	49.99	20.43	<0.05 (0.019)
	SP	76.98	12.79	
DGE	LP	35.19	17.56	<0.01 (0.002)
	SP	5.54	5.95	
DC	LP	22.23	20.41	<0.05 (0.018)
	SP	2.37	3.55	
DCO	LP	1.86	5.57	<0.05 (0.017)
	SP	15.06	13.10	

As shown in Table 5.9, in terms of content accuracy, professionals performed worse in dealing with LPs (M=12.98, SD=16.20) than SPs (M=40.47, SD=19.87) and the difference is statistically significant (P<0.01). Overall, LPs caused more omissions in content (M=35.19, SD=26.94) than SPs (M=15.86, SD=12.77) and the difference is significant for professionals (P <0.05). LPs resulted in more substitutions in content (M=51.86, SD=25.60) than SPs (M=43.66, SD=10.98), however, the structural difference did not have a statistically significant effect on the occurrence of substitutions (P>0.05).

In terms of good delivery, the proportion of well-interpreted LPs (M=49.99, SD=20.43) is lower than that of well-interpreted SPs (M=76.98, SD=12.79), and the difference is statistically significant (P<0.05). Professionals made more grammatical errors in interpreting LPs (M=35.19, SD=17.56) than SPs (M=5.54, SD=5.95) and the correlation between grammatical difference and grammatical errors is statistically significant (P<0.01). From the perspective of corrections in delivery, the overall performance of professionals shows that LPs (M=22.23, SD=20.41) caused more corrections in delivery than SPs (M=2.37, SD=3.55), and there is a significant correlation between the form of passives and corrections in delivery (P<0.05). It was surprising to see that LPs (M=1.86, SD=5.57) caused fewer complete omissions than SPs (M=15.06, SD=13.10) and the impact of the grammatical difference was significant for professionals (P<0.05). As shown in the table above, LPs caused more omissions including both partial omissions and complete omissions, but fewer complete omissions than SPs. I conclude, therefore, that LPs resulted in far more partial omissions (e.g. the omissions of recipients, passive verb phrases or agents) than SPs.

The analysis in Table 5-10 is based on the test on data produced by students.

Table 5-10: Student: LP-SP analysis

Parameter	Agent	Mean percentage	Standard Deviation	P-value
CG	LP	2.78	6.50	<0.001 (0.000)
	SP	25.00	7.15	
CO	LP	36.11	13.90	<0.01 (0.001)
	SP	18.45	9.87	

CS	LP	61.13	10.86	>0.05 (0.114)
	SP	56.53	8.32	
DG	LP	30.56	18.57	<0.05 (0.011)
	SP	53.56	14.45	
DGE	LP	56.94	20.68	<0.01 (0.003)
	SP	27.38	11.35	
DC	LP	22.23	10.83	<0.01 (0.006)
	SP	8.91	10.60	
DCO	LP	0.00	0.00	<0.01 (0.002)
	SP	13.69	11.98	

As shown in Table 5.10, with regard to content accuracy, students performed worse in dealing with LPs (M=2.78, SD=6.50) than SPs (M=25.00, SD=7.15) and the difference is statistically significant (P<0.001). Students made more omissions in content in dealing with LPs (M=36.11, SD=13.90) than with SPs (M=18.45, SD=9.87) and the difference is significant (P <0.01). LPs caused more substitutions in content (M=61.13, SD=10.86) than SPs (M=56.53, SD=8.32), however, the correlation between the structural difference and the occurrence of substitutions is not significant (P>0.05).

In terms of good delivery, the percentage of well-interpreted LPs (M=30.56, SD=18.57) is lower than that of well-interpreted SPs (M=53.56, SD=14.45), and the difference is statistically significant (P<0.05). Students made more grammatical errors in interpreting LPs (M=56.94, SD=20.68) than SPs (M=27.38, SD=11.35) and the grammatical difference had a significant impact on the occurrence of grammatical errors (P<0.01). In terms of corrections in delivery, students' performance shows that LPs (M=22.23, SD=10.83) caused fewer corrections in delivery than SPs (M=8.91, SD=10.60), and there is a significant correlation between the form of passives and corrections in delivery (P<0.01). LPs (M=0.00, SD=0.00) caused no complete omissions, whereas for SPs the figures are (M=13.69, SD=11.98) and the impact of the grammatical difference was significant (P<0.01). As shown in the above table, LPs caused more omissions, both partial and complete, but fewer complete omissions than SPs, therefore, we can conclude that LPs resulted in far more partial omissions (e.g. the omissions of recipients, passive verb phrases

or agents) than SPs. The results are consistent with those of professionals.

To sum up, the structural differences between passives in Chinese and in English correlated significantly with the performance of both professionals and students. Compared with the interpretations of SPs, those of LPs have a lower percentage of content accuracy and delivery appropriateness, to be more specific, the SI of LPs exhibit more partial omissions such as the omissions of recipients, passive verb phrases or agents but fewer complete omissions than SPs, and more grammatical errors and more corrections in delivery than SPs as well.

5.2.4   Chinese CP1s vs. CP2s

5.2.4.1 Predictions

The hypothesis was that CP2s, compared with CP1s, would have a significant impact on SI both in terms of content accuracy and delivery appropriateness and the predictions are that:

1. The percentages of interpretations of CP1s with good content and delivery are significantly higher than those of interpretations of CP2s.

2. The interpretations of CP1s would display fewer content omissions (CO) and content substitutions (CS) than those of CP2s.

3. The interpretations of CP1s would display fewer grammatical errors (DGE) and corrections (DC) in delivery than those of CP2s.

5.2.4.2 Evaluation

Sentence-initial CPs or CP1s are separated from the rest of a sentence by a comma and not closely related to the verb phrase of the sentence semantically, therefore, the content assessment of CP1s will focus on the changes of the CPs only. However, because all the CPs in the experimental speech are realised by *cóng* (from), and *(zìcóng)…yǐlái* (since) indicating a time, they will grammatically relate to the tense of the verb in the sentence. Therefore, in this case, the delivery assessment of CP1s will focus on the grammar of interpretations of CP1s and also the tense of the rest sentence. In terms of CP2s, the assessment will focus on changes of a CP and its verb phrase as they are inseparable in terms of meaning and grammar. In Section 5.2.4.2, CPs and their verb phrases will be underlined as CPs and verb phrases respectively.

5.2.4.2.1 Parameter A, CG

If a CP and its verb phrase are interpreted correctly in terms of content, the interpretation is considered good in content.

(5.46)   Pro20 (CP1)

ST: *1978 年以来，中国绝对贫困人口减少两亿多人。*

EG: 1978 year since China absolute poverty population decrease 200 million many people

TT: Since 1978, China's population in absolute poverty has been reduced by more than 200 million.

SI: Since 1978, the population under the absolute poverty line has been reduced by 200 million.

The original CP *1978 年以来* (since 1978) was interpreted correctly and the verb of the main clause *减少* (has been reduced) is using the perfective tense. The SI is good I n content.

(5.47)   Pro18 (CP2)

ST: *为发展中国家建设 200 所学校*

EG: for developing country build 200 CL school

TT: build 200 schools for developing countries

SI: build 200 schools for developing countries

The original Chinese coverb is *为* (for) and the main verb is *建设* (build). In the SI, the interpreted main verb phrase "build 200 schools" is placed before the interpreted CP "for developing countries". This SI is good in content.

5.2.4.2.2 Parameter B, CO

If a CP or its verb phrase is omitted, the interpretation is considered omission in content.

(5.48)   Stu2 (CP1)

ST: *今年 7 月以来，为支持巴基斯坦抗击洪灾、重建家园，中国已提供了 3.2 亿元人*

201

民币的人道主义援助。

EG: <u>this year July since</u> to support Pakistan fight against flood rebuild homeland China <u>already provide PFV/CRS</u> 320 million Yuan RMB ASSOC humanitarian assistance

TT: <u>Since this July</u>, in order to help Pakistan fight against flood and rebuild their homeland, China <u>has provided</u> humanitarian assistance of 320 million RMB.

SI: (   ) We fight the flood and rebuild our homes.

The original CP 今年 7 月以来 (since this July) was omitted in the interpretation. It is a case of omission.

(5.49)   Pro14 (CP2)

ST: *向全球艾滋病、结核病和疟疾基金捐款 1400 万美元*

EG: <u>facing globe HIV/AIDS、TB and malaria fund donate money 14 million US dollars</u>

TT: <u>donate 14 million US dollars to the Global Fund against HIV/AIDS, TB and Malaria</u>

SI: <u>contribute 14 million US dollars</u>

The original Chinese coverb is 向 (facing), and the main verb is 捐款 (donate money). In the SI, the main verb phrase was interpreted into "contribute 14 million US dollars" and the CP was omitted. It is an omission in content.

5.2.4.2.3 <u>Parameter C, CS</u>

If a CP or its verb phrase is replaced by anything else in terms of content, the interpretation is considered substitution in content.

(5.50)   Pro 14 (CP1)

ST: *今年 7 月以来，为支持巴基斯坦抗击洪灾、重建家园，中国已提供了 3.2 亿元人民币的人道主义援助。*

EG: <u>this year July since</u> to support Pakistan fight against flood rebuild homeland China <u>already provide PFV/CRS</u> 320 million Yuan RMB ASSOC humanitarian assistance

TT: <u>Since this July</u>, in order to help Pakistan fight against flood and rebuild their homeland, China <u>has provided</u> humanitarian assistance of 320 million RMB.

SI: <u>Recently</u>, China <u>has provided</u> 320 million funds to help Pakistan to fight against natural disaster.

The original CP 今年 7 月以来 (since this July) was misinterpreted into "recently".

It is a substitution.

(5.51)   Stu9 (CP2)

ST: *为发展中国家建设 200 所学校*

EG: for developing country build 200 CL school

TT: build 200 schools for developing countries

SI: construct 200 schools in developing countries

The Chinese coverb is 为 (for), and the main verb is 建设 (build). In the SI, the main verb phrase was interpreted into "construct 200 schools" and the CP was interpreted into "in developing countries". There is a difference in meaning between the original CP 为发展中国家 (for developing countries) and the interpreted CP "in developing countries", because 为发展中国家 (for developing countries) indicates the beneficiary while "in developing countries" suggests the place where the action takes place. It is a substitution in content.

5.2.4.2.4 Parameter D, DG

(5.52)   Stu12 (CP1)

ST: *今年 7 月以来，为支持巴基斯坦抗击洪灾、重建家园，中国已提供了 3.2 亿元人民币的人道主义援助。*

EG: this year July since to support Pakistan fight against flood rebuild homeland China already provide PFV/CRS 320 million Yuan RMB ASSOC humanitarian assistance

TT: Since this July, in order to help Pakistan fight against flood and rebuild their homeland, China has provided humanitarian assistance of 320 million RMB.

SI: In the next 5 years, we will help Pakistan to fight the floods and droughts. We have provided 0.32 billion dollars to Pakistan.

The original CP 今年7月以来 (since this July) was interpreted into "in the next 5 years", followed by "we will help Pakistan to fight the floods and droughts". The original main clause 中国已提供了 3.2 亿元人民币的人道主义援助 (China has provided humanitarian assistance of 320 million RMB) was interpreted into a separate sentence "China has provided humanitarian assistance of 320 million RMB." The meaning of the

original sentence has been dramatically changed, however, in terms of grammar, the SI is still acceptable.

(5.53)   Stu4 (CP2)

ST: *向**发**展中国家提供形式多**样**、真诚无私的援助*

EG: facing developing country provide form various sincere selfless NOM assistance

TT: provide various forms of sincere and selfless assistance for developing countries

SI: offer help to developing countries in many ways

The original Chinese coverb is *向* (facing), and the main verb is *提供* (provide). In the SI, the original main verb phrase *提供形式多**样**、真诚无私的援助* (provide various forms of sincere and selfless assistance) was interpreted into "offer help…in many ways". As can been seen, the meaning was slightly changed but the grammar of the interpretation is correct.

5.2.4.2.5 Parameter E, DGE

(5.54)   Stu9 (CP1)

ST: *1978 年以来，中国绝对贫困人口减少两亿多人。*

EG: 1978 year since China absolute poverty population decrease 200 million many people

TT: Since 1978, China's population in absolute poverty has been reduced by more than 200 million.

SI: Since 1978, the absolute poverty population in China fall by 0.2 million.

Even though the original CP *1978 年以来* (since 1978) was interpreted into "since 1978", the verb in the main clause is using the present tense rather than the perfective tense, therefore, the CP and the tense of the rest sentence do not match grammatically. It is a grammatical error in delivery.

(5.55)   Pro18 (CP2)

ST: *把帮助非洲发展和脱贫作为主攻方向*

EG: *BA* help Africa develop and shake off poverty as main attack direction

204

TT: <u>helping Africa develop and eradicate poverty will be the top priority</u>

SI: <u>our efforts should be put in the area, for example, the poverty relief</u>

The Chinese coverb in the ST is 把 *(Ba)*, a direct object marker, and the main verb is 作为 (be). Leaving aside the meaning of the SI, the SI is not a well-constructed English sentence.

5.2.4.2.6 Parameter F, DC

(5.56)   Stu 5 (CP1)

ST: *<u>1978 年以来</u>，中国绝对贫困人口<u>减少</u>两亿多人。*

EG: <u>1978 year since </u>China absolute poverty population <u>decrease </u>200 million many people

TT: <u>Since 1978</u>, China's population in absolute poverty <u>has been reduced</u> by more than 200 million.

SI: <u>Since in 1978 since 1978</u>, our poverty population <u>has been reduced</u> greatly.

The original CP *1978 年以来* (since 1978) was first interpreted into "since in 1978" and then was corrected to "since 1978". It is a correction in delivery.

(5.57)   Pro20 (CP2)

ST: *<u>将官方发展援助占国民收入的比重提高到千分之七</u>*

EG: <u>BA official develop assistance account for national income ASSOC proportion lift high to 0.7 per cent</u>

TT: <u>increase the official development assistance to 0.7 per cent of the GNP</u>

SI: <u> provide the ODA and increase the proportion of the ODA to 0.7%</u>

The Chinese coverb is 将, a direct object marker like *Ba*, and the main verb is 提高 (lift high). In the SI, the ST was first interpreted into "provide the ODA" and then corrected into "increase the proportion of the ODA to 0.7%". It is a correction in SI delivery.

5.2.4.2.7 Parameter G, DCO

The scenario on complete omissions in delivery includes the omissions of entire Chinese CPs and their verb phrases, which has been illustrated in Parameter B, Omissions in content, and will not be repeated here.

5.2.4.3 Results analysis and Discussions

The CP1-CP2 analysis was done through a Paired T-test with professionals' data first followed by students'.

The analysis in table 5-11 is based on the test on data produced by professionals.

Table 5-11: Professional: CP1s-CP2s analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	CP1	48.14	17.60	<0.001 (0.000)
	CP2	9.07	6.83	
CO	CP1	18.52	29.41	>0.05 (0.732)
	CP2	22.72	15.77	
CS	CP1	33.33	28.88	<0.05 (0.022)
	CP2	68.18	14.90	
DG	CP1	59.27	22.24	<0.05 (0.036)
	CP2	40.91	9.90	
DGE	CP1	22.21	23.57	<0.05 (0.015)
	CP2	46.99	5.57	
DC	CP1	0.00	0.00	>0.05 (0.056)
	CP2	5.54	7.46	
DCO	CP1	18.52	29.41	>0.05 (0.342)
	CP2	8.57	10.28	

As shown in Table 5.11, in terms of content accuracy, the percentage of CP1s (M=48.14, SD=17.60) interpreted correctly is higher than that of CP2s (M=9.07, SD=6.83) and the difference is significant (P<0.001). To be specific, interpretations of CP1s display fewer omissions (M=18.52, SD=29.41) and fewer substitutions (M=33.33, SD=28.88) than interpretations of CP2s (Omissions: M=22.72, SD=15.77; Substitutions: M=68.18, SD=14.90), the correlation between the type of CPs and omissions is insignificant (P>0.05) while that between the type of CPs and substitutions is significant (P<0.05).

In terms of good delivery, more CP1s were interpreted well (M=59.27, SD=22.24) than CP2s (M=40.91, SD=9.90), and the difference is significant (P<0.05). In terms of

delivery inappropriateness, interpretations of CP1s display fewer grammatical errors (M=22.21, SD=23.57) and fewer corrections (M=0.00, SD=0.00) than interpretations of NP2s (Grammatical Errors: M=46.99, SD=5.57; Corrections: M=5.54, SD=7.46), the correlation between the type of CPs and grammatical errors is statistically significant (P<0.05) while that between the type of CPs and corrections in delivery is insignificant (P>0.05).The interpretations of CP1s display more complete omissions in delivery (M=18.52, SD=29.41) than interpretations of CP2s (M=8.57, SD=10.28), but the correlation between the type of CP and complete omissions in delivery is insignificant (P>0.05).

The analysis in Table 5-12 is based on the test on data produced by students.

Table 5-12: Student: CP1s-CP2s analysis

Parameter	Position	Mean percentage	Standard Deviation	P-value
CG	CP1	30.54	22.29	<0.01 (0.001)
	CP2	1.13	2.04	
CO	CP1	47.23	33.22	>0.05 (0.168)
	CP2	34.47	14.58	
CS	CP1	22.21	21.71	<0.001 (0.000)
	CP2	64.39	13.82	
DG	CP1	30.55	33.21	>0.05 (0.881)
	CP2	28.78	10.15	
DGE	CP1	19.44	26.44	<0.01 (0.001)
	CP2	57.57	13.03	
DC	CP1	5.55	12.96	>0.05 (0.173)
	CP2	10.58	6.24	
DCO	CP1	36.45	35.77	<0.05 (0.039)
	CP2	10.98	8.57	

As shown in Table 5.12, the percentage of CP1s which were accurately interpreted in terms of content (M=30.54, SD=22.29) is much higher than that of CP2s (M=1.13, SD=2.04), and the difference is significant (P<0.01). In terms of content errors,

interpretations of CP1s display more omissions (M=47.23, SD=33.22) and fewer substitutions (M=22.21, SD=21.71) than interpretations of CP2s (Omissions: M=34.47, SD=14.58; Substitutions: M=64.39, SD=13.82). The impact of the type of CPs on omissions is insignificant (P>0.05) while that of the type of CPs on substitutions is statistically significant (P<0.001).

With regard to good delivery, the percentage of CP1s interpreted well (M=30.55, SD=33.21) is higher than that of CP2s (M=28.78, SD=10.15), however, the difference is insignificant (P>0.05). In terms of grammatical errors and corrections in delivery, interpretations of CP1s include fewer grammatical errors (M=19.44, SD=26.44) and fewer corrections (M=5.55, SD=12.96) than those of CP2s (Grammatical Errors: M=57.57, SD=13.03; Corrections: M=10.58, SD=6.24). The effect of the type of CPs on grammatical errors is significant (P<0.01); however, that of the type of CPs on corrections is insignificant (P>0.05). Interpretations of CP1s display slightly more complete omissions in delivery (M=36.45, SD=35.77) than those of NP2s (M=10.98, SD=8.57), and the difference is statistically significant (P<0.05).

To conclude the two groups of comparison of interpretations of CP1s and CP2s: CP2s, which are the Chinese CPs that are translated into English with the word order between the CP and the verb phrase changed in its English translation, seem to have a significant impact on the interpreting performance of both professionals and students in terms of content accuracy and delivery appropriateness. To be specific, both professionals and students produced fewer good interpretations of CP2s in terms of content; both groups made more substitutions in content and more grammatical errors in delivery in coping with CP2s.

5.2.5   Chinese NP1s vs. NP2s

5.2.5.1 Predictions

The hypothesis was that NP2s, compared with NP1s, would have a significant impact on SI both in terms of content accuracy and delivery appropriateness and the expected results are that:

1. The percentages of interpretations of NP1s with good content and delivery are significantly higher than those of interpretations of NP2s.

2. The interpretations of NP1s will display fewer content omissions (CO) and content substitutions (CS) than those of NP2s.

3. The interpretations of NP1s will display fewer grammatical errors (DGE) and corrections (DC) in delivery than those of NP2s.

5.2.5.2 Evaluation

The assessment will focus on changes of a head noun and its modification of the two types of Chinese NPs from the perspective of the seven parameters mentioned above. In Section 5.2.5.2, modifications in Chinese NPs are underlined as <u>modifications.</u>

5.2.5.2.1 <u>Parameter A, CG</u>

If both a head noun and its modification are interpreted correctly in terms of content, the interpretation is considered good in content.

