

A Study of the Use of Discourse Particles in English-to-Chinese
Simultaneous Interpreting by Trainee Interpreters

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Abstract

Discourse particles are known to be of significance to discourse management and organization. Much work has been devoted to understanding the use of discourse particles in Chinese spontaneous speech (SP). However, in the field of simultaneous interpreting (SI), they have remained under-researched. This thesis sets out to fill this gap and to investigate differences in particle usage between Chinese SP and English-to-Chinese SI.

Literature on discourse markers, pragmatics, information processing, and interpreting studies is reviewed with an attempt to provide a holistic view of the research framework of the present study.

A pilot study was first carried out to find any different tendencies in the use of discourse particles between SP and SI. The main subject population was interpreting students at Newcastle University. In my mixed-method approach of the main study, data was collected and analyzed through on-line parser, interviews, a mock-conference, and questionnaire surveys. Both the frequency count and the qualitative analyses were carried out to explore the reasons behind the different tendencies in use initially found, and the effects of using the surveyed discourse particles for perceived fluency in Chinese SP and English-to-Chinese SI for comparison.

The findings show that the most frequently utilized type of discourse particles in Chinese SP are conjunction particles (e.g. *Ranhou*), whereas in English-to-Chinese SI, they are quantifier particles (e.g. *Na*). The discourse functions of the surveyed particles are very context-sensitive. These findings are generally in line with previously reported findings about particle usage in SP, and the present study is the first empirical study to report particle usage in SI. As regards the perceived effects, the overall fluency rating of sentences in which surveyed particles were identified is higher in SI than in SP perceived by all listeners from two different backgrounds (i.e. interpreting vs. non-interpreting students). Implications of the present study for interpreting studies and discourse analysis, followed by suggestions for possible future research, are discussed.

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Chapter 1. Introduction

The use of discourse particles is known to affect discourse management and organization. In speech, these particles serve sociolinguistic and interpersonal functions in relation to the speaker's intention, providing directions as to where a speech segment is heading, engaging parties involved in discourse, and affecting how the speech segment is perceived by the addressee. They are a natural language phenomenon in language processing and production.

Over the years, a substantial amount of research has been devoted to the use of discourse particles in the scenario of spontaneous speech (SP), in terms of categorizing their linguistic class, pragmatic features, and syntactic properties. Nonetheless, in the field of simultaneous interpreting (SI), it has remained under-researched, and little is yet known about the use of discourse particles in this type of speech.

In particular, it is still not clear whether discourse particles are used differently in simultaneous interpreting from spontaneous speech and what their effects are on interpreting output. To fill the gap, speech production tasks that contrast considerably in spontaneity and time constraint (i.e. spontaneous speech vs. simultaneous interpreting) were compared through the collection of corpora, to further our understanding of the usage and effects of discourse particles in simultaneous interpreting, specifically, in English-to-Chinese simultaneous interpreting.

1.1 Where the Research Idea Begins

It is frequently observed that humans use discourse particles on a number of occasions such as daily conversations, news reports, and political speeches. Although the definition of discourse particles may differ from one scholar to another in terms of what linguistic features they have and of what functions they assume in discourse, in general, they are categorized as lexical items that fulfill many different functions in discourse regarding turn-taking, speech management, discourse structure, and the level of interaction between the communication partners (Scheler & Fischer, 1997, p.668).

Simply put, their purpose is the organization and the management of discourse on the part of human language users.

A significant amount of research has been devoted to the use of discourse particles in a variety of languages, particularly in English and in Chinese. For example, a classic work on discourse particles was put forward by Schiffrin (1987), who proposed the term discourse marker to assume certain discourse functions in relation to organizing the structure of discourse. In light of Schiffrin's ground-breaking work on categorizing the features and functions of discourse markers, more research has been devoted to either refining Schiffrin's model or delving further into what linguistic properties discourse markers should have (Brinton, 1996; Jucker & Ziv, 1998). This has also led to the flourishing of relevant work on Chinese discourse particles in terms of case studies on individual particles (Liu, 2009; Wu, 2012; Yao, 2012) or of the features Chinese discourse particles represent as a whole (Xu, 2008).

Put differently, it can be said that building on Schiffrin's work on discourse particles, a tremendous amount of knowledge regarding discourse particles has accumulated over the past three decades, which has provided insight into how discourse particles are utilized in discourse. However, the scenario in which discourse particles have been utilized and analyzed in these studies is spontaneous speech. In other words, we know very little about the use of discourse particles outside this scenario. In particular, while it is common to observe the use of discourse particles in simultaneous interpreting, little can be found to suggest how they are used and their influence on discourse, or more precisely, on the interpreting output. This provides a platform from which the current study can contribute to find out the ways in which discourse particles are utilized in the scenario of simultaneous interpreting, particularly English-to-Chinese simultaneous interpreting.

1.2 A Gap in the Literature

Studying the use of discourse particles should fall under the category of discourse analysis, within the framework of pragmatics. Studying the use of discourse particles

aims at knowing the speaker's intention and how it affects the development of an utterance in relation to the perception of the hearer, namely, how more is communicated than is said (Yule, 1996, p.3). The most relevant study regarding pragmatics in the field of simultaneous interpreting is probably the work by Setton (1999), who investigated the effects of syntactic differences between German and Chinese when these two languages are interpreted into the same language: English. By pragmatics in simultaneous interpreting, Setton (1999) refers to a number of factors such as the frame effects (i.e. the background knowledge and the choice of words under a certain speech topic), situations and scripts (i.e. local knowledge suited to a local situation), inference, and interpreting strategies. Indeed, it can be argued that these factors determine interpreting quality in general. After all, with the use of interpreting services, people expect that they can understand, to their own satisfaction, what is being said in a language foreign to them.

Other relevant research in simultaneous interpreting addresses interpreting quality. Although there are no broadly accepted definitions for some of the widely utilized quality assessment parameters for interpreting performance (Macías, 2006, p.26), interpreting quality mainly looks at semantic content, linguistic performance, and presentation, each with its own sub-categories (Kalina, 2002, p.125). For instance, the notion by Schiffrin that coherence in discourse can be enhanced with the provision of contextual coordinates by discourse markers can be linked with examining interpreting quality from the perspective of semantic content, under which logic and coherence is one parameter for interpreting quality (Kalina, 2002, p.125).

But, given that the notion of interpreting quality is vaguely defined and can encompass a variety of sub-categories for examination, it would be easier to investigate the use of discourse particles in the scenario of simultaneous interpreting using only the most relevant parameters, such as the relationship between fluency and use of discourse particles. This argument can be supported by an existing interpreting assessment model by Liu et al. (2007) who proposed that fluency is one critical criterion for assessing interpreting performance. One of the parameters included in this fluency model is

logical cohesion, which is conceptually compatible with the notion by Schiffrin that use of discourse markers can enhance coherence in discourse by providing contextual coordinates. In light of this notion, it can be argued that using discourse particles may influence fluency in the scenario of simultaneous interpreting. Although coherence and cohesion do not refer to exactly the same idea, they both signal how the text is connected together, how it conveys its message and how the text is understood (Martinková, 2013, p.168), providing a link between use of discourse particles and assessing interpreting performance based on fluency.

Despite the fact that the research journey ahead may seem clear, no existing literature can be found to suggest how discourse particles are used differently in simultaneous interpreting from spontaneous speech and how the use of discourse particles can affect interpreting quality, or more precisely interpreting fluency. The challenge which now lies ahead is where to start with knowing whether discourse particles are used differently in simultaneous interpreting from spontaneous speech.

1.3 Objectives of the Research

With the aim of better understanding particle usage in English-to-Chinese simultaneous interpreting, how particle usage may be different from Chinese spontaneous speech and the effects on oral output, the underlying interests of the present study are manifested through three research questions.