(5.58)   Stu5 (NP1)

ST: *发达国家*

EG: <u>developed</u> country

TT: <u>developed</u> countries

SI: <u>developed</u> countries

In the original Chinese NP1, 发达 (developed) is the premodification of the head noun 国家 (countries). In the interpretation, the original premodification was interpreted into a premodification in the English NP, modifying the English head noun "countries". This interpretation is considered good in content.

(5.59)   Pro16 (NP2)

ST: *最不发达国家债务的负担*

EG: <u>most not developed country debt ASSOC</u> burden

TT: <u>the debt</u> burden <u>of the least developed countries</u>

SI: <u>the debt</u> burden <u>of the least developed countries</u>

In the original Chinese NP2, 最不发达国家债务的 (the debt of the least developed countries) premodifies the head noun 负担 (burden). In the interpretation, the original premodified Chinese NP was interpreted into an English NP with both pre-and

postmodification. This interpretation is good in content.

If a head noun or its premodification or both are omitted, the interpretation is considered an omission in content.

(5.60)   Stu1 (NP1)

ST: *形式多样、真诚无私的援助*

EG: form various, sincere, selfless NOM assistance

TT: various forms of sincere and selfless assistance

SI: aid, financial aid

In the Chinese NP1, there are three premodifiers of the head noun *援助* (assistance), namely, *形式多样* (various forms of), *真诚* (sincere), and *无私* (selfless). In the interpretation, the English head noun "aid" was repeated, and the original three modifiers were interpreted into one English premodifier "financial". This case is regarded as an omission of content.

(5.61)   Pro18 (NP2)

ST: *发展中国家减贫人数的 75%*

EG: developing country reduce poverty population ASSOC 75%

TT: 75% of the population lifted out of poverty in developing countries

SI: 75% of the whole world

In the original Chinese NP, the head noun "75%" was premodified by *发展中国家减贫人数的* (the population lifted out of poverty in developing countries). The original premodification consists of two parts, "the population lifted out of poverty" and "developing countries"; however, in the interpretation, the premodification was interpreted into a postmodification "of the whole world" but "the population lifted out of poverty" was omitted. This is an omission in content.

(5.62)   Pro15 (NP2)

ST: *发展中国家减贫人数的 75%*

EG: developing country reduce poverty population ASSOC 75%

TT: 75% of the population lifted out of poverty in developing countries

SI: none

In the original Chinese NP, the head noun "75%" was premodified by *发展中国家减贫人数的* (the population lifted out of poverty in developing countries), but the NP was completely omitted in the interpretation.

5.2.5.2.3 Parameter C, CS

If a head noun or its modification or the entire NP is substituted by something else or is not interpreted accurately in terms of content, the interpretation is considered as a substitution in content.

(5.63)   Stu6 (NP1)

ST: *数以千万计的贫困人口*

EG: number by thousand ten thousand calculate NOM poverty population

TT: tens of millions of poor people

SI: a thousands of poor people

In the original Chinese NP1, *数以千万计的贫困* (tens of millions of poor) is the premodification of the head noun *人口* (population/people). In the interpretation, the original premodification was misinterpreted into "a thousands of poor" which still premodified the English head noun "people". The meaning of premodification has been changed and also the interpreted NP "a thousands of poor people" does not conform to English grammar. It is regarded as a substitution in content.

(5.64)   Pro21 (NP2)

ST: *与发展中国家的农业合作*

EG: with developing country ASSOC agriculture cooperation

TT: agricultural cooperation with developing countries

SI: our agricultural cooperation with other countries

In the original Chinese NP2, *与发展中国家的* (with developing countries) and *农业* (agricultural) are the premodifiers of the head noun *合作* (cooperation). In the interpretation, the first premodifier *与发展中国家的* (with developing countries) was interpreted into "with other countries" which slightly changed the meaning; the second

211

premodifier 农业 (agricultural) was interpreted into "our agricultural". Given the fact that the subject of the original sentence is "we" and the speaker was talking about the agricultural cooperation between the country which the speaker represented and developing countries, "our" is not regarded as an addition to the original meaning, so in terms of the interpretation of the second modifier, it is not a substitution. But the interpretation of the first modifier is a substitution as the meaning has been slightly changed.

5.2.5.2.4 Parameter D, DG

If a head noun and its modification are interpreted grammatically correctly and the interpretation of the entire Chinese NP conforms to the conventions of English grammar, the interpretation is regarded as a good delivery.

(5.65)   Stu7 (NP1)

ST: *3000 名医疗专家*

EG: 3000 CL medical expert

TT: 3000 medical experts

SI: 3000 specialists

The original Chinese head noun 专家 (expert) is premodified by *3000 名* (3000 CL) and 医疗 (medical) and in the interpretation, "medical" was omitted. Despite the omission, the delivery is grammatical error-free. Therefore, it is a good delivery in terms of grammar.

(5.66)   Pro17 (NP2)

ST: *在农业规划、杂交水稻、水产养殖、农田水利、农业机械等方面的合作*

EG: at agriculture planning hybrid rice aqua farming farmland water conservancy agriculture machinery and so on aspect ASSOC cooperation

TT: cooperation in agricultural planning, hybrid rice, aqua farming, farmland water conservancy, and agricultural machinery

SI: cooperation in all fields

The original Chinese head noun 合作 (cooperation) is premodified by a long prepositional phrase *在农业规划、杂交水稻、水产养殖、农田水利、农业机械等方面的* (in agricultural planning, hybrid rice, aqua farming, farmland water conservancy, and agricultural machinery), but in the interpretation, the original long modification was

212

interpreted into a short postmodifier "in all fields". Obviously, even though the SI is still a premodified NP, there is a radical loss of details, which is occasioned by the need to wait for the noun, and this seems a very striking result of grammatical differences; therefore, from the perspective of content accuracy, it is a substitution. Despite that, the delivery is correct and acceptable in terms of grammar; therefore, it is a good delivery.

5.2.5.2.5 <u>Parameter E, DGE</u>

If a head noun or its modification is not interpreted grammatically correctly or if the interpretation of the entire Chinese NP does not follow the grammatical conventions of English grammar, the interpretation will be considered as a grammatical error in delivery.

     Stu10 (NP1)

(5.67)   Stu 8 (NP1)

     ST: *数以千万计的贫困人口*

     EG: <u>number by thousand ten thousand calculate NOM poverty</u> population

     TT: <u>tens of millions of poor</u> people

     SI: <u>many poverty</u> population

In the original Chinese NP1, *数以千万计的贫困* (tens of millions of poor) is the premodification of the head noun 人口 (population/people). In the interpretation, the original premodification was misinterpreted into "many poverty" which still premodified the English head noun "population". It is obvious that the meaning has been changed and it is a substitution in content; meanwhile, it is also grammatically unacceptable in terms of delivery as "much" would be the right premodifier of "population" rather than "many" and "poverty" is a noun which cannot modify "population"; "poor" would be the correct term. The SI output does not conform to the conventions of English grammar; therefore, it is a grammatical error in delivery.

(5.68)   Stu 1 (NP2)

ST: *发展中国家减贫人数的 75%*

EG: <u>developing country reduce poverty population ASSOC</u> 75%

TT: 75% of the population lifted out of poverty in developing countries

SI: (which accounts for) 75%. (China is a large population country).

213

In the original Chinese NP, the head noun "75%" was premodified by *发展中国家减贫人数的* (the population lifted out of poverty in developing countries), but only the head noun of the NP was interpreted into 75% and it is a clear omission of modification and one of the most possible reasons could be that the modification is too long to be remembered after the interpreter rendered 75%. As shown in the SI, "75%" preceded by "which accounts for" and succeeded by a completely new sentence "China is a large population country" and "which accounts for 75%" does not make any sense due to the omission of interpretation of modification in the SI, therefore, "which accounts for75%" in this case is regarded as an incomplete sentence and therefore, it is ungrammatical.

5.2.5.2.6 Parameter F, DC

Corrections in delivery include repetitions, restarts or corrections of errors in the interpretation of a head noun or its modification of a Chinese NP or the entire NP.

(5.69)　　Stu1 (NP1)

ST: *提供长期、稳定、可预期的资金援助*

EG: provide long-term stability can expect NOM fund assistance

TT: provide long-term, stable and assured financial assistance

SI: provide more help provide more long-term, and expectable financial aid

The original head noun *援助* (assistance) is premodified by *长期* (long-term), *稳定* (stable), *可预期的* (assured) and *资金* (financial). The original NP was first interpreted into "more help" and then re-interpreted into "more long-term and expectable financial aid". It is a repetition of the meaning of the head noun; therefore, it is regarded as a correction in delivery.

(5.70)　　Pro18 (NP2)

ST: *中国绝对贫困人口*

EG: China absolute poverty population

TT: the population in absolute poverty in China

SI: the absolute poverty, the number of people in absolute poverty

In the original Chinese NP, the head noun *人口* (population) is premodified by *中国* (China) and *绝对贫困* (absolute poverty). In the interpretation, the NP was first

214

interpreted into "the absolute poverty" and then was corrected into "the number of people in absolute poverty". In terms of content, one premodifier 中国 (China) was omitted and in terms of delivery, there is a repetition of "absolute poverty" in the interpretation. One possibility of this kind of repetition is that the interpreter heard the Chinese premodification first, therefore, s/he interpreted the premodification, but when s/he realised the original premodification was supposed to be interpreted into a postmodification in English, the interpreter corrected immediately. It is a correction in delivery.

5.2.5.2.7 Parameter G, DCO

The scenario on complete omissions in delivery includes the omissions of entire Chinese NPs, which has been illustrated in Parameter B, Omissions in content, and will not be repeated here.

5.2.5.3 Results analysis and Discussion

The NP1-NP2 analysis was done through a Paired T-test with professional's data first followed by students'.

The analysis in Table 5-13 is based on the test on data produced by professionals.

Table 5-13: Professional: NP1-NP2 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	45.54	12.48	<0.001 (0.000)
	NP2	16.07	11.16	
CO	NP1	27.13	12.53	<0.001 (0.000)
	NP2	51.12	18.96	
CS	NP1	27.29	7.89	>0.05 (0.246)
	NP2	32.83	12.41	
DG	NP1	74.28	9.30	<0.001 (0.000)
	NP2	57.02	8.75	
DGE	NP1	7.78	2.69	<0.001 (0.000)
	NP2	30.61	6.36	
DC	NP1	2.08	1.78	<0.05 (0.042)

	NP2	3.96	3.31	
DCO	NP1	16.20	9.77	<0.05 (0.031)
	NP2	10.12	10.14	

As shown in Table 5.13, in terms of content accuracy, the percentage of NP1s (M=45.54, SD=12.48) interpreted accurately is higher than that of NP2s (M=16.07, SD=11.16) and the difference is significant (P<0.001). In terms of content errors, interpretations of NP1s display fewer omissions (M=27.13, SD=12.53) and fewer substitutions (M=27.29, SD=7.89) than interpretations of NP2s (Omissions: M=51.12, SD=18.96; Substitutions: M=32.83, SD=12.41).The correlation between the type of NP and omissions is significant (P<0.001) while that between the type of NP and substitutions is insignificant (P>0.05).

With regard to good delivery, the percentage of NP1s which were interpreted well (M=74.28, SD=9.30) is higher than that of NP2s (M=57.02, SD=8.75), and the difference is significant (P<0.001). In terms of delivery appropriateness, interpretations of NP1s display fewer grammatical errors (M=7.78, SD=2.69) and fewer corrections (M=2.08, SD=1.78) than interpretations of NP2s (Grammatical Errors: M=30.61, SD=6.36; Corrections: M=3.96, SD=3.31), the correlation between the type of NP and grammatical errors and that between the type of NP and corrections in delivery are both statistically significant (Grammatical Errors: P<0.001; Corrections: P<0.05).The interpretations of NP1s display more complete omissions in delivery (M=16.20, SD=9.77) than interpretations of NP2s (M=10.12, SD=10.14), and the correlation between the type of NP and complete omissions in delivery is significant (P<0.05).

The analysis in Table 5-14 is based on the test on data produced by students.

Table 5-14: Student: NP1-NP2 analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	NP1	30.83	7.24	<0.001 (0.000)
	NP2	6.28	3.27	
CO	NP1	40.01	9.11	<0.001 (0.000)
	NP2	65.74	5.88	

CS	NP1	29.17	5.95	>0.05 (0.613)
	NP2	27.98	4.59	
DG	NP1	62.37	10.07	<0.001 (0.000)
	NP2	44.66	8.33	
DGE	NP1	11.92	5.83	<0.001 (0.000)
	NP2	36.12	8.79	
DC	NP1	2.97	2.15	>0.05 (0.138)
	NP2	4.98	3.69	
DCO	NP1	23.23	9.71	<0.01 (0.007)
	NP2	16.48	8.34	

As can be seen in Table 5.14, the percentage of NP1s which were accurately interpreted in terms of content (M=30.83, SD=7.24) is much higher than that of NP2s (M=6.28, SD=3.27), and the difference is significant (P<0.001). In terms of omissions and substitutions, interpretations of NP1s display fewer omissions (M=40.01, SD=9.11) and more substitutions (M=29.17, SD=5.95) than interpretations of NP2s (Omissions: M=65.74, SD=5.88; Substitutions: M=27.98, SD=4.59). The impact of the type of NP on omissions is significant (P<0.001) while that of the type of NP on substitutions is not significant (P>0.05).

In terms of good delivery, the percentage of NP1s interpreted well (M=62.37, SD=10.07) is higher than that of NP2s (M=44.66, SD=8.33), and the difference is significant (P<0.001). With regard to grammatical errors and corrections in delivery, interpretations of NP1s include fewer grammatical errors (M=11.92, SD=5.83) and fewer corrections (M=2.97, SD=2.15) than those of NP2s (Grammatical Errors: M=36.12, SD=8.79; Corrections: M=4.98, SD=3.69). The effect of the type of NP on grammatical errors is significant (P<0.001); however, that of the type of NP on corrections is insignificant (P>0.05). Interpretations of NP1s display slightly more complete omissions in delivery (M=23.23, SD=9.71) than those of NP2s (M=16.48, SD=8.34), and the difference is statistically significant (P<0.01).

To conclude the two groups of comparison of interpretations of NP1s and NP2s, NP2s which are the Chinese NPs being translated into English with the word order between

the modification and the head noun changed in its English translation seem to have a significant impact on the interpreting performance of both professionals and students in terms of content accuracy and delivery appropriateness. In the interpretations of NP2s, both professionals and students produced fewer good interpretations in terms of content and fewer good interpretations in terms of delivery; both groups made more omissions in content and more grammatical errors but fewer complete omissions in delivery in coping with NP2s.

5.2.6 Chinese Subject Prominent Clauses (SCs) vs. Topic Prominent Clauses (TCs)

5.2.6.1 Predictions

The hypothesis is that compared with SCs, topics in TCs pose challenges to simultaneous interpreters, and the expected results are that:

1. The percentages of interpretations of TCs with good content and delivery are significantly higher than those of interpretations of SCs

2. The interpretations of TCs display fewer content omissions (CO) and content substitutions (CS) than those of SCs

3. The interpretations of TCs display fewer grammatical errors (DGE) and corrections (DC) in delivery than both those of SCs.

5.2.6.2 Evaluation

The assessment will focus on changes of topics, subjects and the verbs of the closest verb phrase of TCs and SCs in Chinese from the perspective of the seven parameters mentioned above. In Section 5.2.6.2, topics, subjects and the verbs of the closest verb phrases are underlined as topics, subjects and the verbs.

5.2.6.2.1 Parameter A, CG

If a topic, a subject and the verb of its closest verb phrase are interpreted correctly in terms of content, the interpretation is considered good in content.

(5.71)   Pro13 (SC)

ST: *十年过去了。*

EG: ten year pass PFV/CRS

TT: Ten years have passed.

SI: Ten years have passed.

In the original Chinese SC, 十年 (ten year) is the subject and 过去 (pass) is the verb and 了 indicates the perfective aspect. Obviously, it is a good interpretation.

(5.72)   Pro13 (TC)

ST: 中国人口多。

EG: China population much

TT: China has a large population.

SI: China has a big population.

In the original Chinese TC, 中国 (China) is the topic; 人口 (population) is the subject, and according to Li and Thompson (1981: 93), there is a being relationship between the subject which is 人口 (population) in this case and the predicate which is 多 (much) in this example. In the SI, the original topic 中国 (China) was interpreted into the subject in the English sentence which is a SP structure and the original subject 人口 (population) was interpreted into the object in the English sentence. Despite the changes in structure between the ST and the interpretation, the meaning is well preserved; therefore, it is considered a good interpretation.

5.2.6.2.2 Parameter B, CO

If a topic or a subject or the verb of its closest verb phrase are omitted, the interpretation is considered to display an omission in content.

(5.73)   Stu3 (SP)

ST: 实现千年发展目标依然任重道远。

EG: fulfil millennium development goal still task heavy road far

TT: There is still a long way to go to achieve the Millennium Development Goals.

SI: We still have a long way to go.

The subject in the original SP is a verb phrase 实现千年发展目标 (fulfil millennium development goal) and the complement is 任重道远 (task heavy road far). In the interpretation, the complement was interpreted into "we (still) have a long way to go";

219

however, the original subject was omitted in the English interpretation. The interpretation is regarded as an omission in content.

(5.74)　　Pro15 (TC)

ST: *千年发展目标在不同地区和领域的落实还不平衡。*

EG: Millennium Development Goal at different region and field ASSOC implementation still not even

TT: The progress toward the Millennium Development Goals is still uneven in different regions and fields

SI: The development is not balanced

In the original Chinese TC, *千年发展目标* (Millennium Development Goal) is the topic, *在不同地区和领域的落实* (at different region and field ASSOC implementation) is the subject and there is a being relationship between the subject *在不同地区和领域的落实* (at different region and field ASSOC implementation) and the adjective *还不平衡* (still not even). In this case, it is not very clear whether "the development" in the SI is from the original Chinese topic *千年发展目标* (Millennium Development Goal) or from the original Chinese subject *在不同地区和领域的落实* (at different region and field ASSOC implementation). If it is from the original Chinese topic, the subject was omitted; if it is from the original Chinese subject, the topic was omitted. No matter which element is the ST of the subject in the interpretation, there is an omission. Given the fact that there should be a being or doing relationship between the subject and the adjective, the case is considered as an omission of the topic.

(5.75)　　Pro18 (SP)

ST: *我愿在此宣布，今后三年内，中国将向全球艾滋病、结核病和疟疾基金捐款1400万美元。*

EG: I wish at here announce today after three year inside, China will toward globe HIV/AIDS TB and malaria fund donate 14 million US dollar

TT: I would like to declare here that in the next three years, China will donate 14 million US dollars to the Global Fund to Fight AIDS, Tuberculosis and Malaria.

220

SI: ( ) And so far, the Chinese government has contributed over 10 million dollars to different funds.

In the original SP, the subject is 我 (I) and the verb is 愿 (wish). However, in the interpretation, the subject and the verb were all omitted. It is a complete omission of the SP.

5.2.6.2.3 Parameter C, CS

If a topic or a subject or the verb of its closest verb phrase are substituted by something else or are not interpreted accurately in terms of content, the interpretation is considered as a substitution in content.

(5.76) Pro17 (SC)

ST: *我们也清醒地认识到…*

EG: we also clearly know CRS

TT: we have also clearly realised…

SI: we still remember…

In the original SC, 我们 (we) is the subject, 认识 (know) is the verb, 到 (arrive) indicates the currently relevant state, and the verb which is supposed to be translated into "have realised" was interpreted into "remember". The meaning has been slightly changed; therefore, it is a substitution in content.

(5.77) Stu11 (TC)

ST: *千年发展目标在不同地区和领域的落实还不平衡。*

EG: Millennium Development Goal at different region and field ASSOC implementation still not even

TT: The progress toward the Millennium Development Goals is still uneven in different regions and fields

SI: The Millennium Goals, the achievement of the goal is not balanced

In the original Chinese TC, 千年发展目标 (Millennium Development Goal) is the topic, 在不同地区和领域的落实 (at different region and field ASSOC implementation) is the subject and there is a being relationship between the subject 在不同地区和领域的落实 (at different region and field ASSOC implementation) and the adjective 还不平衡 (still not even). The topic 千年发展目标 (Millennium Development Goal) was interpreted

221

into "The Millennium Goals"; the subject 在不同地区和领域的落实 (at different region and field ASSOC implementation) was interpreted into "the achievement of the goal" and the closest adjective 还不平衡 (still not even) was interpreted into "is not balanced". Clearly, the topic and the subject were misinterpreted in this case, as parts of the topic and the subject are not there in the interpretation. One reason for this could be that the interpreter was trying to interpret the original topic into a subject in English first, but then realised it would be appropriate to translate the original subject into the subject in English because there was a being relationship between the original predicate and the original subject, and therefore, the interpreter corrected him/herself by repeating "the goal" in the subject in English and maintained an agreement between the interpreted subject "the achievement of the goal" and the interpreted predicate "is not balanced". Possibly because of corrections and repetitions, parts of the original topic and the original subject were omitted, but the main message delivered by the Chinese topic and the Chinese subject has been maintained in the interpretation, therefore, it is regarded as a substitution in content.

5.2.6.2.4 Parameter D, DG

If a topic and a subject and the verb of its closest verb phrase are interpreted grammatically correctly and the SIs of the original TCs or SCs conform to the conventions of English grammar, for instance, the agreement between subjects and verbs is maintained in the interpretation, the interpretation is regarded as a good delivery.

(5.78)   Stu10 (SC)

ST: 实现千年发展目标依然任重道远。

EG: fulfil millennium development goal still task heavy road far

TT: There is still a long way to go to achieve the Millennium Development Goals.

SI: We still have much work to do.

The subject in the original SC is a verb phrase 实现千年发展目标 (fulfil millennium development goal) and the verb is 任重道远 (task heavy road far). Although in terms of content, the verb 任重道远 (task heavy road far) was correctly interpreted into "we (still) have much work to do", the subject 实现千年发展目标 (fulfil millennium development goal) was omitted in the SI. Nevertheless the interpretation is grammatically acceptable in delivery. This is a good delivery.

222

(5.79)   Pro15 (TC)

ST: *中国人口多。*

EG: China population much

TT: China has a large population

SI: China is a big country

In the original Chinese TC, 中国 (China) is the topic; 人口 (population) is the subject, and there is a being relationship between the subject 人口 (population) and the adjective 多 (much). As shown in the TT, the meaning of the ST is "China has a large population"; however, the ST was misinterpreted into "China is a big country" in the interpretation. Although the meaning has been altered, the delivery is still grammatically acceptable. It is a good delivery, because this investigation is focused on structure rather than meaning

5.2.6.2.5 Parameter E, DGE

If a topic or a subject or the verb of its closest verb phrase are not interpreted grammatically correctly and the TTs of the original TCs or SCs do not follow English grammatical conventions, for instance, if there is disagreement between subjects and verbs in the interpretations, the interpretation is regarded as a grammatical error in delivery.

(5.80)   Pro14 (SC)

ST: *未来五年是实施千年发展目标的关键阶段。*

EG: future five year be implement millennium development goal ASSOC key period

TT: The future five years will be the crucial period for implementing the Millennium Development Goals

SI: In the next five years will be a key stage for us to reach the Millennium Development Goal.

In the original SC, the subject is 未来五年 (the future five year) and the verb is 是 (be). In the SI, possibly because the subject is a time phrase, it was interpreted into an adverb "in the next five years" and its relationship with the verb phrase suggests that it is a subject, however, English subjects cannot be place adverbs like this, and it is obviously ungrammatical. It is a grammatical error in delivery.

223

(5.81)   Stu9 (TC)

ST: *千年发展目标在不同地区和领域的落实还不平衡。*

EG: Millennium Development Goal at different region and field ASSOC implementation still not even

TT: The progress toward the Millennium Development Goals is still uneven in different regions and fields

SI: The Millennium goals and the implementation has been unbalanced in many countries.

In the original Chinese TC, *千年发展目标* (Millennium Development Goal) is the topic, the noun *落实* (implementation) modified by the prepositional phase *在不同地区和领域的* (at different region and field ASSOC) is the subject and there is a being relationship between the subject *在不同地区和领域的落实* (at different region and field ASSOC implementation) and the adjective *还不平衡* (still not even). The topic *千年发展目标* (Millennium Development Goal) was interpreted into "The Millennium goals"; the subject *在不同地区和领域的落实* (at different region and field ASSOC implementation) was interpreted into "the implementation in many countries" and the closest adjective *还不平衡* (still not even) was interpreted into "has been unbalanced". The subject in the interpretation is "the Millennium goals and the implementation" and the verb phrase in the interpretation "has been unbalanced" is in singular form, however, the verb is supposed to be in plural form to maintain the agreement between the subject and the verb in English. It is a grammatical error in delivery.

5.2.6.2.6 Parameter F, DC

Corrections in delivery include repetitions, restarts or corrections of errors in the interpretation of a topic (if any), a subject and the verb of its closest verb phrase.

(5.82)   Pro18 (SC)

ST: *未来五年是实施千年发展目标的关键阶段。*

EG: future five year be implement millennium development goal ASSOC key period

TT: The future five years will be the crucial period for implementing the Millennium Development Goals

SI:　Five years the future five years are very critical for the realization of MDG

In the original SC, the subject is *未来五年* "future five year" and the verb is *是* "be". In the SI, the subject was interpreted into "five years" first and then was corrected into "the future five years". It is a correction in delivery.

(5.83)　　　Stu12 (TC)

ST: *中国...发展不平衡。。*

EG: China…development uneven

TT: The development in China is uneven

SI: we the development is uneven

In the original Chinese TC, *中国* "China" is the topic, *发展* "development" is the subject and *不平衡* "uneven" is the predicate. As the speaker is presenting the current situation in China on behalf of the Chinese government, it is appropriate to interpret *中国* "China" into "we"; however, there is no being or doing relationship between the topic *中国* "China" and the predicate *不平衡* "uneven", therefore, the interpreter corrected him/herself by changing the subject from "we" into "the development" in the English interpretation. It is a case of correction in delivery.

5.2.6.2.7　Parameter G, DCO

The scenario on complete omissions in delivery includes entire omissions of TCs including topics, subjects and the verbs of the closest verb phrases or SCs including subjects and the verbs of the closest verb phrases. This scenario has been illustrated in Parameter B, Omissions in content, and will not be repeated here.

5.2.6.3 Results analysis and Discussion

The SC-TC analysis was done through a Paired T-test with professionals' data first followed by students'.

The analysis in Table 5-15 is based on the test on data produced by professionals.

Table 5-15: Professional: SCs-TCs analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value

CG	TC	27.78	13.01	<0.001 (0.000)
	SC	57.58	10.65	
CO	TC	20.98	9.91	<0.01 (0.001)
	SC	4.52	4.54	
CS	TC	51.23	15.43	<0.05 (0.039)
	SC	37.89	7.20	
DG	TC	58.64	11.82	<0.01 (0.001)
	SC	81.31	8.35	
DGE	TC	33.32	13.31	<0.01 (0.003)
	SC	13.12	4.81	
DC	TC	7.41	6.21	>0.05 (0.247)
	SC	4.53	3.94	
DCO	TC	4.33	4.63	>0.05 (0.287)
	SC	2.51	4.59	

As shown in Table 5.15, in terms of content accuracy, the percentage of TCs (M=27.78, SD=13.01) interpreted accurately is lower than that of SCs (M=57.58, SD=10.65) and the difference is clearly significant (P<0.001). In terms of content errors, interpretations of TCs display more omissions (M=20.98, SD=9.91) and more substitutions (M=51.23, SD=15.43) than interpretations of SCs (Omissions: M=4.52, SD=4.54; Substitutions: M=37.89, SD=7.20), and both the correlation between the type of sentence structures and omissions (P<0.01) and that between the type of sentence structures and substitutions (P<0.05) are significant.

In terms of good delivery, the percentage of TCs which were interpreted well (M=58.64, SD=11.82) is lower than that of SCs (M=81.31, SD=8.35), and the difference is significant (P<0.01). In terms of delivery inappropriateness, interpretations of TCs display more grammatical errors (M=33.32, SD=13.31) and slightly more corrections (M=7.41, SD=6.21) than interpretations of SCs (Grammatical Errors: M=13.12, SD=4.81; Corrections: M=4.53, SD=3.94). The correlation between the type of sentence structure and grammatical errors is significant but there is no significant correlation between the type of sentence structure and corrections in delivery (Grammatical Errors: P<0.01; Corrections:

P>0.05).The interpretations of TCs display slightly more complete omissions in delivery (M=4.33, SD=4.63) than interpretations of SCs (M=2.51, SD=4.59), however, the correlation between the type of sentence structures and complete omissions in delivery is insignificant (P>0.05).

The analysis in Table 5-16 is based on the test on data produced by students.

Table 5-16: Student: SCs-TCs analysis

Parameter	Type	Mean percentage	Standard Deviation	P-value
CG	TC	13.89	12.63	<0.01 (0.001)
	SC	35.23	11.81	
CO	TC	39.35	16.14	<0.001 (0.000)
	SC	14.01	8.56	
CS	TC	46.77	12.65	>0.05 (0.259)
	SC	50.38	10.87	
DG	TC	43.97	12.86	<0.01 (0.001)
	SC	62.48	8.70	
DGE	TC	43.98	12.42	<0.001 (0.000)
	SC	24.25	8.96	
DC	TC	11.13	7.49	>0.05 (0.062)
	SC	6.43	6.85	
DCO	TC	9.28	8.32	>0.05 (0.829)
	SC	8.70	4.92	

As can be seen in Table 5.16, the percentage of TCs which were accurately interpreted in terms of content (M=13.89, SD=12.63) is much lower than that of SCs (M=35.23, SD=11.81), and the difference is significant (P<0.01). In terms of omissions and substitutions, interpretations of TCs display more omissions (M=39.35, SD=16.14) and fewer substitutions (M=46.77, SD=12.65) than interpretations of SCs (Omissions: M=14.01, SD=8.56; Substitutions: M=50.38, SD=10.87). The impact of the type of sentence structure on omissions is significant (P<0.001) while that of the type of sentence structures on substitutions is not significant (P>0.05).

In terms of good delivery, the percentage of TCs interpreted well (M=43.97, SD=12.86) is lower than that of SCs (M=62.48, SD=8.70), and the difference is significant (P<0.01). With regard to grammatical errors and corrections in delivery, interpretations of TCs include more grammatical errors (M=43.98, SD=12.42) and more corrections (M=11.13, SD=7.49) than those of SCs (Grammatical Errors: M=24.25, SD=8.96; Corrections: M=6.43, SD=6.85). The effect of the type of sentence structures on grammatical errors is significant (P<0.001); however, that of the type of NPs on corrections is insignificant (P>0.05). Interpretations of TCs display slightly more complete omissions in delivery (M=9.28, SD=8.32) than those of SCs (M=8.70, SD=4.92), and the difference is not significant (P>0.05).

To sum up, the comparisons of the interpretations of TCs and SCs have shown that the type of sentence structure correlates with the interpreting performance of both professionals and students in terms of content accuracy and delivery appropriateness. To be more specific, the existence of topic in TCs seems to have a statistically significant impact on the interpretations of both professionals and students. In the interpretations of TCs, both professionals and students produced fewer good interpretations in content and fewer good interpretations in delivery; both groups make more omissions in content and the professional group makes more substitutions in content as well. Both groups make more grammatical errors in delivery in dealing with TCs.

5.2.7 Conclusion

In conclusion, the intra-group analysis has shown that compared with symmetrical structures (English Y-position adverbials, English NP1s, English SPs, Chinese CP1s, Chinese NP1s and Chinese SCs), asymmetrical structures (English N-position adverbials, English NP2s and NP3s, English LPs, Chinese CP2s, Chinese NP2s and Chinese TCs) seem to have a statistically significant impact on SI in terms of content accuracy and delivery appropriateness. To be specific, interpretations of divergent structures often correlate with omissions and substitutions in content, and grammatical errors and corrections in delivery, compared with those of similar structures. Two additional, very interesting findings are that a) the less complex the structures are, the fewer complete omissions in delivery there will be; and b) all the English divergent structures correlate with corrections in delivery, none of the Chinese divergent structures do. This is probably

because a) Chinese is a left-branching language, and interpreters tend to wait a bit longer for the essential item before articulating in dealing with Chinese than English; and b) interpretation from Chinese into English is a task from the subjects' native language into their non-native language, therefore, it is not that flexible and easy to make corrections in their non-native language.

5.3 Inter-group analysis

5.3.1 English adverbials

The following section is a comparison between the interpretations of professionals and those of students. Given that the previous section has shown that the position of adverbials has an effect on interpreting performance, we will compare professionals' performance and students' performance from Y-position and N-position perspectives respectively.

The analysis in Table 5-17 is based on the data on Y-position adverbials.

Table 5-17: Y Position: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	41.48	8.86	<0.01 (0.002)
	Pro	58.02	12.74	
CO	Stu	22.22	10.03	>0.05 (0.265)
	Pro	17.51	8.19	
CS	Stu	36.31	8.66	<0.01 (0.002)
	Pro	24.44	7.84	
DG	Stu	67.23	8.08	<0.05 (0.013)
	Pro	77.02	8.37	
DGE	Stu	7.96	6.33	<0.05 (0.032)
	Pro	2.70	2.89	
DC	Stu	2.94	1.97	>0.05 (0.804)
	Pro	2.70	2.42	
DCO	Stu	22.22	10.03	>0.05 (0.265)
	Pro	17.51	8.19	

As shown in Table 5.17, the proportion of content accuracy of student interpretations (M=41.48, SD=8.86) is lower than that of professional interpretations (M=58.02, SD=12.74) and the level of expertise correlates significantly with performance quality (P<0.01). In terms of omissions, although students (M=22.22, SD=10.03) made more omissions than professionals (M=17.51, SD=8.19), the difference is not significant (P>0.05). However, students (M=36.31, SD=8.66) made more substitutions in content than professionals (M=24.44, SD=7.84) and the difference is significant (P<0.01).

Students (M=67.23, SD=8.08) produced fewer good deliveries than professionals (M=77.02, SD=8.37) and the level of expertise correlates significantly with the quality of delivery of interpretation (P<0.05). More grammatical errors can be observed in student interpretations (M=7.96, SD=6.33) than in professional interpretations (M=2.70, SD=2.89) and the difference is significant (P<0.05). The correlation between level of expertise and correction is not significant (P>0.05), though the proportion of corrections in student interpretations (M=2.94, SD=1.97) is slightly higher than that in professional interpretations (M=2.70, SD=2.42). The results for complete omissions in delivery are the same as those for omissions in content.

The analysis in Table 5-18 is based on the test on data on N-position adverbials.

Table 5-18: N Position: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	26.01	7.60	<0.01 (0.002)
	Pro	39.68	10.31	
CO	Stu	26.37	9.74	>0.05 (0.328)
	Pro	21.76	11.26	
CS	Stu	47.62	6.12	<0.01 (0.005)
	Pro	38.54	6.87	
DG	Stu	40.48	8.02	<0.001 (0.000)
	Pro	60.24	10.74	
DGE	Stu	21.94	9.60	<0.01 (0.003)
	Pro	10.66	2.43	

DC	Stu	13.60	5.65	>0.05 (0.241)
	Pro	10.60	5.57	
DCO	Stu	26.37	9.74	>0.05 (0.328)
	Pro	21.76	11.26	

As shown in Table 5.18, the percentage of accurate interpretations of students (M=26.01, SD=7.60) is lower than that of professionals (M=39.68, SD=10.31) and the level of expertise correlates significantly with performance quality (P<0.01). In terms of omissions, students (M=26.37, SD=9.74) made more omissions than professionals (M=21.76, SD=11.26), but the difference is not significant (P>0.05). However, students (M=47.62, SD=6.12) made more substitutions in content than professionals (M=38.54, SD=6.87) and the difference is significant (P<0.01).

The interpretations of students (M=40.48, SD=8.02) include fewer good deliveries than those of professionals (M=60.24, SD=10.74) and the level of expertise correlates significantly with the quality of delivery of interpretation (P<0.001). More grammatical errors are displayed in student interpretations (M=21.94, SD=9.60) than in professional interpretations (M=10.66, SD=2.43) and the difference is significant (P<0.01). The correlation between level of expertise and correction is not significant (P>0.05), though the proportion of corrections in student interpretations (M=13.60, SD=5.65) is higher than that in professional interpretations (M=10.60, SD=5.57). The results on complete omissions in delivery are the same as those on omissions in content.

Although the position of English adverbials has a significant effect on interpretations, it does not change the impact of the level of expertise on interpretations. By analysing the interpretations of both Y-position and N-position adverbials, the impact of the level of expertise is consistently observed through the better performance of professionals than students in terms of content and delivery, and in the fact that students made more substitutions and grammatical errors than professionals.

5.3.2   English NPs

Given that the previous section has shown that the presence of postmodification has an effect on interpreting performance, the following section will compare professionals'

performance and students' performance on NP1s, NP2s and NP3s respectively.

The analysis in Table 5-19 is based on the data on NP1s.

Table 5-19: NP1: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	32.35	7.30	<0.01 (0.002)
	Pro	45.22	8.67	
CO	Stu	39.19	7.60	<0.05 (0.041)
	Pro	30.96	9.59	
CS	Stu	27.65	6.62	>0.05 (0.197)
	Pro	23.80	6.39	
DG	Stu	75.00	9.44	>0.05 (0.304)
	Pro	79.22	8.50	
DGE	Stu	2.00	1.39	>0.05 (0.130)
	Pro	1.07	1.26	
DC	Stu	2.30	1.57	>0.05 (0.413)
	Pro	1.73	1.48	
DCO	Stu	21.14	9.54	>0.05 (0.486)
	Pro	18.40	7.55	

As shown in Table 5.19, the proportion of content accuracy of student interpretations (M=32.35, SD=7.30) is lower than that of professional interpretations (M=45.22, SD=8.67) and the level of expertise correlates significantly with performance quality (P<0.01). Students (M=39.19, SD=7.60) made more omissions than professionals (M=30.96, SD=9.59) and the difference is significant (P<0.05). Students (M=27.65, SD=6.62) also made more substitutions in content than professionals (M=23.80, SD=6.39), however, the difference is insignificant (P>0.05).

Students (M=75.00, SD=9.44) produced fewer good deliveries than professionals (M=79.22, SD=8.50) but the level of expertise does not correlate significantly with the quality of delivery of interpretation (P>0.05). More grammatical errors can be observed in student interpretations (M=2.00, SD=1.39) than in professional interpretations (M=1.07,

SD=1.26), but the difference is not significant (P>0.05). The correlation between level of expertise and correction is not significant (P>0.05), though the proportion of corrections in student interpretations (M=2.30, SD=1.57) is slightly higher than that in professional interpretations (M=1.73, SD=1.48). Although student interpretations display more complete omissions in delivery (M=21.14, SD=9.54) than professional interpretations (M=18.40, SD=7.55), the correlation between level of expertise and complete omissions in delivery is not significant (P>0.05).

The analysis in Table 5-20 is based on the data on NP2s.

Table 5-20: NP2: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	9.93	5.49	<0.01 (0.009)
	Pro	17.73	6.86	
CO	Stu	44.72	8.80	>0.05 (0.581)
	Pro	42.10	12.61	
CS	Stu	45.35	8.14	>0.05 (0.137)
	Pro	40.18	6.63	
DG	Stu	64.89	8.78	<0.05 (0.035)
	Pro	73.71	8.87	
DGE	Stu	17.67	6.70	<0.001 (0.000)
	Pro	6.44	2.65	
DC	Stu	9.29	7.15	>0.05 (0.328)
	Pro	6.62	3.99	
DCO	Stu	10.61	5.08	>0.05 (0.112)
	Pro	14.98	6.95	

It is obvious in Table 5.20 that the percentage of accurate student interpretations (M=9.93, SD=5.49) is lower than that of professionals (M=17.73, SD=6.86) and the level of expertise correlates significantly with performance quality (P<0.01). Students (M=44.72, SD=8.80) made more omission content errors than professionals (M=42.10, SD=12.61), but the difference is not significant (P>0.05); students (M=45.35, SD=8.14) made more

substitutions in content than professionals (M=40.18, SD=6.63), however, this difference is also insignificant (P>0.05).

The student interpretations (M=64.89, SD=8.78) include fewer good deliveries than those of professionals (M=73.71, SD=8.87) and the level of expertise correlates significantly with the quality of delivery of interpretation (P<0.05). More grammatical errors are displayed in student interpretations (M=17.67, SD=6.70) than in professional interpretations (M=6.44, SD=2.65) and the difference is significant (P<0.001). Student interpretations include more corrections in delivery (M=9.29, SD=7.15) than professional interpretations (M=6.62, SD=3.99), but the correlation between level of expertise and correction is not significant (P>0.05). It is interesting to see fewer complete omissions in delivery in student interpretations (M=10.61, SD=5.08) than in professional interpretations (M=14.98. SD=6.95), however, the difference is not significant (P>0.05).

The analysis in Table 5-21 is based on the data on NP3s.