1.3.1 Research questions

A previous study by Liu (2009) showed that in Chinese spontaneous speech, conjunction particles are most frequently used type of discourse particle. However, it remains unknown whether such a tendency holds in the scenario of English-to-Chinese simultaneous interpreting. In light of this, the first research question to be asked is *How different is the frequency of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* By asking this question, the current study aims not only to answer whether or not there is a frequency difference across the two scenarios, but also to explore possible reasons behind the difference, if such a

tendency exists.

A variety of research on Mandarin discourse particles or discourse markers has investigated how they help manage and organize discourse by providing discourse functions such as signaling turn-taking or floor-holding among the parties involved. However, no existing literature can be found to suggest what functions discourse particles may assume in the scenario of simultaneous interpreting. This leads to the second research question, which is *How different are the discourse functions of the discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* By asking this question, the present study aims to shed light on the discourse functions the surveyed particles can assume in the scenario of simultaneous interpreting, and make comparisons accordingly to find out if the discourse functions of the surveyed particles differ across the two scenarios.

In the previous section, it was pointed out that discourse particles can be connected with interpreting performance from the perspective of fluency. This leads to the third research question, which is *To what extent does the use of discourse particles impact fluency in English-to-Chinese simultaneous interpreting and Chinese spontaneous speech?* By asking the third research question, the current study aims to explore the effect of individual discourse particles on fluency in the two scenarios and to make comparisons accordingly to find out if there is any common ground between the two scenarios or differences in between. In particular, this question aims to provide an answer to whether discourse markers are able to enhance fluency with the contextual coordinates they provide, based on Schiffrin's (1987) work. With these questions and objectives in mind, the following section presents the organization of the entire research work.

1.4 Organization

The current thesis reports systematically on what the author has found through comparing the effects of discourse particles in two scenarios, namely spontaneous speech and simultaneous interpreting.

The second chapter reviews literature relevant to the current research to develop a theoretical framework for later discussions. It is divided into five sections, reviewing literature on (1) defining discourse markers and how they can be connected with interpreting studies for investigation, (2) pragmatics in general and pragmatics in simultaneous interpreting, (3) information processing, illustrating why simultaneous interpreting as a form of communication is inherently different from spontaneous speech and thus requires specialized coping tactics, (4) strategies in interpreting studies, and (5) interpreting assessment, illustrating mainly the assessment model adopted in this study for investigating the use and effect of discourse particles.

Chapter Three explains the methodology employed in the present study for the purpose of data collection and analysis. The current research adopted the principles proposed by Robin Setton (1999) to collect, transcribe, and analyze the data, although other approaches have also been utilized for the purpose of data analysis. More will be explained in the chapter devoted to each of the approaches.

From Chapter Four to Chapter Six, the findings from data analysis are presented. In Chapters Four and Five, the results of use of discourse particles in the scenario of spontaneous speech and simultaneous interpreting based on the semantic parser were analyzed and used as a primary basis to investigate the many features of discourse markers. Chapter Six presents the findings of listener surveys to provide insights into the use of discourse particles as perceived by human listeners.

Based on the findings illustrated in Chapters Four to Six, Chapter Seven discusses what can be learnt from the parser and listener surveys in approaching discourse particles. Particularly, it discusses how the use of discourse particles in simultaneous interpreting is different from spontaneous speech in terms of their effects and discourse functions. It also discusses the limitations of the present study.

Chapter Eight summarizes the findings of the present study and makes suggestions for what can be done by future research in terms of approaching discourse particles and

connecting the use of particles with interpreting studies.