Table 5-21: NP3: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	2.50	3.52	<0.01 (0.001)
	Pro	14.80	10.68	
CO	Stu	55.83	9.87	>0.05 (0.081)
	Pro	45.92	14.82	
CS	Stu	41.39	9.25	>0.05 (0.623)
	Pro	39.24	10.37	
DG	Stu	55.55	10.68	<0.01 (0.004)
	Pro	69.61	8.57	
DGE	Stu	26.67	14.35	<0.01 (0.002)
	Pro	8.89	4.42	
DC	Stu	14.99	5.78	>0.05 (0.939)
	Pro	15.19	5.81	
DCO	Stu	4.43	4.78	>0.05 (0.161)
	Pro	8.14	6.90	

As shown in Table 5.21, students (M=2.50, SD=3.52) produced fewer accurate interpretations than professionals (M=14.80, SD=10.68) and the level of expertise correlates significantly with performance quality (P<0.01). In terms of errors in content, students (M=55.83, SD=9.87) made more omissions than professionals (M=45.92, SD=14.82), but the difference is insignificant (P>0.05). Students (M=41.39, SD=9.25) made more substitutions in content than professionals (M=39.24, SD=10.37), however, the difference is insignificant (P>0.05).

Students (M=55.55, SD=10.68) produced fewer good deliveries than professionals (M=69.61, SD=8.57) and the level of expertise correlates significantly with the quality of delivery of interpretation (P<0.01). Student interpretations (M=26.67, SD=14.35) include more grammatical errors than professional interpretations (M=8.89, SD=4.42) and the difference is significant (P<0.01). Although student interpretations (M=14.99, SD=5.78) display fewer corrections in delivery than professional interpretations (M=15.19, SD=5.81), the correlation between level of expertise and correction is not significant (P>0.05). There are fewer complete omissions in delivery in student interpretations (M=4.43, SD=4.78) than in professional interpretations (M=8.14, SD=6.90), but the correlation between level of expertise and complete omissions in delivery is not significant (P>0.05).

Postmodification has a significant effect on interpretations, as we have concluded through the previous analysis; however, it does not change the impact of the level of expertise on interpretations. In the analysis of the interpretations of NP1s, NP2s and NP3s, the impact of the level of expertise is consistently observed through the better performance of professionals than students in terms of content. It is interestingly noticeable that in terms of interpretations of NP1s, significant correlation between level of expertise and interpretations is only displayed at the content level, while in terms of interpretations of NP2s and NP3s, significant correlation between level of expertise and interpretations is shown not only at the content level but also at the delivery level, and in the fact that students made more grammatical errors than professionals, which in particular means students have more problems in dealing with NPs with postmodification in terms of delivery while professionals seem to handle them better.

5.3.3 English passives

Given that the previous section has shown that the structural differences between English

and Chinese passives have an effect on interpreting performance, the following section will compare professionals' performance and students' performance on LPs and SPs respectively.

The analysis in Table 5-22 is based on the data on SPs.

Table 5-22: SP: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	25.00	7.15	<0.05 (0.021)
	Pro	40.47	19.87	
CO	Stu	18.45	9.87	>0.05 (0.605)
	Pro	15.86	12.77	
CS	Stu	56.53	8.32	<0.01 (0.006)
	Pro	43.66	10.98	
DG	Stu	53.56	14.45	<0.01 (0.001)
	Pro	76.98	12.79	
DGE	Stu	27.38	11.35	<0.001 (0.000)
	Pro	5.54	5.95	
DC	Stu	8.91	10.60	>0.05 (0.093)
	Pro	2.37	3.55	
DCO	Stu	13.69	11.98	>0.05 (0.807)
	Pro	15.06	13.10	

As shown Table 5.22, from the perspective of the interpretations of SPs, professionals (M=40.47, SD=19.87) performed better than students (M=25.00, SD=7.15) in terms of content accuracy and the level of expertise had a significant effect on this aspect (P<0.05). Students (M=18.45, SD=9.87) made more omissions than professionals (M=15.86, SD=12.77), however, we cannot conclude that the difference is significant (P>0.05). Students (M=56.53, SD=8.32) produced more substitutions than professionals (M=43.66, SD=10.98), and the level of expertise had a significant effect on the occurrence of substitutions (P<0.01).

Students (M=53.56, SD=14.45) produced fewer good deliveries than professionals (M=76.98, SD=12.79), and the correlation between the level of expertise and the quality of delivery of interpretation is statistically significant (P<0.01). Students (M=27.38, SD=11.35) made more grammatical errors than professionals (M=5.54, SD=5.95) and the number of grammatical errors was statistically correlated with the level of expertise (P<0.001). The data show that students (M=8.91, SD=10.60) made more corrections in delivery than professionals (M=2.37, SD=3.55) and fewer complete omissions (M=13.69, SD=11.98) than professionals (M=15.06, SD=13.10), however, it is impossible to conclude that this is closely related with the level of expertise (Correction in delivery: P>0.05; Complete Omissions in delivery: P>0.05).

The analysis in Table 5-23 is based on the data on LPs.

Table 5-23: LP: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	2.78	6.50	>0.05 (0.061)
	Pro	12.98	16.20	
CO	Stu	36.11	13.90	>0.05 (0.920)
	Pro	35.19	26.94	
CS	Stu	61.13	10.86	>0.05 (0.271)
	Pro	51.86	25.60	
DG	Stu	30.56	18.57	<0.05 (0.035)
	Pro	49.99	20.43	
DGE	Stu	56.94	20.68	<0.05 (0.020)
	Pro	35.19	17.56	
DC	Stu	22.23	10.83	>0.05 (0.999)
	Pro	22.23	20.41	
DCO	Stu	0.00	0.00	>0.05 (0.258)
	Pro	1.86	5.57	

Table 5.23 shows a comparison between how students and professionals deal with LPs. Professionals (M=12.98, SD=16.20) performed better than students (M=2.78,

SD=6.50) in terms of content accuracy, but the level of expertise does not have a significant effect on this aspect (P>0.05). Although students (M=36.11, SD=13.90) made more omissions than professionals (M=35.19, SD=26.94), the difference is not statistically significant (P>0.05). Despite the fact that students (M=61.13, SD=10.86) made more substitutions than professionals (M=51.86, SD=25.60), the difference in expertise did not result in a significant difference in the occurrence of substitutions (P>0.05).

Students (M=30.56, SD=18.57) produced fewer good deliveries than professionals (M=49.99, SD=20.43), and the correlation between the level of expertise and the quality of delivery of interpretation is statistically significant (P<0.05). It is clearly shown in Table 5.23 that students (M=56.94, SD=20.68) made more grammatical errors than professionals (M=35.19, SD=17.56) and the number of grammatical errors is closely related with the level of expertise (P<0.05). It is interesting that the experiment shows that students (M=22.23, SD=10.83) have roughly the same percentage of corrections in delivery as professionals (M=22.23, SD=20.41) and fewer complete omissions (M=0.00, SD=0.00) than professionals (M=1.86, SD=5.57), however, we cannot conclude that this is closely related with the level of expertise (Correction in delivery: P>0.05; Complete Omissions in delivery: P>0.05).

Although the analysis has shown that LPs have a significant effect on interpretations, it does not change the impact of the level of expertise on interpretations. The analysis of interpretations of both LPs and SPs have illustrated that the level of expertise has a significant effect on SI. More specifically, in interpretations of SPs, professionals performed better than students in terms of content and delivery and students made more substitutions in content and more grammatical errors in delivery than professionals. In contrast, in the interpretations of LPs, professionals only performed better than students in terms of delivery and students made more grammatical errors in delivery than professionals; there is no significant difference in content accuracy of the interpretations of LPs and the existence of agents in LPs could be the key factor here. In other words, both professionals (CG%: 12.98%) and students (CG%: 2.78%) seem to have problems in dealing with LPs in terms of content accuracy.

5.3.4 Chinese CPs

Given that the previous section has shown that CP2s have a more significant effect on

interpreting performance than CP1s, I will compare professionals' performance and students' performance on CP1s and CP2s respectively in this section.

The analysis in Table 5-24 is based on the test on data on CP1s.

Table 5-24: CP1: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	30.54	22.29	>0.05 (0.066)
	Pro	48.14	17.60	
CO	Stu	47.23	33.22	>0.05 (0.054)
	Pro	18.52	29.41	
CS	Stu	22.21	21.71	>0.05 (0.325)
	Pro	33.33	28.88	
DG	Stu	30.55	33.21	<0.05 (0.037)
	Pro	59.27	22.24	
DGE	Stu	19.44	26.44	>0.05 (0.806)
	Pro	22.21	23.57	
DC	Stu	5.55	12.96	>0.05 (0.217)
	Pro	0.00	0.00	
DCO	Stu	36.45	35.77	>0.05 (0.236)
	Pro	18.52	29.41	

As shown in Table 5.24, student interpreters (M=30.54, SD=22.29) produced fewer good interpretations in content than professional interpreters (M=48.14, SD=17.60), but the difference is insignificant (P>0.05). With regard to content errors, students (M=47.23, SD=33.22) made more omissions than professionals (M=18.52, SD=29.41), but the difference is insignificant (P>0.05). Students (M=22.21, SD=21.71) made fewer substitutions in content than professionals (M=33.33, SD=28.88), however, the difference is insignificant (P>0.05).

In terms of good delivery, students (M=30.55, SD=33.21) produced fewer good interpretations than professionals (M=59.27, SD=22.24) and the correlation between the

level of expertise and the quality of delivery of interpretation is significant (P<0.05). Student interpretations display fewer grammatical errors (M=19.44, SD=26.44) than professional interpretations (M=22.21, SD=23.57), but the difference is not significant (P>0.05). There are more corrections in student interpretations (M=5.55, SD=12.96) than in professional interpretations (M=0.00, SD=0.00), but the different is insignificant (P>0.05). More complete omissions in delivery can be observed in student interpretations (M=36.45, SD=35.77) than in professional interpretations (M=18.52, SD=29.41), however, the correlation between level of expertise and complete omissions in delivery is not significant (P>0.05).

The analysis in Table 5-25 is based on the data on CP2s.

Table 5-25: CP2: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	1.13	2.04	<0.01 (0.001)
	Pro	9.07	6.83	
CO	Stu	34.47	14.58	>0.05 (0.094)
	Pro	22.72	15.77	
CS	Stu	64.39	13.82	>0.05 (0.555)
	Pro	68.18	14.90	
DG	Stu	28.78	10.15	<0.05 (0.013)
	Pro	40.91	9.90	
DGE	Stu	57.57	13.04	<0.05 (0.035)
	Pro	46.99	5.57	
DC	Stu	10.58	6.24	>0.05 (0.109)
	Pro	5.54	7.46	
DCO	Stu	10.98	8.56	>0.05 (0.565)
	Pro	8.57	10.28	

As shown in Table 5.25, the percentage of accurate student interpretations of CP2s (M=1.13, SD=2.04) is lower than that of professionals (M=9.07, SD=6.83) and the correlation between the level of expertise and performance quality is significant (P<0.01).

Student interpretations (M=34.47, SD=14.58) include more omissions than professional interpretations (M=22.72, SD=15.77), but the difference is insignificant (P>0.05); students (M=64.39, SD=13.82) made fewer substitutions than professionals (M=68.18, SD=14.90), but this difference is insignificant (P>0.05).

Student interpretations of CP2s (M=28.78, SD=10.15) include fewer good deliveries than those of professionals (M=40.91, SD=9.90) and the correlation between the level of expertise and the quality of delivery of interpretation is statistically significant (P<0.05). Student interpreters generated more grammatical errors (M=57.57, SD=13.04) than professional interpreters (M=46.99, SD=5.57), and the difference is significant (P<0.05). Student interpretations display more corrections in delivery (M=10.58, SD=6.24) than professional interpretations (M=5.54, SD=7.46), but the correlation between level of expertise and corrections in delivery is insignificant (P>0.05). There are more complete omissions in delivery in student interpretations (M=10.98, SD=8.56) than in professional interpretations (M=8.57. SD=10.28), however, the difference is not significant (P>0.05).

Despite the fact that there is a significant impact of Chinese CPs on SI, as shown in the previous analysis, the impact of the level of expertise on interpretations is still statistically significant. The professional-student comparison has shown that the impact of the level of expertise is consistently observed in the interpretations of CP1s and CP2s through the better performance of professionals than students in terms of content and delivery. Interestingly, the student-professional difference is shown at delivery level only in coping with CP1s and in the fact that professionals had more good deliveries than students; however, the difference is displayed at both content and delivery levels in dealing with CP2s and professionals produced more good content, more good deliveries and fewer grammatical errors in delivery than students. That means that students are less able to cope with grammatical differences at both content and delivery levels than professionals.

5.3.5 Chinese NPs

Given that the previous section has shown that NP2s have a more significant effect on interpreting performance than NP1s, I will compare professionals' performance and students' performance on NP1s and NP2s respectively in this section.

The analysis in Table 5-26 is based on the data on NP1s.

Table 5-26: NP1: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	30.83	7.24	<0.01 (0.003)
	Pro	45.54	12.48	
CO	Stu	40.01	9.11	<0.05 (0.013)
	Pro	27.13	12.53	
CS	Stu	29.17	5.95	>0.05 (0.541)
	Pro	27.29	7.89	
DG	Stu	62.37	10.07	<0.05 (0.012)
	Pro	74.28	9.30	
DGE	Stu	11.92	5.83	>0.05 (0.064)
	Pro	7.78	2.69	
DC	Stu	2.97	2.15	>0.05 (0.326)
	Pro	2.08	1.78	
DCO	Stu	23.23	9.71	>0.05 (0.118)
	Pro	16.20	9.77	

As Table 5.26 shows, student interpreters (M=30.83, SD=7.24) produced fewer good interpretations in content than professional interpreters (M=45.54, SD=12.48), and the difference is significant (P<0.01). In term of content errors, students (M=40.01, SD=9.11) made more omissions than professionals (M=27.13, SD=12.53) and the difference is significant (P<0.05). Students (M=29.17, SD=5.95) made more substitutions in content than professionals (M=27.29, SD=7.89), however, the difference is insignificant (P>0.05).

With regard to delivery appropriateness, students (M=62.37, SD=10.07) produced fewer good interpretations than professionals (M=74.28, SD=9.30) and the correlation between the level of expertise and the quality of delivery of interpretation is significant (P<0.05). Student interpretations display more grammatical errors (M=11.92, SD=5.83) than professional interpretations (M=7.78, SD=2.69), but the difference is not significant (P>0.05). The percentage of corrections in student interpretation (M=2.97, SD=2.15) is slightly higher than that in professional interpretations (M=2.08, SD=1.78), but the

difference is insignificant (P>0.05). More complete omissions in delivery can be observed in student interpretations (M=23.23, SD=9.71) than in professional interpretations (M=16.20, SD=9.77), however, the correlation between level of expertise and complete omissions in delivery is not significant (P>0.05).

The analysis in Table 5-27 is based on the test on NP2s.

Table 5-27: NP2: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	6.28	3.27	<0.01 (0.009)
	Pro	16.07	11.16	
CO	Stu	65.74	5.88	<0.05 (0.02)
	Pro	51.12	18.96	
CS	Stu	27.98	4.59	>0.05 (0.225)
	Pro	32.83	12.41	
DG	Stu	44.66	8.33	<0.05 (0.004)
	Pro	57.02	8.75	
DGE	Stu	36.12	8.79	>0.05 (0.129)
	Pro	30.61	6.36	
DC	Stu	4.98	3.69	>0.05 (0.521)
	Pro	3.96	3.31	
DCO	Stu	16.48	8.34	>0.05 (0.131)
	Pro	10.12	10.14	

As shown in Table 5.27, the percentage of accurate student interpretations of NP2s (M=6.28, SD=3.27) is lower than that of professionals (M=16.07, SD=11.16) and the correlation between the level of expertise and performance quality is significant (P<0.01). Student interpretations (M=65.74, SD=5.88) include more omissions than professional interpretations (M=51.12, SD=18.96), and the difference is significant (P<0.05); students (M=27.98, SD=4.59) made fewer substitutions than professionals (M=32.83, SD=12.41), but this difference is not significant (P>0.05).

Student interpretations of NP2s (M=44.66, SD=8.33) include fewer good deliveries

than those of professionals (M=57.02, SD=8.75) and the correlation between the level of expertise and the quality of delivery of interpretation is statistically significant (P<0.05). Student interpreters generated more grammatical errors (M=36.12, SD=8.79) than professional interpreters (M=30.61, SD=6.36), however, the difference is insignificant (P>0.05). Student interpretations display more corrections in delivery (M=4.98, SD=3.69) than professional interpretations (M=3.96, SD=3.31), but the correlation between level of expertise and corrections in delivery is insignificant (P>0.05). There are more complete omissions in delivery in student interpretations (M=16.48, SD=8.34) than in professional interpretations (M=10.12, SD=10.14), however, the difference is not significant (P>0.05).

Despite the fact that there is a significant impact of Chinese NP2s on SI, as shown in the previous analysis, the impact of the level of expertise on interpretations is still statistically significant. The professional-student comparison has shown that the impact of the level of expertise is consistently observed in the interpretations of NP1s and NP2s through the better performance of professionals than students in terms of content and delivery, and in the fact that students made more omissions in content than professionals.

5.3.6 Chinese TCs

Given that the previous section has shown that compared with SCs, TCs have a significant effect on interpreting performance; I will compare professionals' performance and students' performance on TCs and SCs respectively in this section.

The analysis in Table 5-28 is based on the data on SCs.

Table 5-28: SC: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	35.23	11.81	<0.001 (0.000)
	Pro	57.58	10.65	
CO	Stu	14.01	8.56	<0.01 (0.007)
	Pro	4.52	4.54	
CS	Stu	50.38	10.87	<0.05 (0.008)
	Pro	37.89	7.20	
DG	Stu	62.48	8.70	<0.001 (0.000)

	Pro	81.31	8.35	
DGE	Stu	24.25	8.96	<0.01 (0.003)
	Pro	13.12	4.81	
DC	Stu	6.43	6.85	>0.05 (0.469)
	Pro	4.53	3.94	
DCO	Stu	8.70	4.92	<0.01 (0.009)
	Pro	2.51	4.59	

As shown in Table 5.28, the percentage of accurate student interpretations of TCs (M=35.23, SD=11.81) is lower than that of professionals (M=57.58, SD=10.65) and the correlation between the level of expertise and performance quality is significant (P<0.001). Student interpretations (M=14.01, SD=8.56) include more omissions than professional interpretations (M=4.52, SD=4.54), and the difference is significant (P<0.01); students (M=50.38, SD=10.87) made more substitutions than professionals (M=37.89, SD=7.20), and the difference is statistically significant (P<0.05).

Student interpretations of SCs (M=62.48, SD=8.70) include fewer good deliveries than those of professionals (M=81.31, SD=8.35) and the correlation between the level of expertise and the quality of delivery of interpretation is statistically significant (P<0.001). Student interpreters produced more grammatical errors (M=24.25, SD=8.96) than professional interpreters (M=13.12, SD=4.81), and the difference is significant (P<0.01). Student interpretations display more corrections in delivery (M=6.43, SD=6.85) than professional interpretations (M=4.53, SD=3.94), but the correlation between level of expertise and corrections in delivery is insignificant (P>0.05). There are more complete omissions in delivery in student interpretations (M=8.70, SD=4.92) than professional interpretations (M=2.51, SD=4.59), and the difference is statistically significant (P<0.01).

The analysis in Table 5-29 is based on the data on TCs.

Table 5-29: TC: Stu-Pro analysis

Parameter	Expertise	Mean percentage	Standard Deviation	P-value
CG	Stu	13.89	12.64	<0.05 (0.024)
	Pro	27.78	13.01	

CO	Stu	39.35	16.14	<0.01 (0.007)
	Pro	20.98	9.91	
CS	Stu	46.78	12.65	>0.05 (0.476)
	Pro	51.23	15.43	
DG	Stu	43.97	12.86	<0.05 (0.015)
	Pro	58.64	11.82	
DGE	Stu	43.98	12.42	>0.05 (0.075)
	Pro	33.32	13.31	
DC	Stu	11.13	7.49	>0.05 (0.241)
	Pro	7.41	6.21	
DCO	Stu	9.28	8.32	>0.05 (0.126)
	Pro	4.33	4.63	

As shown in Table 5.29, student interpreters (M=13.89, SD=12.64) produced fewer good interpretations in content than professional interpreters (M=27.78, SD=13.01), and the difference is significant (P<0.05). In term of content errors, students (M=39.35, SD=16.14) made more omissions than professionals (M=20.98, SD=9.91) and the difference is significant (P<0.01). Students (M=46.78, SD=12.65) made fewer substitutions in content than professionals (M=51.23, SD=15.43), however, the difference is not significant (P>0.05).

With regard to delivery appropriateness, students (M=43.97, SD=12.86) produced fewer good interpretations than professionals (M=58.64, SD=11.82) and the correlation between the level of expertise and the quality of delivery of interpretation is significant (P<0.05). Student interpretations include more grammatical errors (M=43.98, SD=12.42) than professional interpretations (M=33.32, SD=13.31), but the difference is not significant (P>0.05). The percentage of corrections in student interpretations (M=11.13, SD=7.49) is slightly higher than that in professional interpretations (M=7.41, SD=6.21), but the different is not significant (P>0.05). More complete omissions in delivery can be observed in student interpretations (M=9.28, SD=8.32) than in professional interpretations (M=4.33, SD=4.63), however, the correlation between level of expertise and complete omissions in delivery is not significant (P>0.05).

Despite the fact that there is a significant impact of topics in TCs on SI, as shown in the previous analysis, the impact of the level of expertise on interpretations is still statistically significant. The professional-student comparison has shown that the impact of the level of expertise is consistently observed in the interpretations of TCs and SCs through the better performance of professionals than students in terms of content and delivery, and to be more specific, students made more omissions in content than professionals.

As mentioned before, there is only 1 topic-only sentence in the experimental ST. Sentences with topics only and no subjects are also called subject-less structures, and in the process of translation, they often involve a change from subject-less structures, which are active-voice structures, to passive-voice structures, according to Li and Thompson (1981). It is interesting to see how simultaneous interpreters deal with this type of sentence structure and to see whether there is a difference between professional interpretations and student interpretations. 21 participants including 9 professional and 12 students did the interpretation of the sentence and 21 SIs are shown below. The sentence which immediately precedes the TCs we focus on is also provided in brackets below.

ST: *(我们将进一步加大扶贫开发的力度)* *千年发展目标在中国一定能够如期实现。*

EG: (we will further enlarge help poverty development NOM strength) Millennium Development Goal in China certainly can as schedule fulfil

TT: (We will further increase our efforts on poverty reduction and development) The Millennium Development Goals can surely be achieved as scheduled in China.

In the original SP, the topic is *千年发展目标* (Millennium Development Goal), the auxiliary verb is *能够* (can), the verb is *实现* (fulfil), and the SIs are listed below.

First, twelve students' SIs are shown in the table below (the interpretations of the immediately preceding sentences of the TCs are underlined as <u>underlined</u>):

SI	Voice
1.<u>… and</u> realise the goal	Active
2. (Omission)	Omission
3. <u>We should increase our efforts to</u> reach the	Active

Development Mell Millennium Melle Development goal.	
4. We hope and we are sure that goals of development will be reach in China.	Passive
5. MDG will sure be achieved in China.	Passive
6. The Millennium Development Goals will be realised in China in time.	Passive
7. <u>We will continue to improve our efforts in this aspect to</u> make our due contribution to achieving MDG.	Active
8. We will achieve the goal in time.	Active
9. The Millennium development goal must be finished in time in China.	Passive
10. <u>We should strengthen the efforts to help people living in poverty and</u> realise the goals in time.	Active
11. Millennium Goal will be achieved in time.	Passive
12. <u>We will continue to strengthen the efforts to help the poor people and</u> fulfil the Millennium Development Goals on time.	Active

Now, nine professionals' interpretations are listed in the table below.

SI	Voice
13. The Millennium Development Objective will be realised in time in China.	Passive
14. The Millennium Goal must be reached in China.	Passive
15. We hope to achieve our goals.	Active
16. In China, Millennium Development Goal must be achieved as scheduled.	Passive

17. The MDG will surely be realised in China.	Passive
18. The millennium target can be realised in China.	Passive
19. We are confident that we are going to achieve the MDG in China as scheduled.	Active
20. I believe that MDGs will be realised on time in China.	Passive
21. The MDGs are bound to be realised in China according to schedule.	Passive

I am not going to look at individuals' interpretations; instead, I will give a summary based on the differences between professional and student interpretations.

First，the ST is an independent sentence which does not share the topic/subject of its immediately preceding sentence. The 9 professional interpretations are all independent sentences, using either active or passive structures. However, 5 student interpretations produced by Subject 1,3,7,10,and 12 are newly formed sentences combining half of the interpretations of the TCs with half of the interpretations of its immediately preceding sentences. Very interestingly, all of the 5 interpretations were interpreted into active voice structures.

Second, 7 out of 9 or 77.8% of the professional interpretations are passives and only 5 out of 12 or 41.7% of the student interpretations are passives. In other words, in 77.8% of the professional interpretations, the original Chinese topic 千年发展目标 "Millennium Development Goal" was interpreted into subjects in the English sentences and the word order between those English subjects and English verbs was the same as that between the original Chinese topic and the original Chinese verb, while just 41.7% of the student interpretations show the same phenomenon.

The findings reported here support Li and Thompson's point (1981) that there is no direct being or doing relationship between topics and verbs. Therefore, the process of interpretation involves a change from actives to passives, as seen especially in the professionals' performance; in contrast, 5 of 6 students who interpreted the Chinese structures into actives in English produced serious omissions in the form of combining with

the immediately preceding interpreted structures.

The summary also supports the suggestion that topics in the TCs are likely to cause a change either in sentence type or in word order in the interpretations and exert a larger impact on student interpreters' performance than on professional interpreters' performance.

5.3.7 Conclusion

To conclude the inter-group analysis, despite the fact that grammatical differences have a significant impact on the interpreting performance of both professional and student interpreters, the impact of level of expertise is still significant. Generally speaking, professionals outperformed students in interpretations of both symmetrical and asymmetrical structures in terms of content accuracy and delivery appropriateness and students' interpretations often display more grammatical errors in delivery and more omissions in content than professionals'. Interestingly, when it comes to the interpretations of English NPs and Chinese CPs, professional-student differences are shown at the content level only in with the case of symmetrical structures while they are shown at both content and delivery levels in the case of asymmetrical structures. That means that students are more vulnerable to problems caused by grammatical differences than professionals.

5.4 Retrospective study

The main purpose of the retrospective interview is to investigate the main challenges or problems interpreters encountered during interpreting, to identify professional and student subjects' perceptions of problems caused by grammatical differences and also to recommend coping strategies.

5.4.1 Retrospective study on student subjects

Table 5-28: Interview-student subjects

No.	Challenges	Number of subjects	Percentage (out of 12 students)
1	Both known and unknown words, technical terms, expressions, and proper names	12	100%
2	Numbers	9	75%

3	List of linguistic items	5	41.7%
4	Grammatical differences	4	33.3%
5	Wrong anticipation	2	16.7%
6	Accent	1	8.3%
7	Equipment	1	8.3%

According to the retrospective interviews with student subjects, the main challenges that students recalled fall into seven groups as shown in Table 5.26. Every student subject recalled that it was difficult to deal with both known and unknown words, terms, expressions and proper names (100%). It seems that word-level difficulties were the biggest challenge for the student subjects.

Table 5-29: Categorization of word-level difficulties

No.	Word-level difficulties	Number of subjects	Percentage (out of 12 students)
1	Unknown words, technical terms	9	75%
2	Difficulties with expressing terms or phrases in the TL or of responding quickly in dealing with known terms or phrases	8	66.7%
3	Proper names	6	50%
4	Difficulties with choosing the most appropriate interpretation from two or three available versions	2	16.7%

The word-level difficulties are further classified into four sub-categories as shown in Table 5.27, namely, unknown words and technical terms (75%), difficulties with expressing terms or phrases in the TL or with responding quickly in dealing with known terms or phrases (66.7%), proper names (50%) and difficulties with choosing he most appropriate interpretation from two or three available versions, which are further illustrated below with transcripts or summaries of parts of the interviews.

According to student subject 1, "Sometimes, I have this kind of problem when I

come across something just like this one 'underperformance', I can tell its meaning but it is hard to describe and just can't think of the simplest way to translate it". Also, according to student subject 5, "I am not familiar with some technical terms in this version. Sometimes, I lose them. Sometimes, I know, I know what to say but I didn't react quickly". Student subject 3 recalled she was struggling with proper names, such as "President Ping", "Democracy Fund" and "Rwanda". According to student subject 5, when she heard 曙光 "light of dawn", she was wondering whether she should interpret it into "light" or "hope".

Apart from word-level difficulties, 75% of students reported that they had problems in dealing with numbers, as shown in Table 5.26. According to student subject 2, there were two major problems for her in dealing with numbers. First, it was difficult for her to interpret numbers between a million and a hundred million as it took her some time to figure out what they were in the TL. Second, because she focused on the previous sentence, she had to omit subsequent numbers in her interpretation.

The third biggest challenge for student interpreters is lists of linguistic items (41.7%). According to student subjects 2, 6, 7, 8 and 11, they had problems in dealing with a list of linguistic items because according to these five subjects, it seemed that the speaker tended to speed up while delivering the list and it was difficult for them to follow and to catch all the linguistic items. One example given by subject 8 is "and other pledges to fight poverty, disease, illiteracy, inequality"; she recalled that she did not interpret it well because she just caught two or three items from the list, that included poverty, disease, illiteracy and inequality.

Grammatical differences were only considered challenging by 33.3% of the student subjects, followed by wrong anticipation (16.7%), accent (8.3%) and equipment problems (8.3%). Grammatical differences were not given a great deal of attention by student subjects. For instance, when student subject 2 was asked "Did you realise it was a passive voice?" the response was "I didn't pay attention to it. I don't know". Only four students, student subjects 4, 7, 9, 11, recall that they had problems dealing with grammatical differences. Subject 4 found it difficult to interpret Chinese NPs because she had to wait a while for the head noun. This also happened in the case of the interpretation of English NPs because she was struggling with how to deal with the "-of" structure in English NPs. She also mentioned that it was difficult to interpret the Chinese coverb 对 "to" because the

coverb occurred before the Chinese verb but its translation had to be positioned after the translated English verb, which caused a problem with restructuring. Even though these four students reported that they had problems with certain structures, no systematic solutions or well-developed strategies were identified from the interviews, as the transcripts or summaries of parts of the interviews below illustrate.

The dialogue below between student subject 7 and the researcher focuses on how to deal with modification in a Chinese NP. The head noun is 合作 (cooperation) and the premodification is 农业规划、杂交水稻、水产养殖、农田水利、农业机械等方面的 (agricultural planning, hybrid rice, aquaculture, farmland water conservation and agricultural machinery.)

Student subject 7: "I don't know how to stop, how to separate this sentence into small parts. Here, I said 'strengthen agricultural plan', so actually it is 'strengthen the cooperation in agricultural area'."

Researcher: So you waited for the [head] noun?

Student subject 7: Yes, cooperation. But if I follow the sentence order, what I have just said does [sic] not right in the grammatical way.

Researcher: It will be grammatically unacceptable.

Student subject 7: Yes, I think but I don't know how to deal with them.

Also, according to student subject 9, it was difficult to break long and complicated structures into smaller chunks and it was also difficult to connect pieces together after dividing them up. Student subject 9 explained, "I just want to render by following the formal sequence but when I translate it into Chinese, I found it [sic] is no logic between them. I don't know how to do it."

Student subject 11 recalled how she had dealt with the coverb structure 向全球艾滋病、结核病和疟疾基金捐款 1400 万美元 (to the global AIDS, Tuberculosis and Malaria fund donate 14 million US dollars). The verb phrase "donate 14 million US dollars" in the English translation often comes before the translated CP "to the Global Fund to Fight AIDS, Tuberculosis and Malaria." According to subject 11, she held on for a long time for the speaker to say "donate" and in this case, she did not predict and just waited till the sentence was nearly finished. When the subject was asked "Did you interpret correctly?", the response was negative because she forgot the names of the three diseases and just

253

interpreted it into "donate to some diseases".

5.4.2 Retrospective study on the professional subjects

The results of the retrospective study for the professional subjects are shown in Table 5.30.

Table 5-30: Interview-professional subjects

No.	Challenges	Number of subjects	Percentage (out of 9 professionals)
1	Grammatical/syntactic differences (no such challenge)	7 (2)	77.8% (22.2%)
2	No preparation/no transcript available	4	44.4%
3	List of numbers plus items	2	22.2%
4	Accent	1	11.1%
5	Input rate	1	11.1%
6	Technical terms	1	11.1%

Grammatical or syntactic differences (77.8%) are regarded as the biggest challenge for them to cope with during SI. 22.2% of professional interpreters believed they had dealt with grammatical differences very frequently in SI, and that, therefore, they could just adopt relevant strategies (see below) to deal with them, and they would not regard it as a big challenge. According to subject 13, "English language and Chinese language are different in terms of syntax. In Chinese, we often omit the subject, so sometimes it is very, very confusing whether to choose a subjunctive, I mean whether to use an active or passive voice."

44% of professionals mentioned that they would interpret better if more preparation could be done beforehand, or if transcripts (especially the transcript of the Chinese speech) were available while interpreting. According to subject 14, "If I could have the Chinese speech while doing interpreting, I could make quicker decisions about how to restructure sentences. It would be good to wait for the whole sentence to finish in order to deliver complete information, however, the previous information would be likely to be forgotten. If

you rush into interpretation without waiting, the interpretation will not be right in syntax." Also, he believed he had the same problem with both speeches, but compared with the Chinese speech, it was easier to remedy what had been done wrong with the English speech, because Chinese, the TL, is his mother tongue. There is general agreement among professional interpreters that the Chinese speech was more challenging than the English speech as it was an interpreting task into their foreign language, although almost all the students thought these two speeches were not really difficult and the Chinese one was especially easy; however, their output seems to prove them wrong. One possible explanation is that students do not really comprehend the Chinese ST and therefore do identify the challenges it presents. 22.2% of professionals thought they had problems with long lists of numbers plus items. Subject 19 mentioned that she would ask her teammate to note down numbers for her in real life. Accent, input rate and technical terms were only considered challenging by 11.1% of professionals.

Table 5-31: Language-related strategies

No.	Language-related strategies	Number of subjects	Percentage (out of 9 professionals)
1	Tracking/syntactic linearity---segmentation by converting word classes, sentence patterns or repeating if necessary	8	88.9%
2	Tracking/syntactic linearity---anticipation by using "neutral padding expressions" (see Kirchhoff 1976/2002: 116) or abstract words and making corrections if necessary	6	66.7%
3	Waiting and restructuring	5[43]	55.6%
4	Good knowledge of conventional expressions and linguistic structures	1	11%

Since the majority of the professional subjects believed that grammatical differences

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[43] Subject 13 will only adopt restructuring if the speech is delivered at a fairly slow speed.

posed challenges to their interpreting performance, I asked a series of follow-up questions (which were not asked to students) how to cope with structural differences in SI. The main answer was tracking or syntactic linearity. "Tracking (Ts) refer to the employment of certain tools available in the syntax of Arabic in order to follow the English word order as closely as possible. The interpreter, thus, avoids restructuring which forces him to lag too far behind the speaker" (Al-Rubai'I 2004: 257). Also, according to Zhong (2009), the main principle of doing SI is to keep syntactic linearity without waiting and restructuring. Segmentation (88.9%) by converting word classes, or sentence patterns, and repeating if necessary has been rated as the most widely adopted strategy in order to achieve tracking or syntactic linearity. Subject 16 gave one example of how he would like to deal with English postmodification. If the English NP consisted of one head noun and two postmodifiers, very often he would start interpreting when he heard the first postmodifier rather than the head noun because the interpretation of just a head noun from English to Chinese often does not make any sense. Therefore, he would start interpret the first postmodifier and the head noun into a Chinese NP and then maybe interpret the second postmodifier into another sentence. Subjects 17 and 20 mentioned that when dealing with an N-position English if-clause, a frequently adopted method was to interpret "if" into "but the pre-condition is". However, according to some interpreters, tracking has disadvantages as well. According to subject 13, discussing how to cope with English passives,

> We stick to the original English syntax although this is awkward in Chinese but it is easier for the interpreter to handle, particularly when the delivery speed of the English speech is very fast. However, if I can manage the speed, I mean when I am interpreting an English speech delivered with fairly slow speed, I can use active voice in Chinese language by changing "the sentence order".

Subjects 19 and 20 also mentioned that tracking could result in awkward interpretation. If tracking cannot always solve problems caused by grammatical differences, why will interpreters continue to adopt it? According to subject 18, "I will interpret a segment first and adjust later on. The reason is very simple: if you wait, there will be a huge

burden on your short-term memory and it is very risky of waiting especially when you cannot anticipate what is coming next because the audience will become uncomfortable if there is no interpretation for one second and they will look back at the interpreter if there is no interpretation for two seconds, so it is not good for the interpreter to do his job. It would be better to deliver parts of the information first and then complete the information rather than letting the audience wait for 2, 3 seconds or even longer" (my translation). Also, subject 21 explains that "you can restructure if you interpret for just 10 or 20 minutes, as long as you have been given proper training, you should know how to restructure, but you will be exhausted if you interpret for the whole day. Following the order is easiest brainwork as you don't need to keep it in your memory, but the disadvantages are a) your delivery may be fragmented and b) the logic you add may not be ideal for delivering the exact meaning. But in terms of such a trade-off between fatigue and perfection, I would prefer to save energy" (my translation).

Anticipation (66.7%) by using "neutral padding expressions" (see above) or abstract words, and correcting if necessary is regarded as another way to achieve tracking or syntactic linearity. Subject 16 illustrated anticipation with his own interpreting experience. (The ST below is from subject 16, the EG and the TT are my own).

ST: *我们下面要**做好**保增长，促稳定，促和谐，增文明的**工作**。*

EG: we next need do good <u>maintain growth promote stability promote harmony enhance civilization ASSOC work</u>

TT: Next, we will do a good <u>job in maintaining economic growth, promoting stability and harmony, and enhancing civilization.</u>

In this sentence, *做好* (do good) is the verb phrase, followed by a Chinese NP with a long modification *保增长，促稳定，促和谐，增文明的* (maintain growth promote stability promote harmony enhance civilization ASSOC) and a head noun *工作* (work). Translators may start translating after processing the head noun, but simultaneous interpreters do not have enough capacity to store the modification; and if they do wait, it will be very likely that a) they will not have enough time to deliver the complete modification in the TL, or b) they will not remember the exact modification. The strategy adopted by subject 16 was anticipation. Based on his experience and his familiarity with the Chinese language, he anticipated that the head noun would be an abstract/general word

257

which did not have much to do with the meaning of the sentence, therefore, he started with "we will do a good job in doing something" when he heard the verb phrase *做好* (do good) and the very beginning of the modification *保增长* (maintain growth) and in this case, it worked well. The follow-up question from the researcher was "What if the head noun was not an abstract word? What if the head noun was 'plan'?" as in the sentence below. (The ST, the EG and the TT are my own).

ST: *我们下面要**做好**保增长，促稳定，促和谐，增文明等工作的**计划**。*

EG: we next need do good <u>maintain growth promote stability promote harmony enhance civilization and so on work ASSOC plan.</u>

TT: Next, we will make <u>a sound plan for maintaining economic growth, promoting stability and harmony, and enhancing civilization.</u>

According to subject 16, he would still use anticipation, and when he heard *计划* (plan) towards the end of the sentence, he would complete the interpretation by saying "we will do a good job in maintaining economic growth, promoting stability and harmony, and enhancing civilization by drawing up a sound plan". According to subject 16, "For SI, it doesn't matter how you start but how you complete your interpretation in an acceptable way" (my translation). Just like segmentation, anticipation can be wrong sometimes, and correction must be provided as long as the interpreter is aware of the error and the way to remedy.

Waiting and restructuring are only selected as a strategy in SI by 55.6% of professional interpreters. Some interpreters completely refused to wait or restructure as their memory would be overloaded and information would be lost. According to subject 19, a modification in a Chinese NP would be easier to handle if she could follow the order by using a string of adjectives as premodifiers; but it would be difficult if the modification has to be translated into postmodification. For the latter, she would need to wait for more information. However, according to most interpreters, they would not prefer to wait too long or to restructure as a) they can lose information as their short-term memory may be saturated; b) the audience may not be very comfortable with their interpretation; and c) interpreters will be exhausted easily and cannot deliver a high quality service for a long time.

5.4.3 Conclusion

The retrospective study focused on professional and student interpreters' perceptions of problems or challenges in SI and possible challenge-related strategies, and also indicated three noticeable differences between professionals and students:

1) Professionals and students have different perceptions of the impact of grammatical differences on SI. As shown in Table 5.28 and 5.30, the majority of student interpreters focused on word-level challenges and very often got stuck in the process of SI due to unknown words, while the majority of professional interpreters acknowledged that grammatical differences had indeed induced problems in SI. These findings are in line with Moser-Mercer, Frauenfelder, Casado and Künzli's (2000: 109) viewpoints on expert-novice differences. According to Moser-Mercer, Frauenfelder, Casado and Künzli's (2000: 109), first, "with respect to factual knowledge expert translators and interpreters display better organizations with more associative connections and more domain connections." Second, "with respect to expert translators' and interpreters' semantic knowledge one sees experts' semantic interpretation almost always being tied to the context of a speech or a text, whereas novices' semantic interpretations are often entirely unrelated to the context." Third, in terms of experts' schematic knowledge, "we can see that they have built up schemata for different types of individual utterances/sentences. Novices, however, tend to treat each utterance/ sentence in a more isolated manner and fail to establish discourse links." Fourth, "at the level of strategic knowledge experts tend to proceed from known to unknown information. Novice translators and interpreters more often focus on the unknown and then easily get stuck. Experts thus use more global plans, whereas novices tend to favour low-level-microcontextual-plans."