Chapter 2. Literature Review

As an interdisciplinary study aimed at understanding the use of discourse particles in simultaneous interpreting, the present study combines interpreting with linguistics by reviewing literature revolving around discourse markers and interpreting studies to form its theoretical framework. To present a more holistic view on the use of spoken particles in simultaneous interpreting, the current research reviews literature on discourse markers (2.1), pragmatics (2.2), information processing in simultaneous interpreting (2.3), interpreting strategies (2.4), and interpreting assessment (2.5), starting with 2.1, what are discourse markers?

2.1 Discourse Markers

Before one can grasp what makes discourse markers (DMs) or what features they represent, distinctions should be made between discourse particles and DMs. As discussed in the previous chapter, given that the present study sets out to compare the use of discourse particles between Chinese spontaneous speech and English-to-Chinese simultaneous interpreting, it should be made clear what the term spontaneous speech and simultaneous interpreting refer to in the present study, followed by the definition of discourse particles and DMs. Simultaneous interpreting (SI) is defined as “a form of Translation in which a first and final rendition in another language is produced on the basis of a one-time presentation of an utterance in a source language” (Pöchhacker, 2004, p.11). Spontaneous speech is defined as unprepared speech in which disfluencies are a primary feature of it and is “a statement conceived and perceived during its utterance” (Dufour et al., 2009, p.42). The main distinction between the two scenarios is the simultaneity of language conversion in SI whereas absent in SP, which can potentially lead to the different use of discourse particles across the two scenarios.

In the present study, the working definition of discourse particles refers to lexemes that serve certain functions in discourse through the semantic content they suggest (Scheler & Fischer, 1997, p.669), which can indicate either propositional or non-propositional

meanings. All particles can be regarded as discourse particles before the listener is able to tell whether they are indicating propositional or non-propositional meaning. For example, when the English particle *yes* is used at propositional level, it signals agreement on the subject in question as an answer particle (Scheler & Fischer, 1997, p.669). When it is used as a turn-taking signal to introduce a new topic as in the case of *yes, what would you suggest?* (Scheler & Fischer, 1997, p.669), it is not used as an answer particle and can be regarded as suggesting non-propositional meaning and may therefore be regarded as a discourse marker. In other words, in the present study, DMs belong to the same category as do discourse particles but have undergone weakening in their semantic content at propositional level, and have specific features. In particular, DMs serve certain interpersonal functions in discourse with regard to the management and organization of a discourse segment. However, the interest of the current research lies in investigating what can be communicated between the parties involved in discourse without actually having to say it, such that the discourse can still be processed and move on. This therefore leads to the investigation of DMs from a variety of aspects.

For a long time, studies have shown interest in the use of DMs across genres in either written or verbal contexts. For example, Chaume's (2004) work indicated that conjunctive DMs representing temporal and causal relationships are used more frequently in academic journals than in text books. Yu et al. (2003) point out that DMs are linguistic elements that assume procedural meanings but do not affect the truth value of a discourse segment. In other words, DMs serve to construct discourse on the part of the speaker whilst providing numerous pragmatic functions to reach the goal of communication in a given context on a sociolinguistic basis (Yu & Wu, 2003). It can be said that the use of DMs is a natural phenomenon in conversations, in which they help to organize discourse and bear close relevance to interpersonal relations. Liu's (2009) work suggested that in interviews, people tend to use conjunctions more frequently. Where translation is concerned, Verikaitė's (2005) work in audiovisual translation (subtitle translation) suggested that DMs and spoken particles present in the source language may be absent or omitted in the target language as no equivalents can be

found. Although these studies approached DMs from different perspectives, neither was designed to research DMs in simultaneous interpreting (SI). This therefore paves the way for the current study to investigate the use of DMs in an area that has not yet been widely researched. Given continuous language conversion under time pressure is involved in SI whereas it is absent in SP, the ways in which DMs are used in SI could be different from SP in terms of frequency, for instance, fewer conjunctions whilst more particles from other categories resulting from the different natures of the form of communication between SI and SP may be observed.

2.1.1 Conversations versus simultaneous interpreting

According to Liu (2004), a discourse or a conversation should engage at least a speaker and a listener, with turn-taking taking place naturally. 'Turn' in a discourse is defined as the exchange of identities between the speaker and the listener repeatedly and continuously over the course of conversations (Liu, 2004, p.46). One of the prominent features over the course of conversation is that there is at least one person talking, but no more than one (Sacks, 1974; Mey, 1993). Moreover, Wennerstrom and Siegel (2003) discovered that in conversations, 94% of the DMs observed are used to maintain the floor of the speaker.

In the case of SI, however, the features are extremely different. For example, turn-taking is a critical component in conversations as Sacks (1974) and Liu (2004) suggested. But in SI, interpreters are interpreting on the speaker's behalf, which means there are always two people speaking at the same time (the speaker in the source language and the interpreter in the target language), with no turn-taking between the speaker and the listener(s) involved. This forms a very strange situation in which the listeners served by the interpreter do not seem to have a say in the process although they may be responding silently. In other words, turn-taking, a vital feature in conversations, is absent in the case of SI, which may explain the different ways in which DMs are used. That is to say, in response to the finding by Wennerstrom and Siegel (2003) that 94% of all DMs in conversations are used to maintain or to preserve the floor of the speaker, this would not be their function at all in SI since no turn-taking is

involved.

Given that no ready-made answers have been found to how or why DMs function differently in SI, it can only be argued that the nature of SI, being a special form of communication involving conversion between languages under time pressure (Pöchhacker, 2004), can result in different tendencies and different functions in the use of discourse particles compared to SP. Since SI is conducted in a complex and artificial setting in which language conversion takes place concurrently and continuously, a phenomenon absent in SP, the purpose for which interpreters use discourse particles or DMs could be more complicated than merely producing a coherent discourse as Schiffrin et al. claim. To illustrate the argument further, since brevity has been widely accepted as the guiding principle in the practice of SI, why would interpreters risk violating this principle under time pressure to use DMs in the target language which are absent in the source language? The current research hence assumes that interpreters use DMs for at least two purposes: i) to provide contextual cues to listeners so that the renditions can be followed more easily; for instance, by adding in DMs in the output, coherence and fluency in the discourse segment can be achieved, as DMs relate the uttered segment to the ongoing segment to fit into the ways in which the target language is expressed naturally and ii) to buy time to process information by using DMs as a buffer; by the use of DMs, interpreters can wait for more incoming details to comprehend and confirm the gist of the segment before they begin to interpret what follows. In short, interpreters may use DMs to help them with processing information regardless of the time pressure.

Nevertheless, illustrating the inherent difference between SI and SP in the form of conversations is still far from integrating the use of DMs into interpreting studies. More clues are still needed as to how DMs are used from the perspective of discourse management and discourse structure before discussing the functions of DMs in SI in detail. Therefore, 2.1.2 reviews the development of DMs and the different approaches proposed by scholars in an attempt to shed more light on the properties of DMs with regard to organizing discourse.

2.1.2 Discourse markers: in search of structures

Even before the term DM came into existence and received popular recognition, notably by the work of Schiffrin (1987), semantic connectives such as *so*, *because*, and *but* had been the focus of research in cognitive and language development in terms of their causal and adversative relations since the 1970s (Halliday & Hasan, 1976). For example, a growing interest in connectives in the 1970s was devoted to investigating the production and comprehension of extended discourse and, more generally, in the contextual and pragmatic aspects of connectives in utterance interpretation (Zarei, 2013, p.107). Throughout the 1980s and the 1990s, research on these connectives continued to thrive and vary as it was discovered that they have prominent roles not only in pragmatic and analytic research, but also in research on language acquisition and sociolinguistics (Zarei, 2013, p.107). Because connectives have been researched with different scope for different purposes, the terms for these connectives have also differed from one another.