2) As shown in the interview above, a few student interpreters realised they either got stuck during interpreting or omitted a large amount of information because of grammatical differences, however, they have not accumulated systematic solutions so that they would not be able to respond to problems caused by grammatical differences as swiftly as possible. By contrast, professional interpreters have developed systematic strategies due to their experience and practice and are always ready to remedy errors in their interpretation.

3) Another very interesting finding is that apart from being more aware of the impact of grammatical differences and relevant strategies, professionals also have a better knowledge of SI features such as the simultaneity of listening, speaking and self-monitoring, interpreters' limitations such as memory lapses and fatigue, as well as the audience's expectations and perceptions of their performance. According to Liu (2001), professionals who outperformed students are superior in terms of selective processing, self-monitoring and efficiently allocating working memory resources rather than in terms of "general working memory capacity". This is also supported by the present study. As shown in my study, professionals tend to proceed from known to unknown and from macro-level to micro-level information. Also, self-monitoring is clearly reflected through self-correction, especially when professional interpreters unsuccessfully apply language-related strategies. Also, professionals are more aware of the challenges posed by grammatical differences and more aware of the fact that those differences can easily result in the saturation of their working memory and physical fatigue. Therefore, Professional interpreters select tracking or syntactic linearity as key principle in SI in order to efficiently allocate their working memory.

5.5 Conclusion

This chapter began with an intra-group comparison between the SIs of symmetrical and asymmetrical structures and the comparison has shown that divergent structures seem to have a statistically significant impact on SI in terms of content accuracy and delivery appropriateness, and to be more specific, the SIs of divergent structures display more omissions and more substitutions in content, and more grammatical errors and more corrections in delivery than those of identical structures. The second part of the chapter is devoted to an inter-group comparison between the SIs generated by professionals and those by students. The inter-group analysis has shown that level of expertise still has a significant impact on interpreting performance although grammatical differences have a statistically significant impact on the interpreting performance of both professional and student interpreters, and to be more specific, students produced more grammatical errors in delivery and more omissions in content than professionals and when it comes to grammatical differences, students' SIs of asymmetrical structures display not only content

errors but also delivery errors while professionals' SIs of asymmetrical structures only show content errors, which indicates that grammatical differences pose a greater challenge to students than to professionals in SI. The last section of the chapter discussed the results obtained from a retrospective study and established that professional and student interpreters have different perceptions of problems, grammatical difference-related problems in particular, in SI and adopt different challenge-related strategies to cope with those problems.

Chapter 6 Conclusion

Overview: Chapter 6 concludes the current research into the impact of grammatical differences on English-Chinese SI, focusing on the major empirical findings of the study, and providing recommendations and implications for simultaneous interpreter teaching and training as well as suggestions for further research into SI.

6.1.1　Conclusions of current research

6.1.1.1 Major contributions of current research

The motivation for the current research is to establish whether or not grammatical differences between the two languages involved have a significant impact on SI. As discussed in Chapter 2, representatives of the 'Paris School' (Seleskovich 1962, 1978b, García-Landa 1981 and Lederer 1981) champion the interpretive theory of translation and believe that simultaneous interpreters must convey meaning rather than interpreting words or focusing on differences in the surface structures of the languages involved. However, an opposite view is represented by a number of scholars (Goldman-Eisler 1972, Kirchhoff 1976/2002, Wilss 1978, Riccardi 1996, Gile 1997/2002, Jörg 1997, Setton 1999, Van Besien 1999, Zanetti 1999, Lee 2002, Jones 2002, Kurz and Färber 2003, Al-Rubai'I 2004, Chernov 2004, Seeber 2011, Seeber and Kerzel 2012) who strongly believe that grammatical differences can significantly affect SI. Chinese has been the focus of a few interpreting scholars (Dawrant 1996, Setton 1999, Chang 2005, Hou 2005), however, none of them have provided convincing qualitative and quantitative evidence for or against the impact of asymmetrical structures on SI compared with symmetrical structures. This research has conducted a contrastive analysis of Chinese and English symmetrical and asymmetrical structures, an error analysis of SIs of both types of structures, and an intra-group, symmetrical and asymmetrical comparison as well as an inter-group expert-novice comparison to obtain statistically significant or insignificant evidence for the impact of grammatical differences on SI. The major empirical findings and contributions of the current research consist of three parts as follows:

    a) Despite the fact that the 'Paris School' strongly argues against the impact of grammatical differences on SI while the 'Soviet School', the 'Leipzig School' and a

number of interpreting scholars and practitioners of different language pairs such as English-Arabic (Al-Rubai'I 2004), English-Japanese (Fukuii and Asano 1961), English-Korean (Lee 2002), English-Italian (Zanetti 1999), and English-Polish (Bartłomiejczyk 2006) argue for such an impact, there hadn't been any empirical contribution regarding the impact of grammatical differences between English and Chinese on SI of these two languages prior to current research. The results of the study have shown that grammatical differences have a statistically significant impact on English-Chinese SI and there is a strong correlation between English-Chinese grammatical differences and the occurrence of content departures such as omissions and substitutions and delivery inappropriateness such as grammatical errors and corrections, and to be more specific, compared with identical structures, divergent structures seem to cause more omissions and substitutions in content, and more grammatical errors and corrections in delivery. Based on these empirical findings, it can be claimed that the current research has strengthened the argument for the impact of grammatical differences on SI from the perspective of English-Chinese interpreting practice.

b) There are theory-based or personal experience-based textbooks on English-Chinese SI teaching and training (Mei 2009, Zeng 2009, Zhong 2009) to discuss how to cope with the impact of grammatical differences on English-Chinese SI, however, due to the lack of empirical evidence, the solutions offered in those books seem to be less scientific and possibly unachievable. In addition, there has been empirical research into the impact of directionality on SI (Chang 2005), on the complexity of SI by carrying out comparative studies of Chinese-to-English SI and other linguistic tasks such as Chinese-to-English CI and English free narrative (Dawrant 1996, Hou 2005). Only Setton's corpus-based study (1999) qualitatively discusses the impact of Chinese sentence structures on their English SIs and possible strategies that interpreters could adopt to deal with the challenges posed by those structures, however, Setton only examines the impact of asymmetrical Chinese structures on SI in a qualitative way and concludes that the impact of sentence structures on SI is insignificant. The innovative approach of this research is that the impact of grammatical differences on SI has been properly assessed through a contrastive

study of the SIs of both symmetrical and asymmetrical structures and we have arrived at convincing conclusions about whether or not grammatical differences have a statistically significant impact on SI through both qualitative and quantitative comparisons between the SI of similar structures and those of dissimilar structures. From that point of view, this research serves as a complement to the empirical research into English-Chinese SI, and the impact of grammatical differences on SI of these two languages involved in particular.

c) Previous research into expert-novice comparison in SI focuses on interpreting output such as pauses and errors (Barik 1973, 1975/2002), comprehension (Dillinger 1994), linguistics structures (Gile 1992a, 1997, Fabbro and Gran 1997), linguistic complexity (Hild 2001), recall and recognition (Lambert 1989b), working memory (Padilla et at. 1995, Liu, Schallert and Carroll 2004), simultaneous listening and speaking (Kurz 1996) and strategies and quality of interpreting (Tiselius and Jenset 2001). The retrospective study of the current research has obtained new empirical findings which have not been established by the previous research. First, the study has established professional and student interpreters have different perceptions of the nature of SI, its processes, its features and its challenges, grammatical difference-related challenges in particular. Second, professionals and students in this study have recalled different strategies adopted to deal with problems caused by grammatical differences in English-Chinese SI. Third, professionals have a better knowledge of interpreters' capacity limitations such as memory lapses and physical fatigue as well as of the outcome expectations, for instance, the communicative role of interpreters, the intention of speakers and the response of listeners. All these findings shall be incorporated into SI teaching and training to ensure interpreting students and trainees will have a comprehensive knowledge of the complicated and demanding task (see Section 6.1.2 for recommendations and implications).

6.1.1.2 Outline of current research

The thesis includes six chapters in total. The first chapter is a literature review on SI, providing a general background to the present study, describing SI models, the features of SI, and the influencing factors of SI. Chapter 2 provides a review of literature on the effect

of grammatical difference on SI, and discusses previous research which argues for and against the impact of structural dissimilarities on SI. As the present study is centred on the impact of divergent structures on English-Chinese SI, Chapter 3 presents a contrastive analysis of English and Chinese symmetrical and asymmetrical structures and especially suggests potential challenges that linguistic asymmetry could pose to SI. The fourth chapter concerns methodology and the experimental design. Chapter 5 analyses and discusses the results and findings obtained from the error-analysis-based intra-group comparison and inter-group comparison as well as an interview-based retrospective study. The last chapter is dedicated to providing a conclusion to the current study, and recommendations and implications for simultaneous interpreter teaching and training and suggestions for future research into SI.

6.1.2 Recommendations and implications

The present study has shown that grammatical differences have a significant impact on experts' and novices' performance, even though expertise and techniques enable experts to cope with those differences in a better way than students. Apart from these findings, the present study also has some pedagogical and training implications.

According to Santulli (2002: 258-260), linguistics plays a significant role in the interpreter's curriculum. "[T]he most interesting and practically relevant area for trainee interpreters is language typology, which can be approached both in its morphological and syntactic aspects" and "typological study applied to an interpreter's working languages can greatly help his/her awareness of the divergences between the structures of such languages in view of developing strategies to overcome the problems deriving from such divergences". Santulli (2002: 260) also emphasizes that an interpreter should not only have a good command of his or her mother tongue but also have "a thorough knowledge of its structures and varieties" and "an awareness of its typological and structural characteristics, in both a contemporary and a historical dimension". One of the findings of the current research is that although all the student subjects have Chinese as their native language, they seem to have a fairly low-level comprehension of the content and difficulty of the Chinese text and not to have enough knowledge of its typological and structural characteristics, let alone its grammatical differences from English. Therefore, linguistics, typological and grammatical characteristics of one's foreign language as well as one native language in particular, should

265

be incorporated into SI teaching and training courses. Gile (1995a: 236) also shares the view that teachers of interpreting have focused far more on non-language specificity issues, for instance, "attention, analysis, memory, and communication variables than on linguistic issues," and "underestimating the importance of the linguistic aspects of interpreting may lead to inappropriate strategies which deprive students of useful training components," and therefore, this thesis will significantly enhance the understanding of the impact of linguistic differences between languages on SI between them.

According to Moser-Mercer, Frauenfelder, Casado and Künzli (2000: 110), "In translation and interpreting novices still need to engage in tactical learning whereby they learn specific rules for solving specific problems, such as how to covert particular syntactic constructions in the incoming message to matching constructions in the outgoing language." And "[t]his tactical knowledge then becomes increasingly well organised and the novice develops a set of strategies designed to optimally solve the problems he encounters." From this point of view, language-related strategies are also a necessary part of interpreting teaching and training. Some professional interpreters may acquire and accumulate a set of strategies through practice and working experience, but it may be a more efficient and effective way for student interpreters to become professionals if strategy-oriented training or teaching is offered at an early stage.

In addition, based on my observation of the student subjects in this experiment as well as my teaching experience, students are aware that SI is a challenging task performed at high-level bilateral or multilateral conferences, and they should work hard on their foreign language in order to deliver a perfect interpretation, however, this is not really the case in reality. Professionals have a better understanding of the nature of SI (its processes, its features and its challenges), of interpreters' capacity (memory and physical limitations) and of outcome expectations (interpreters' communicative role, speaker's intention and audience's response). All of the knowledge mentioned above needs to be taken into account in interpreting training and teaching so that students become able to build professionalism as early as possible and will understand that aiming for perfection or no-error performance seems to be impossible in SI.

6.1.3   Suggestions for further research

The present study only has a brief section on SI strategies obtained from questions in a

retrospective interview. It would be interesting to carry out a research into language-related strategies in Mandarin-Chinese SI by examining interpreters' SI output.

The current study is an investigation into SIs produced by Chinese-speaking interpreters only. The present study has shown that regardless of directionality, grammatical differences have a significant impact on SI, and it would be an inspiring complement to the current study to replicate it with non-native Chinese interpreters.

In addition, it would be of great interest to examine the differences in EVSs, pauses, intonation or other spoken features between interpretations of symmetrical and asymmetrical structures to provide additional evidence for the impact examined in the present study.

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271

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Appendix I   Pre-experiment questionnaire

Date:

Place:

1. Have you ever been trained as a simultaneous interpreter? (If yes, please go to Question 2; if no, please go to Question 3)

2. How long have you been trained as a simultaneous interpreter?

3. Age:

4. Gender:

5. Have you had any simultaneous interpreting experience before? (If yes, please go to Question 6; if no, please go to Question 8)

6. How long have you been working as a simultaneous interpreter?

7. How many days per year on average are you involved in simultaneous interpreting?

8. How many years on average have you used English actively for learning or working purpose?

Appendix II   Post-experiment questionnaire

Date:

Place:

1. What do you think of the content of the two speeches?

    English ST: A. General   B. Specific (technical terms)

    Chinese ST: A. General   B. Specific (technical terms)

2. What do you think of the speech rate of the two speeches?

    English ST: A. Slow   B. Medium   C. Fast

    Chinese ST: A. Slow   B. Medium   C. Fast

3. What do you think of the accent of the two speakers?

    English ST: A. Standard   B. Slight Accent   C. Strong Accent

    Chinese ST: A. Standard (Putonghua)   B. Slight Accent   C. Strong Accent

4. Specific Q&A session after they finish the translation on the day. (Ask roughly 5 questions by the researcher but could change according to individual SI performance on the day)

Appendix III   English ST

Co- Presidents,

Majesties,

Heads of State and Government,

Excellencies,

Ladies and Gentlemen,

Two years ago, speaking from this podium, I said that we stood at a fork in the road.

I did not mean that the United Nations, marking its sixtieth anniversary this year, was in existential crisis. The Organization remains fully engaged in conflict resolution, peacekeeping, humanitarian assistance, defense of human rights, and development around the world.

No, I meant that deep divisions among Member States, and the underperformance of our collective institutions, were preventing us from coming together to meet the threats we face and seize the opportunities before us. The clear danger was that States of all kinds might increasingly resort to self-help, leading to a proliferation of ad hoc responses that would be divisive, destabilizing, and dangerous.

To help you, the Member States, chart a more hopeful course, I appointed the High-level Panel, and commissioned the Millennium Project. Their reports set the agenda for reform.

Drawing on these reports and the early reactions of Member States, as well as my own conviction that our work must be based on respect for human rights, I put forward, six months ago, a balanced set of proposals for decisions at this Summit.

Those proposals were ambitious. But I believed they were necessary, given the era of peril and promise in which we live. And I believed they were achievable, if the political will was there.

Since then, under the able leadership of President Ping, your representatives have been negotiating an outcome document for this Summit. They have worked hard, right up to the last minute, and yesterday they produced the document that is now before you.

Even before they finished their work, this Summit served as a trigger for progress on critical issues. In recent months, a Democracy Fund has been created, and a convention

against nuclear terrorism has been finalised.

Most important of all, an additional $50 billion a year has been unleashed to fight poverty by 2010. The 0.7 target has gained new support; innovative sources of financing are now coming to fruition; and there has been progress on debt relief.

By your agreement on the outcome document, these achievements will be locked in. And progress on development will be matched by commitments to good governance and national plans to achieve the Millennium Development Goals by 2015.

Millions of lives, and the hopes of billions, rest on the implementation of these and other pledges to fight poverty, disease, illiteracy, inequality, and on development remaining at the centre of trade negotiations in the year ahead.

Your adoption of the outcome document will achieve vital breakthroughs in other areas as well.

You will condemn terrorism in all its forms and manifestations, committed by whomever, wherever, for whatever purpose. You will pledge to seek agreement on a comprehensive anti-terrorism convention in the coming year. And you will signal your support for a strategy to make sure that we fight terrorism in a way that makes the international community stronger and terrorists weaker, not the other way around.

For the first time, you will accept, clearly and unambiguously, that you have a collective responsibility to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity. You will make clear your willingness to take timely and decisive collective action through the Security Council, when peaceful means prove inadequate and national authorities are manifestly failing to protect their own populations. Excellencies, you will be pledged to act if another Rwanda looms.

You will agree to establish a Peace building Commission backed by a support office and a fund. This will mark a new level of strategic commitment to one of the most important contributions the United Nations makes to international peace and security. You will also agree to create a standing police capacity for the United Nations peacekeeping operations.

You will agree to double the budget of the Office of the High Commissioner for Human Rights and strengthen her office. You will also agree that the failures of the Human Rights Commission must be remedied by establishing a new Human Rights Council, the

291

details of which must now be worked out during the 60th General Assembly.

You will strengthen early humanitarian funding, to prevent hidden emergencies remaining forgotten -- as we have seen happen too often, particularly in Africa.

And you will put in place a framework for a far-reaching Secretariat and management reform, which must be followed up and implemented. An independent oversight committee and ethics office, on which I will be giving you more details in the near future, will help ensure accountability and integrity, while the review of old mandates, the overhaul of rules on budget and human resources, and one-time buy-out of staff, will help re-align the Secretariat to the priorities of the Organization in the 21st century.

Taken together, this amounts to a far-reaching package of changes. But let us be frank with each other, and with the peoples of the United Nations. We have not yet achieved the sweeping and fundamental reform that I and many others believe is required. Sharp differences, some of them substantive and legitimate, have played their part in preventing that.

Our biggest challenge, and our biggest failing, is on nuclear non-proliferation and disarmament. Twice this year -- at the NPT review conference, and now at this Summit -- we have allowed posturing to get in the way of results. This is inexcusable. Weapons of mass destruction pose a grave danger to us all, particularly in a world threatened by terrorists with global ambitions and no inhibitions. We must pick up the pieces in order to renew negotiations on this vital issue, and we should support the efforts Norway has been making to find a basis for doing so.

Likewise, Security Council reform has, for the moment, eluded us, even though everyone broadly agrees that it is long overdue.

The fact that you have not reached agreement on these and other issues does not render them any less urgent.

So this package is a good start. On some issues, we have real breakthroughs. On others, we have narrowed our differences and made progress. On others again, we remain worryingly far apart.

We must now turn to the next stages in the reform process.

First, we must implement what has been agreed. The coming session of the General Assembly will be one of its most important, and we must give our support to President

Eliasson as he assumes his duties. We must get the Peace building Commission and the Human Rights Council up and running, conclude a comprehensive convention on terrorism, and make sure the Democracy Fund starts working effectively. And the coming years will test our resolve to halve extreme poverty by 2015, to act if genocide looms again, and to improve our success rate in building peace in war-torn countries.

These are the tests that really matter.

Second, we must keep working with determination on the tough issues on which progress is urgent but has not yet been achieved. Because one thing has emerged clearly from this process on which we embarked two years ago: whatever our differences, in our interdependent world, we stand or fall together.

Whether our challenge is peacemaking, nation-building, democratization or responding to natural or man-made disasters, we have seen that even the strongest amongst us cannot succeed alone.

At the same time, whether our task is fighting poverty, stemming the spread of disease, or saving innocent lives from mass murder, we have seen that we cannot succeed without the leadership of the strong, and the engagement of all.

And we have been reminded, again and again, that to ignore basic principles – of democracy, of human rights, of rule of law – for the sake of expediency, undermines confidence in our collective institutions, in building a world that is freer, fairer and safer for all.

That is why a healthy, effective United Nations is so vital. If properly utilized, it can be a unique marriage of power and principle, in the service of all the world's peoples.

And that is why this reform process matters, and must continue. No matter how frustrating things are, no matter how difficult agreement is, there is no escaping the fact that the challenges of our time must be met by action – and today, more than ever, action must be collective if it is to be effective.

For my part, I am ready to work with you on the challenges that remain, on implementing what has been agreed, and on continuing to reform the culture and practice of the Secretariat. We must restore confidence in the Organization's integrity, impartiality, and ability to deliver – for the sake of our dedicated staff, and those vulnerable and needy people throughout the world who look to the United Nations for support.

It is for their sake, not yours or mine, that this reform agenda matters. It is to save their lives, to protect their rights, to ensure their safety and freedom, that we simply must find effective collective responses to the challenges of our time.

I urge you, as world leaders, individually and collectively, to keep working on this reform agenda -- to have the patience to persevere, and the vision needed to forge a real consensus.

We must find what President Franklin Roosevelt once called "the courage to fulfil our responsibilities in an admittedly imperfect world". I am not sure we have done that yet. But I believe all of us now understand that we need to do it. Precisely because our world is imperfect, we need the United Nations.

Thank you very much.

Appendix IV   Chinese ST

主席先生，各位同事：

联合国千年首脑会议向全世界立下誓言，一定要使每一个人实现发展权，使全人类免于饥饿和贫困。

十年过去了。千年发展目标在不同地区和领域的落实还不平衡，许多国家在改善妇幼健康、实现男女平等和保护生态环境等方面进展不明显，不少发展中国家受到国际金融危机、自然灾害和粮食、能源市场波动的严重冲击，全球饥饿人口又有新的增加，实现千年发展目标依然任重道远。

中国始终积极响应联合国的倡议，为实现千年发展目标作出了不懈的努力。1978年以来，中国绝对贫困人口减少两亿多人，占发展中国家减贫人数的75%。同时，我们也清醒地认识到，中国人口多、底子薄，发展不平衡，还有数以千万计的贫困人口。我们将进一步加大扶贫开发的力度。千年发展目标在中国一定能够如期实现。

长期以来，中国政府一直竭尽所能向发展中国家提供形式多样、真诚无私的援助，今后，我们将进一步加强和改进援外工作，为全人类早日实现千年发展目标做出应有的贡献。

第一，推动发展中国家民生事业发展。今后五年，中国将再为发展中国家建设200所学校；派遣3000名医疗专家，培养5000名医务人员，为100所医院提供医疗器械、药品等；援建200个清洁能源和环保项目；加强对小岛屿发展中国家防灾减灾的援助，帮助他们提高应对气候变化的能力。我愿在此宣布，今后三年内，中国将向全球艾滋病、结核病和疟疾基金捐款1400万美元。

第二，减免最不发达国家债务的负担。截至 2009 年底，中国政府免除了 50 个重债穷国和最不发达国家的 256 亿元人民币债务。中国将进一步免除这些国家 2010 年到期未还的政府无息贷款。

第三，深化与发展中国家的金融合作。为帮助发展中国家应对国际金融危机，中国已向非洲国家提供 100 亿美元的优惠贷款，向东盟国家提供 150 亿美元的信贷支持；还向国际货币基金组织增资 500 亿美元，明确要求将资金优先用于最不发达国家。今后中国将继续向发展中国家提供一定规模的优惠贷款和优惠出口买方信贷融资支持。

第四，拓展与发展中国家的经贸关系。中国已经承诺逐步给予有关最不发达国家 95%税目的产品零关税待遇。从 2010 年 7 月起，中国对 33 个最不发达国家的 4700 多个税目的输华产品实施零关税，优惠范围已包括这些国家绝大多数对华出口商品。今后，我们还将继续扩大输华零关税产品范围和受惠国国家的范围，并鼓励国内企业扩大对发展中国家的投资。

第五，加强与发展中国家的农业合作。今后五年，中国将再派遣 3000 名农业专家和技术人员，提供 5000 个来华农业培训名额，并重点加强在农业规划、杂交水稻、水产养殖、农田水利、农业机械等方面的合作。

第六，帮助发展中国家开发人力资源。今后五年，中国将为发展中国家再培训 8 万名各类人员。同时，将增加发展中国家来华留学奖学金名额和在职人员硕士学历教育名额，并为 3000 名校长和教师提供来华培训机会。

今年 7 月以来，为支持巴基斯坦抗击洪灾、重建家园，中国已提供了 3.2 亿元人民币的人道主义援助，并向巴灾区派出了救援队。我愿借此机会宣布，在已有援助的基础上，中国将再提供 2 亿美元的无偿援助。

主席先生，各位同事：

未来五年是实施千年发展目标的关键阶段。国际社会应增强紧迫感和责任感，携手共进，扎实工作。

——明确主攻方向。国际社会要把帮助非洲发展和脱贫作为主攻方向，加大对最不发达国家的扶持力度。发展中国家要把通过发展消除贫困作为中心任务，不断提高自我发展能力。

——兑现官方承诺。发达国家要切实履行诺言，尽快将官方发展援助占国民收入的比重提高到千分之七，向发展中国家提供长期、稳定、可预期的资金援助，援助应当是无私的和不附加任何条件的。

——健全实施机制。继续发挥联合国在国际发展合作领域的核心作用。尽快建立千年发展目标评估机制，加强国际协调与合作。

——维护和平环境。国家之间、民族之间都应捐弃前嫌，以和平手段解决纷争，为和平发展创造条件。

主席先生，各位同事：

《千年宣言》的发表，使全世界在贫困中煎熬的人们看到了曙光。让我们以更加积极的姿态、更加精诚的合作，为如期实现千年发展目标、促进全人类的发展和进步而努力奋斗！

谢谢大家！

Appendix V Analysis of ST (English Adverbials)

Adverbs and adverbial clauses have been annotated.

Key

A=Adverbs (Y/A=Y-position adverbs; N/A=N-position adverbs)

AC=Adverbial Clauses (Y/AC=Y-position adverbial clauses; N/AC=N-position adverbial clauses)

Total:

45 Y-position adverbials including both adverbs and adverbial clauses

49 N-position adverbials including both adverbs and adverbial clauses

Co- Presidents,

Majesties,

Distinguished Heads of State and Government,

Excellencies,

Ladies and Gentlemen,

Two years ago, speaking from this podium, I said that we stood at a fork in the road.

I did not mean that the United Nations, marking its sixtieth anniversary this year, was in existential crisis. The Organization remains fully engaged in conflict resolution, peacekeeping, humanitarian assistance, defense of human rights, and development around the world.

No, I meant that deep divisions among Member States, and the underperformance of our collective institutions, were preventing us from coming together to meet the threats we face and seize the opportunities before us.   The clear danger was that States of all kinds might increasingly resort to self-help, leading to a proliferation of ad hoc responses that would be divisive, destabilizing, and dangerous.

To help you, the Member States, chart a more hopeful course, I appointed the High-level Panel, and commissioned the Millennium Project. Their reports set the agenda for reform.

Drawing on these reports and the early reactions of Member States, as well as my

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Commented [S7]:	Y/A
Commented [h8]:	Y/A

own conviction that our work must be based on respect for human rights, I put forward, six months ago, a balanced set of proposals for decisions at this Summit.

Those proposals were ambitious. But I believed they were necessary, given the era of peril and promise in which we live. And I believed they were achievable, if the political will was there.

Since then, under the able leadership of President Ping, your representatives have been negotiating an outcome document for this Summit. They have worked hard, right up to the last minute, and yesterday they produced the document that is now before you.

Even before they finished their work, this Summit served as a trigger for progress on critical issues. In recent months, a Democracy Fund has been created, and a convention against nuclear terrorism has been finalized.

Most important of all, an additional $50 billion a year has been unleashed to fight poverty by 2015. The 0.7 target has gained new support; innovative sources of financing are now coming to fruition; and there has been progress on debt relief.

By your agreement on the outcome document, these achievements will be locked in. And progress on development will be matched by commitments to good governance and national plans to achieve the Millennium Development Goals by 2015.

Millions of lives, and the hopes of billions, rest on the implementation of these and other pledges to fight poverty, disease, illiteracy, inequality, and on development remaining at the centre of trade negotiations in the year ahead.

Your adoption of the outcome document will achieve vital breakthroughs in other areas as well.

You will condemn terrorism in all its forms and manifestations, committed by whomever, wherever, for whatever purpose. You will pledge to seek agreement on a comprehensive anti-terrorism convention in the coming year. And you will signal your support for a strategy to make sure that we fight terrorism in a way that makes the international community stronger and terrorists weaker, not the other way around.

For the first time, you will accept, clearly and unambiguously, that you have a collective response and a collective responsibility to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity. You will make clear your willingness to take timely and decisive and collective action through the Security Council,

when peaceful means prove inadequate and national authorities are manifestly failing to protect their own populations. Excellencies, you will be pledged to act if another Rwanda looms.

You will agree to establish a Peace Building Commission backed by a support office and a fund. This will mark a new level of strategic commitment to one of the most important contributions the United Nations makes to international peace and security. You will also agree to create a standing police capacity for the United Nations peacekeeping operations.

You will agree to double the budget of the Office of the High Commissioner for Human Rights and strengthen her office. You will also agree that the failures of the Human Rights Commission must be remedied by establishing a new Human Rights Council, the details of which must now be worked out during the 60th General Assembly.

You will strengthen early humanitarian funding, to prevent hidden emergencies remaining forgotten -- as we have seen happen too often, particularly in Africa.

And you will put in place a framework for a far-reaching Secretariat and management reform, which must be followed up and implemented. An independent oversight committee and ethics office, on which I will be giving you more details in the near future, will help ensure accountability and integrity, while the review of old mandates, the overhaul of rules on budget and human resources, and one-time buy-out of staff, will help re-align the Secretariat to the priorities of the Organization in the 21st century.

Taken together, this amounts to a far-reaching package of changes. But let us be frank with each other, and with the peoples of the United Nations. We have not yet achieved the sweeping and fundamental reform that I and many others believe is required. Sharp differences, some of them substantive and legitimate, have played their part in preventing that.

Our biggest challenge, and our biggest failing, is on nuclear non-proliferation and disarmament. Twice this year -- at the NPT review conference, and now at this Summit -- we have allowed posturing to get in the way of results. This is inexcusable. Weapons of mass destruction pose a grave danger to us all, particularly in a world threatened by terrorists with global ambitions and no inhibitions. We must pick up the pieces in order to renew negotiations on this vital issue, and we should support the efforts Norway has been

300

making to find a basis for doing so.

Likewise, Security Council reform has, for the moment, eluded us, even though everyone broadly agrees that it is long overdue.

The fact that you have not reached agreement on these and other issues does not render them any less urgent.

So this package is a good start. On some issues, we have real breakthroughs. On others, we have narrowed our differences and made progress. On others again, we remain worryingly far apart.

We must now turn to the next stages in the reform process.

First, we must implement what has been agreed. The coming session of the General Assembly will be one of its most important, and we must give our support to President Eliasson as he assumes his duties. We must get the Peace Building Commission and the Human Rights Council up and running, conclude a comprehensive convention on terrorism, and make sure the Democracy Fund starts working effectively. And the coming years will test our resolve to halve poverty by 2015, to act if genocide looms again, and to improve our success rate in building peace in war-torn countries.

These are the tests that really matter.

Second, we must keep working with determination on the tough issues on which progress is urgent but has not yet been achieved. Because one thing has emerged clearly from this process on which we embarked two years ago: whatever our differences, in our interdependent world, we stand or fall together.

Whether our challenge is peacemaking, nation-building, democratization or responding to natural or man-made disasters, we have seen that even the strongest amongst us cannot succeed alone.

At the same time, whether our task is fighting poverty, stemming the spread of disease, or saving innocent lives from mass murder, we have seen that we cannot succeed without the leadership of the strong, and the engagement of all.

And we have been reminded, again and again, that to ignore basic principles – of democracy, of human rights, of rule of law – for the sake of expediency, undermines confidence in our collective institutions, in building a world that is freer, fairer and safer for all.

301

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When translate, the subordinate clause will be put before the main clause.
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That is why a healthy, effective United Nations is so vital. If properly utilized, it can be a unique marriage of power and principle, in the service of all the world's peoples.

And that is why this reform process matters, and must continue. No matter how frustrating things are, no matter how difficult agreement is, there is no escaping the fact that the challenges of our time must be met by action – and today more than ever, action must be collective if it is to be effective.

For my part, I am ready to work with you on the challenges that remain, on implementing what has been agreed, and on continuing to reform the culture and practice of the Secretariat. We must restore confidence in the Organization's integrity, impartiality, and ability to deliver – for the sake of our dedicated staff, and those vulnerable and needy people throughout the world who look to the United Nations for support.

It is for their sake, not yours or mine, that this reform agenda matters. It is to save their lives, to protect their rights, to ensure their safety and freedom, that we simply must find effective collective responses to the challenges of our time.

I urge you, as world leaders, individually and collectively, to keep working on this reform agenda -- to have the patience to persevere, and the vision needed to forge a real consensus.

We must find what President Franklin Roosevelt once called "the courage to fulfil our responsibilities in an admittedly imperfect world". I am not sure we have done that yet. But I believe all of us now understand that we need to do it. Precisely because our world is imperfect, we need the United Nations.

Thank you very much.

Appendix VI Output Analysis (English Adverbials)

Student subject 1:

主席先生，女王，女士们，先生们，阁下们，

两年以前，在这里，我、我们联合在一起.

我想说，联合国直到现在已经有很多年了，这需要了很多的代价，在和平解决人道主义救援和世界发展都做出了巨大贡献.

我认为成员国的深刻的承诺以及我们共同的机构，都来到这里应对挑战创造机会，我们明显的危机是我们人类所面对的，我们需要自救，担负起责任，帮助他人，稳定去除危机.

帮助成员国应对困难，我们的高层小组以及项目.

其他的报告都共同的帮助我们认识到现实，我们的工作必须基于基本的人权，六月以前我们提出的一个议案在峰会中的议案.

这些解决方案都是有雄心的，但它是有必要的，我们需要平行的承诺.帮助改善生活，召集最大的政治意愿.

在平主席的领导之下，你所带来的协商的已承诺，在昨天已经呈现在我们面前。

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在他们的工作完成之前，我想要说这些进步都是重大的，过去的几天很大一部分工作已经做出，以反对，反恐，我们拨款数以万计以帮助扶贫，提供创造力的融资，以帮助解决问题，在解决债务方面也作出了进步.

我想说这些成果都是杰出的，我们的进步基于我们的承诺，以及国家的在千年发展目标所作出的进步.

我们的执行在适应以应对贫穷都有所成果，在过去的协商中也有所进步.

这个文书是，在，也包含了其他方面，包括反恐，我们的承诺是不论何时何地 都需要达成的，在反恐，接下来的几年的反恐工作中要保证我们反对恐怖主义，建立起更强有力的国际社区.

第一，你将会接受一个明确不模糊的共同的责任，以帮助防止我们的人类遭受屠杀和人道主义危机 ，您的意愿进行及时有效的行动，通过安理会. 进行和平的维护，国家的官员将帮助这些成功。阁下，你们将共同达到目标.

你们同意建立的和平组织将由基金会支持战略性的承诺会贡献于联合国并帮助和平的建立，你将，同时，同意建立一个联合国和平维和组织的项目.

在帮助人权和加强人权保护方面做出贡献。人权组织需要建立一个新的人权议会.

我们需要去除旧的会议，帮助去除深藏的人道灾难

你将争执行一个框架，进行管理的改革和执行，一个独立的监管委员会，我将给你们细节，在不久的将来。

你声张，我们的在财政和人力方面的政治争议，我们需要秘书长和组织的帮助.

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共同来到这里，带来一系列的改变，需要联合国的人的继续的进步以获得基本的改变，很多的人都需要参与其中，防止灾难的发生.

我们的最大的感受是核武器的管理，在这个会议中我们有，很，遇到困难以获得资源.核武器的发展给我们带来很大的危险，使那些恐怖分子有机可乘，我们需要应对这个重大的问题并找到最基本的解决方案.

同样安理会的改革　已经包含了广泛的人.

但还没有达成细节，最，很迫切.

现在是一个好的开始，我们有进步突破，我们有所成就，但是情行仍然让人担忧.

我们需要保证另一步的改革.

首先，我们需要执行我们所共识的是安理会，使大会的成员们，总统们都作出承诺，总结一个全面的民主的基金会　以帮助扶贫，防止屠杀的出现。进行　建立和平.

这些都是真实的挑战.

我们需要共同有决心的运作以获得我们的目标，因为有一点还明显没有达到，这一点　二年前就有所遇到那就是　我们的互利共存，我们要么一起成功，要么一起失败。

我们的和平建立,民主化以及应对人造和自然灾害,即使我们中最强大的也不能单挑这个重量.

要防止疾病的传播，拯救人类生命，我们将无法成功，如果没有一个有力的共同的参与。

我们　已经得到提示基本的民主的政策，人权　以及我们共同组织的信心，将使世界更加的无畏，更加和平.

这是为什么联合国存在，他是一个独特的结合，力量和爱心的结合.

进步是举足轻重的，不管有多困难，我们将不可避免这个事实。现在的挑战需要行动来应对，　并且它必须是共同应对.

从我这角度，我很乐意与你们共同应队这些挑战，达成我们的共识，和秘书长携手应对困难，保证组织的政治性。为了我们勤勉工作的工作人员以及期待我们帮助的人.

为了我们大家的原因而不是个人原因，我们需要拯救生命，保证他们的权力，保证他们的安全，大会　需要找到一个共同的，集合的解决方式.

我督促各位，个人的并且共同的达到改革议程，坚持不懈的按照我们的蓝图进步.

就像总统说的，达成我们责任的勇气，是需要我们达到的。　我们虽然现在没有达到，但我相信我们需要达到它，这正是因为我们的世界不是完美的，我们需要联合国.

非常感谢。

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Professional subject 21:

主席，各位阁下，各位国家元首，政府首脑，女士们，先生们：

两年以前,我在这个讲台上说，我们正站在一个十字路口。我并不是说联合国那时候今年正庆祝 60 周年，我并不是说正面临着一场危机。我们这个组织仍然在维和、人道主义援助、保护人权和发展方面 发挥着重要的作用。你们知道我的意思是我们的组织仍然没有完全的团结起来，共同应对我们面临的挑战。我们明确的一个危险就是各个国家各种国家他们可能越来越可能会导致使得我们面临各种各样的危机。

为帮助这个成员国，能够实现一个更有希望的发展，我组建了一个高级别的委员会和这个小组。他们的任务就是为我们制定了改革的议程。根据他们所提交的报告，成员国包括我自己也认为，我们的工作必须要以对人权的尊重为基础。我提出了六个平衡的原则，希望本次峰会能做出决定。这些所提出的建议是非常雄心勃勃的。但是我相信，他们是有必要的，在这样一个充满希望和危险的时代中。我相信这些目标是可以实现的，只要我们有足够的政治意愿。自从这以后，在黑伦主席的有利的领导下，你的代表为本次峰会准备有利的文件，他们工作非常地努力，工作到最后一分钟，昨天他们完成了一个文件，现在就摆在各位的桌前。哪怕他们在完成工作之前，我想本次峰会能帮助我们，实现…在一些关键问题上取得进展。在最近的几个月中，民族基金已经建立起来，同时，反核恐怖主义公约也已经到了最后的阶段。 我想， 我们需要在 2015 年完成相应的减贫目标，官方发展目标 0。7%的目标已经得到了支持。我们这些创新性的金融资源，现在也已经到位。同时我们在其他方面也取得了一些进展。如果你们同意这个成果文件的话，那么这些成果就会锁定了。对于这些发展的衡量的标准就是我们能够制定一个总体的千年发展规划，千年发展目标的规化，2015 年之前实现这些目标。成百上千万的人对于这些目标和其他的承诺的执行是很有希望的，是充满着期待的，包括帮助我们要减少不平等，包括我们要实现发展，包括在今后几年中进行相应的贸易谈判等等。你们通过这份成果文件的话，将会是一个重大的突破，

307

在其他领域也是如此。你们将会谴责各种形式的恐怖主义，不论是谁，不论在哪里，或者是为了什么目的的恐怖主义都是不允许的。你们将会做出承诺，在全面反恐的条约上取得进展。同时你又会表明你们支持一个战略，要使我们在打击恐怖主义的时候，必须要使得国际社会更加的强大，恐怖分子越来越虚弱，而不是相反。在历史上我们第一次将会接。。明确的接受，做出集体的回应承担起集体的责任，防止种族清洗，屠杀和其他人道主义罪行的发生。你们也明确的表明，你们将会愿意采取及时和果断的行动，通过安理会，当和平的手段不足以解决问题，当国家的当局无法保护他们自己的人民的时候要采取这样的行动。各位阁下，你们如果再次出现卢旺达大屠杀这样的情况的话，你们要采取果断的行动。我们有一个支持的办公室和基金来帮助你们，这是新的一个战略承诺。这是联合国能够做出一个重大的贡献，帮助实现国际和平和安全。同时你们也会同意来使得联合国在维和行动中有足够的能力，你们也愿意使得人权高专的预算翻一倍，同时，你们也会同意，人权委员会的失败，必须要通过建立起一个新的人权理事会来替代。我们希望在 60 届联大会议中，能够对人权理事会的细节加以完成。同时我们需要看到经常会出现的，特别是在非洲一些紧急的情况，没有得到足够的重视。同时你们建立起一个广泛的安理会和管理方面的改革，这必须得到执行。一个独立的监督委员会和指导办公室，我会给大家在未来更多的细节，确保问责制和严肃性，我们要确保规则预算和人力资源能够还有我们的人员能够使得安理会使得秘书处能够进行相应的调整，应对 21 世纪的挑战。