These terms include discourse connectives (Blakemore, 1987, 1992), discourse operators (Redeker, 1990, 1991), discourse particles (Schorup, 1985), pragmatic particles (Östman, 1995), pragmatic operators (Ariel, 1994), pragmatic markers (Fraser, 1988), discourse markers (Schiffrin, 1987), and sentence connectives (Halliday & Hasan, 1976), to name a few. Though these terms seem to be similar in concept, no consensus has been reached regarding the fundamental issue of terminology and classification (Zarei, 2013, p.108), i.e. what kind of grammatical category do they fall in, lexical, phrasal, or independent?

Though the debate over what specific functions DMs serve or to what grammatical category they belong is still ongoing, the definition of DMs in general can be given as words or phrases that establish relationships between topics or grammatical units in a discourse (Zarei, 2013, p.108). Most importantly, they serve pragmatic functions (Brinton, 1996), such as the use of *you know* by the speaker to comment on the state of understanding of a piece of information to be expressed; they may be used by the speaker to indicate a change of state such as with the use of *oh* (Heritage, 1984) or with

the use of *well* to indicate that the seemingly relevant utterance may in fact be inappropriate in the context (Jucker, 1993, P.438). Among all the research on DMs, Schiffrin's work (1987) has remained a classic over the years as she put forward the first yet most detailed attempt to model the use of "elements that mark sequentially dependent units of discourse", which she labels "discourse markers", to be detailed in the following section.

2.1.2.1 Schiffrin's model

In Schiffrin's model, her primary interest lies in the ways in which DMs function to add coherence to a discourse (Schiffrin, 1987). She maintains that coherence is established through relations between adjacent units in a discourse, and thus five distinct yet separate planes of a discourse are proposed, each with its own type of coherence (Schiffrin, 1987, p.24-25):

Exchange Structure, which reflects the mechanics of the conversational interchange (ethnomethodology) and shows the result of the participant turn-taking and how these alternations are related to each other;

Action Structure, which reflects the sequence of speech acts which occur within the discourse;

Ideational Structure, which reflects certain relationships between the ideas (propositions) found within the discourse, including cohesive relations, topic relations, and functional relations;

Participation Framework, which reflects the ways in which the speakers and hearers can relate to one another as well as orientation toward utterances; and

Information State, which reflects the ongoing organization and management of knowledge and metaknowledge as it evolves over the course of the discourse.

In addition, she proposes that the functions of DMs must: i) be syntactically detachable; ii) be commonly used in initial position of an utterance; iii) have a range of prosodic contours; and iv) operate at multiple levels and planes of discourse. And, in enhancing the coherence of a discourse, DMs provide contextual coordinates for an utterance by i) locating the utterance on one or more planes of talk of her discourse model; ii) indexing the utterances to the speaker, the hearer, or both; and iii) indexing the utterances to prior and/or subsequent discourse. She sees DMs as serving an integrative function in

discourse and through which discourse coherence is established (Fraser, 1999, p.934).

Schiffirin's model was designed for grammaticalizing spoken particles in English discourse. Being the first model to account for the functions of DMs in discourse does not necessarily suggest that the model is out-of-date or valueless in the current context. Why? Firstly and most importantly, the notion that DMs serve to bracket discourse units put forward by Schiffirin is conceptually similar to one strategy widely researched in SI termed "segmentation". Where segmentation is discussed in relation to SI, it refers to the fact that conference interpreters group information into meaningful units based on comprehension (Goldman-Eisler, 1972, p.128). Nevertheless, over the years, most SI research has measured segmentation and comprehension based on syntax, such as the fact that interpreters generally require a predicate before beginning to segment information for output (Setton, 1999, p.29) or that in the face of syntactically complex sentences, interpreters may choose to reformulate speech segments earlier than they would normally do (Gile, 1995, p.196). They have overlooked a potentially important device in grouping or segmenting meaningful units in SI, namely, the use of DMs, which could add to the existing research on segmentation in SI.