把所有的这些都加起来，我认为这是一个非常广泛的变革的一揽子计划。但是我们必须要明白联合国必须要明白，我们现在还没有实现全面的和基本的根本性的改进，这是我和其他人所要求的。我们仍然有一些严重的分歧，他们有些人的阻碍着联合国进行进一步的改革。我们现在的最大的挑战，我们也最大的失败，就是这个核扩散和核裁军方面的问题。今年有两次，在 NPT 的回顾会议上，以及在这次峰会上，我们看到各国做出姿态，使得没有我们取得最后的成果。大规模杀伤性武器是一个非常严重的威胁，对我们来说都是如此，特别是那些有着全球野心，胆大妄为的恐怖组织来说。我们必须要维护和平，不能让谈判阻碍这个问题取得进展，我们必须要确保没有一个人有这样的基础采取这样的做法。安理会的改革现在仍然没有取得这个进展，虽然我

308

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们都认为安理会早就应该进行改革。我们在这些和其它问题上没有取得进展，但并不是说这个问题就不重要了。我们所提交的这个议案，在一些问题上我们取得了突破，在另外一些问题上，我们已经缩小了分歧，并且取得了一些进展，同时，在另外一些问题上我们仍然是分歧很严重，这是令人担心的。所以在下个一阶段在改革的过程中。我们必须依照执行我们已经同意的部分。联大的下一次即将举行的大会可以说是一个非常重要的会议。我们必须要支持安立森主席的工作，我们必须让人权理事会能够正常开展并且工作。同时在恐怖主义的公约上取得进展。同时要确保民主基金能够发挥有效的作用。在今后的一年中，我们将会我们的决心将会受到考验，看看我们是否能在 2015 年减少贫困，使得再出现大屠杀的时候，我们能够采取行动。我们同时要让那些战乱国家重建和平。

这些都是对我们非常重要的考验。

第二个，我们必须要有足够的决心，在那些棘手的问题上取得进展，这些问题非常的紧迫，但是却没有取得进展。我们可以看到我们两年前开展的一些的工作，虽然我们有着各种各样的分歧，在这样一个相互依赖的世界里，我们要么一起进步，要么一起倒退。无论是维和，国家建立，民主化还是对于人为的和自然的灾害，我们看到我们没有人可以单独应对上述的这些挑战。

无论是打击贫困还是防止疾病的传播，还是保护无辜的人们免受屠杀，我们看到，我们要想取得成功的话，那就必须要使得强者发挥领导力，使得所有的人都能够参与。

我们一次又一次的意识到，民主的一个基本的原则，法治和人权的原则。同时，以及我们的信心，以及我们整个组织来说，我们都需要建立起一个更加自由、公平和安全的世界。这就是为什么如果联合国发挥积极的作用那是多么的重要。如果用好的话，那么联合国就能够发挥很好的作用，为全世界的人民服务。所以，我们联合国的改革的进程，是非常重要的，而且必须要继续进行下去。无论在这个过程中我们遇到什么

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样的挫折，无论我们在这个过程中遇到什么样的困难，我们都不要忘记我们这个时代所面临挑战必须要通过实际的行动来解决。而且现在，行动比以往任何时候都要重要。作为秘书长，我非常愿意和大家一起应对面临的挑战，执行我们已经达成的协议，同时进一步的进行改革，秘书处的改革。我们必须要重建人们对于联合国的能力，公正度和诚实的信任，同时我们要帮助那些脆弱的群体，无论他们在哪里，他们都希望能够得到联合国的支持。

所以对于我们来说这个改革的进程是非常的重要的。我们要保护那些人们的权利，我们必须要找到集体的回应，来应对我们这个时代的挑战。所以我敦促，在座的各位，世界各国的领导人们能够执行，单独或者集体的执行这些改革的议程。不断的坚持下去，同时有足够的勇气推进改革。像罗斯福总统曾经说过，我们必须要承担起自己责任的勇气，哪怕我们面临的世界有各种各样的困难，我相信我们还没有做到这一点，但是我相信所有在座各位，都理解我们需要采取行动的必要性。因为我们在这样的一个世界中，它不是完美的世界，所以我们就需要联合国。谢谢。

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Appendix VII Data Manipulation before SPSS Entry

Table A: the number of instances of each parameter based on the analysis of interpretations of N-position adverbials.

Key: S=student; P=professional; N=N-position adverbials; Y=Y-position adverbials.

Note: the total number of N-position adverbials is 49.

ID	SP	Position	CG	CO	CS	DG	DGE	DC	DCO
1	S	N	8	20	21	19	7	3	20
2	S	N	12	10	27	19	14	8	10
3	S	N	10	21	18	18	6	4	21
4	S	N	15	12	22	13	21	7	12
5	S	N	11	12	26	21	10	7	12
6	S	N	13	12	24	26	8	4	12
7	S	N	22	4	23	25	16	5	4
8	S	N	16	10	23	23	8	8	10
9	S	N	13	14	22	19	11	6	14
10	S	N	11	18	20	17	9	5	18
11	S	N	13	10	26	23	5	12	10
12	S	N	9	12	28	15	14	11	12
13	P	N	22	4	23	28	8	9	4
14	P	N	14	10	25	30	5	6	10
15	P	N	17	15	17	23	6	5	15
16	P	N	25	6	18	38	5	4	6
17	P	N	19	13	17	25	5	6	13
18	P	N	13	18	18	25	5	1	18
19	P	N	15	18	16	25	4	2	18
20	P	N	23	5	21	35	4	5	5
21	P	N	27	7	15	29	5	8	7

Table B: the number of instances of each parameter based on the analysis of interpretations of Y-position adverbials.

Note: the total number of Y-position adverbials is 45.

ID	SP	Position	CG	CO	CS	DG	DGE	DC	DCO
1	S	Y	12	18	15	26	1	0	18
2	S	Y	22	6	17	34	4	1	6
3	S	Y	15	18	12	24	2	1	18
4	S	Y	17	10	18	27	7	2	10
5	S	Y	22	7	16	33	5	0	7
6	S	Y	22	9	14	33	1	2	9
7	S	Y	26	5	14	34	5	1	5
8	S	Y	19	13	13	31	0	1	13
9	S	Y	14	5	26	34	4	2	5
10	S	Y	18	11	16	28	5	1	11
11	S	Y	20	11	14	31	0	3	11
12	S	Y	17	7	21	28	9	2	7
13	P	Y	30	4	11	38	1	2	4
14	P	Y	25	8	12	36	0	1	8
15	P	Y	22	11	12	32	1	1	11
16	P	Y	28	5	12	38	2	0	5
17	P	Y	32	5	8	38	0	2	5
18	P	Y	22	11	12	30	4	0	11
19	P	Y	15	15	15	28	2	0	15
20	P	Y	28	6	11	37	0	2	6
21	P	Y	33	6	6	35	1	3	6

Table C: the percentages of instances of each parameter based on the analysis of interpretations of N-position adverbials.

Note: All the percentages were converted from numbers in Table A.

ID	SP	Position	CG%	CO%	CS%	DG%	DGE%	DC%	DCO%
1	S	N	16.3	40.8	42.9	38.8	14.3	6.1	40.8
2	S	N	24.5	20.4	55.1	38.8	28.6	16.3	20.4
3	S	N	20.4	42.9	36.7	36.7	12.2	8.2	42.9
4	S	N	30.6	24.5	44.9	26.5	42.9	14.3	24.5
5	S	N	22.4	24.5	53.1	42.9	20.4	14.3	24.5
6	S	N	26.5	24.5	49	53.1	16.3	8.2	24.5
7	S	N	44.9	8.2	46.9	51	32.7	10.2	8.2
8	S	N	32.7	20.4	46.9	46.9	16.3	16.3	20.4
9	S	N	26.5	28.6	44.9	38.8	22.4	12.2	28.6
10	S	N	22.4	36.7	40.8	34.7	18.4	10.2	36.7
11	S	N	26.5	20.4	53.1	46.9	10.2	24.5	20.4
12	S	N	18.4	24.5	57.1	30.6	28.6	22.4	24.5
13	P	N	44.9	8.2	46.9	62.2	16.3	20	8.2
14	P	N	28.6	20.4	51	66.7	10.2	12.2	20.4
15	P	N	34.7	30.6	34.7	46.9	12.2	10.2	30.6
16	P	N	51	12.2	36.7	77.6	10.2	8.2	12.2
17	P	N	38.8	26.5	34.7	51	10.2	12.2	26.5
18	P	N	26.5	36.7	36.7	51	10.2	2	36.7
19	P	N	30.6	36.7	32.7	51	8.2	4.1	36.7
20	P	N	46.9	10.2	42.9	71.4	8.2	10.2	10.2
21	P	N	55.1	14.3	30.6	64.4	10.2	16.3	14.3

Table D: the percentages of instances of each parameter based on the analysis of interpretations of Y-position adverbials.

Note: All the percentages were converted from numbers in Table B.

ID	SP	Position	CG%	CO%	CS%	DG%	DGE%	DC%	DCO%
1	S	Y	26.7	40	33.3	57.8	2.2	0	40
2	S	Y	48.9	13.3	37.8	75.6	8.9	2.2	13.3
3	S	Y	33.3	40	26.7	53.3	4.4	2.2	40
4	S	Y	37.8	22.2	40	60	15.6	4.4	22.2
5	S	Y	48.9	15.6	35.6	73.3	11.1	0	15.6
6	S	Y	48.9	20	31.1	73.3	2.2	4.4	20
7	S	Y	57.8	11.1	31.1	75.6	11.1	2.2	11.1
8	S	Y	42.2	28.9	28.9	68.9	0	2.2	28.9
9	S	Y	31.1	11.1	57.8	75.6	8.9	4.4	11.1
10	S	Y	40	24.4	35.6	62.2	11.1	2.2	24.4
11	S	Y	44.4	24.4	31.1	68.9	0	6.7	24.4
12	S	Y	37.8	15.6	46.7	62.2	20	4.4	15.6
13	P	Y	66.7	8.9	24.4	84.4	2.2	4.4	8.9
14	P	Y	55.6	17.8	26.7	80	0	2.2	17.8
15	P	Y	48.9	24.4	26.7	71.1	2.2	2.2	24.4
16	P	Y	62.2	11.1	26.7	84.4	4.4	0	11.1
17	P	Y	71.1	11.1	17.8	84.4	0	4.4	11.1
18	P	Y	48.9	24.4	26.7	66.7	8.9	0	24.4
19	P	Y	33.3	33.3	33.3	62.2	4.4	0	33.3
20	P	Y	62.2	13.3	24.4	82.2	0	4.4	13.3
21	P	Y	73.3	13.3	13.3	77.8	2.2	6.7	13.3

Appendix VIII SPSS Entry, Calculation and Output

For the professional group, SPSS Paired T-test produced the following two tables (Table 1 and 2) and the bolded and highlighted parts were selected and entered into Table 5.1 in Chapter 5 for discussions.

Table 1: Professionals: Y-position adverbials VS. N-position adverbials

Paired Samples Statistics

Parameter and position		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	CGY	58.0222	9	12.73840	4.24613
	CGN	39.6778	9	10.30652	3.43551
Pair 2	COY	17.5111	9	8.18618	2.72873
	CON	21.7556	9	11.25512	3.75171
Pair 3	CSY	24.4444	9	5.77843	1.92614
	CSN	38.5444	9	6.86988	2.28996
Pair 4	DGY	77.0222	9	8.37329	2.79110
	DGN	60.2444	9	10.74059	3.58020
Pair 5	DGEY	2.7000	9	2.89050	.96350
	DGEN	10.6556	9	2.43265	.81088
Pair 6	DCY	2.7000	9	2.42487	.80829
	DCN	10.6000	9	5.57068	1.85689
Pair 7	DCOY	17.5111	9	8.18618	2.72873
	DCON	21.7556	9	11.25512	3.75171

Table 2:

Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed) P-value
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	CGY – CGN	18.34444	8.80570	2.93523	11.57579	25.11310	6.250	8	.000
Pair 2	COY – CON	-4.24444	6.07641	2.02547	-8.91519	.42630	-2.096	8	.069

315

Pair 3	CSY – CSN	-14.10000	7.89747	2.63249	-20.17053	-8.02947	-5.356	8	.001
Pair 4	DGY – DGN	16.77778	8.30554	2.76851	10.39358	23.16198	6.060	8	.000
Pair 5	DGEY – DGEN	-7.95556	3.84516	1.28172	-10.91121	-4.99990	-6.207	8	.000
Pair 6	DCY – DCN	-7.90000	3.87879	1.29293	-10.88150	-4.91850	-6.110	8	.000
Pair 7	DCOY – DCON	-4.24444	6.07641	2.02547	-8.91519	.42630	-2.096	8	.069

For the student group, SPSS Paired T-test produced the following two tables (Table 3 and 4) and the bolded and highlighted parts were selected and entered into Table 5.2 in Chapter 5 for discussions.

Table 3: Students: Y-position adverbials VS. N-position adverbials

Paired Samples Statistics

Parameter and position		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	CGY	41.4833	12	8.85713	2.55683
	CGN	26.0083	12	7.60017	2.19398
Pair 2	COY	22.2167	12	10.02650	2.89440
	CON	26.3667	12	9.74309	2.81259
Pair 3	CSY	36.3083	12	8.65694	2.49904
	CSN	47.6167	12	6.11746	1.76596
Pair 4	DGY	67.2250	12	7.83513	2.26181
	DGN	40.4750	12	8.01954	2.31504
Pair 5	DGEY	7.9583	12	6.32764	1.82663
	DGEN	21.9417	12	9.59929	2.77108
Pair 6	DCY	2.9417	12	1.96998	.56869
	DCN	13.6000	12	5.65251	1.63174
Pair 7	DCOY	22.2167	12	10.02650	2.89440
	DCON	26.3667	12	9.74309	2.81259

Table 4:

Paired Samples Test

316

		Paired Differences					T	df	Sig. (2-tailed) P-value
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	CGY – CGN	15.47500	6.98324	2.01589	11.03806	19.91194	7.677	11	.000
Pair 2	COY – CON	-4.15000	7.32958	2.11587	-8.80699	.50699	-1.961	11	.076
Pair 3	CSY – CSN	-11.30833	9.37516	2.70637	-17.26502	-5.35164	-4.178	11	.002
Pair 4	DGY - DGN	26.75000	7.01110	2.02393	22.29536	31.20464	13.217	11	.000
Pair 5	DGEY - DGEN	-13.98333	6.21813	1.79502	-17.93415	-10.03252	-7.790	11	.000
Pair 6	DCY - DCN	-10.65833	4.80766	1.38785	-13.71297	-7.60369	-7.680	11	.000
Pair 7	DCOY - DCON	-4.15000	7.32958	2.11587	-8.80699	.50699	-1.961	11	.076

For Y-position adverbials, SPSS Independent T-test produced the following two tables (Table 5 and 6) and the bolded and highlighted parts were selected and entered into Table 5.17 in Chapter 5 for discussions.

SPSS Independent T-test Results

Table 5: Professional VS. Student: Y-position adverbials

Group Statistics

Parameter (%)	SP	N	Mean	Std. Deviation	Std. Error Mean
percentCG	S	12	41.483	8.8571	2.5568
	P	9	58.022	12.7384	4.2461
percentCO	S	12	22.217	10.0265	2.8944
	P	9	17.511	8.1862	2.7287
percentCS	S	12	36.308	8.6569	2.4990
	P	9	24.444	5.7784	1.9261
percentDG	S	12	67.225	7.8351	2.2618
	P	9	77.022	8.3733	2.7911
percentDGE	S	12	7.958	6.3276	1.8266
	P	9	2.700	2.8905	.9635
percentDC	S	12	2.942	1.9700	.5687

317

P	9	**2.700**	**2.4249**	.8083
S	12	**22.217**	**10.0265**	2.8944
percentDCO P	9	**17.511**	**8.1862**	2.7287

Table 6:

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed) P-value	Mean Difference	Std. Error Difference	Lower	Upper
percent CG	Equal variances assumed	1.397	.252	-3.517	19	**.002**	-16.5389	4.7028	-26.3819	-6.6958
	Equal variances not assumed			-3.337	13.557	.005	-16.5389	4.9565	-27.2022	-5.8755
percent CO	Equal variances assumed	.241	.629	1.148	19	**.265**	4.7056	4.0992	-3.8742	13.2853
	Equal variances not assumed			1.183	18.811	.252	4.7056	3.9779	-3.6259	13.0370
percent CS	Equal variances assumed	.967	.338	3.550	19	**.002**	11.8639	3.3422	4.8686	18.8592
	Equal variances not assumed			3.760	18.819	.001	11.8639	3.1552	5.2557	18.4721
percent DG	Equal variances assumed	.007	.936	-2.754	19	**.013**	-9.7972	3.5568	-17.2417	-2.3527
	Equal variances not assumed			-2.727	16.715	.014	-9.7972	3.5925	-17.3866	-2.2079
percent DGE	Equal variances assumed	6.146	.023	2.308	19	**.032**	5.2583	2.2785	.4895	10.0272
	Equal variances not assumed			2.546	16.244	.021	5.2583	2.0652	.8857	9.6310
percent DC	Equal variances assumed	.788	.386	.252	19	**.804**	.2417	.9583	-1.7640	2.2473
	Equal variances not assumed			.245	15.176	.810	.2417	.9883	-1.8627	2.3461
percent DCO	Equal variances assumed	.241	.629	1.148	19	**.265**	4.7056	4.0992	-3.8742	13.2853

Equal variances not assumed			1.183	18.811	.252	4.7056	3.9779	-3.6259	13.0370

For N-position adverbials, SPSS Independent T-test produced the following two tables (Table 7 and 8) and the bolded and highlighted parts were selected and entered into Table 5.18 in Chapter 5 for discussions.

SPSS Independent T-test Results

Table 7: Professional VS. Student: N-position adverbials

Group Statistics

	SP	N	Mean	Std. Deviation	Std. Error Mean
percentCG	S	12	26.008	7.6002	2.1940
	P	9	39.678	10.3065	3.4355
percentCO	S	12	26.367	9.7431	2.8126
	P	9	21.756	11.2551	3.7517
percentCS	S	12	47.617	6.1175	1.7660
	P	9	38.544	6.8699	2.2900
percentDG	S	12	40.475	8.0195	2.3150
	P	9	60.244	10.7406	3.5802
percentDGE	S	12	21.942	9.5993	2.7711
	P	9	10.656	2.4326	.8109
percentDC	S	12	13.600	5.6525	1.6317
	P	9	10.600	5.5707	1.8569
percentDCO	S	12	26.367	9.7431	2.8126
	P	9	21.756	11.2551	3.7517

Table 8:

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed) P-value	Mean Difference	Std. Error Difference	Lower	Upper
percent CG	Equal variances assumed	2.458	.133	-3.506	19	.002	-13.6694	3.8986	-21.8294	-5.5095

319

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
	Equal variances not assumed			-3.353	14.145	.005	-13.6694	4.0763	-22.4039	-4.9350
percent CO	Equal variances assumed	.966	.338	1.005	19	**.328**	4.6111	4.5889	-4.9935	14.2157
	Equal variances not assumed			.983	15.873	.340	4.6111	4.6889	-5.3354	14.5576
percent CS	Equal variances assumed	.220	.644	3.192	19	**.005**	9.0722	2.8420	3.1239	15.0205
	Equal variances not assumed			3.137	16.182	.006	9.0722	2.8918	2.9475	15.1970
percent DG	Equal variances assumed	1.868	.188	-4.840	19	**.000**	-19.7694	4.0847	-28.3188	-11.2201
	Equal variances not assumed			-4.637	14.274	.000	-19.7694	4.2635	-28.8973	-10.6416
percent DGE	Equal variances assumed	10.052	.005	3.425	19	**.003**	11.2861	3.2951	4.3894	18.1828
	Equal variances not assumed			3.909	12.835	.002	11.2861	2.8873	5.0404	17.5319
percent DC	Equal variances assumed	.055	.817	1.211	19	**.241**	3.0000	2.4774	-2.1852	8.1852
	Equal variances not assumed			1.214	17.525	.241	3.0000	2.4720	-2.2035	8.2035
percent DCO	Equal variances assumed	.966	.338	1.005	19	**.328**	4.6111	4.5889	-4.9935	14.2157
	Equal variances not assumed			.983	15.873	.340	4.6111	4.6889	-5.3354	14.5576