In particular, the likelihood of using DMs as strategy increases as it segments speech units, which bears relevance to organizing information as suggested in Schiffirin's information state. Secondly, the notion put forward by Schiffirin that discourse coherence is enhanced as DMs provide contextual coordinates for integrating local contexts into the main contexts has not yet been tested empirically, at least not in the scenario of SI. Therefore, there is a window for the current study to test this notion by investigating the extent to which the use of DMs can affect renditions: for example, by providing more contextual cues to listeners so that coherence is enhanced and the renditions can be followed more easily. Thirdly, the grammaticalization of spoken particles in Schiffirin's model has provided inspirations to Mandarin studies on grammaticalizing spoken particles in conversations (*Na* and *Then*, in Lin, 2000) or in interviews (Liu, 2009). Beyond grammaticalization of Mandarin spoken particles, some scholars such as Xu (2008) have endeavored to search for the meanings of DMs,

following the proposal of core meaning by Schiffrin (1987). It is fitting to say that the proposal of Schiffrin's model has provided numerous directions for research into DMs in terms of grammaticalization, meanings of DMs, coherence, and perhaps more over the decades in the field of discourse analysis. Yet in SI studies, Schiffrin's model has never been applied, offering the potential for integrating the model into SI studies in terms of how the use of DMs can affect the organization and management of information as depicted in her information state model.

Schiffrin, having examined only 11 English spoken particles, she realized herself that her focus is somewhat narrow and thus suggested a number of other cases which should be considered as DMs: perception verbs such as *see*, *look*, and *listen*, deixis such as *here* and *there*, interjections such as *gosh* and *boy*, meta-talk such as *this is the point* and *what I mean is*, and quantifier phrases such as *anyway*, *anyhow*, and *whatever* (Schiffrin, 1987, p.328). Furthermore, Schiffrin proposes that, with some exceptions such as *oh* and *well*, all markers have core meanings. However, she does not elaborate on what she means by core meaning in her work (Fraser, 1999). Against this backdrop, there was room for others (Redeker, 1991; Hansen, 1998; Fraser, 1999) to propose several notions aimed at addressing the issues underspecified in Schiffrin's work from different scopes.

2.1.2.2 Redeker's model

Redeker (1991) criticized Schiffrin's model for having inadequately addressed the definition of DMs and suggests that "what is needed is a clearer definition of the component of discourse coherence and a broader framework that embraces all connective expressions and is not restricted to an arbitrary selected subset" (Redeker, 1991, p.1167). Redeker goes on to provide examples of language items which should not be included as DMs, which are not discussed in Schiffrin's work. These categories include clausal indicators of discourse structure (e.g. *let me tell you a story, as I said before*), deictic expressions which are not used anaphorically (e.g. *now, here, today*), anaphoric pronouns and noun phrases, and any expressions whose scope does not exhaust the utterance (Redeker, 1991, p.1168). With an attempt to provide a clearer

definition of discourse coherence, Redeker (1991, p.1168) revised Schiffrin's model from five planes of discourse to three planes of discourse as follows:

- (a) **Ideationally**, if their utterance in the given context entails the speaker's commitment to the existence of that relation in the world the discourse describes. For example, temporal sequence, elaboration, cause, reason, and consequence;
- (b) **Rhetorically**, if the strongest relation is not between the propositions expressed in the two units but between the illocutionary intentions they convey. For example, antithesis, concession, evidence, justification, and conclusion;
- (c) **Sequentially**, if there is a paratactic relation (transition between issues or topics) or hypotactic relation (those leading into or out of a commentary, correction, paraphrase, aside, digression, or interruption sentence) between loosely related (or indirectly related) adjacent discourse sentences.

The revised model proposed by Redeker based upon Schiffrin's work reduces the planes of discourse from five to three in number, and with different wording. By this different wording, it is made clear that Redeker's model aimed at clarifying the definition of discourse coherence, as shown by terms such as ideationally, rhetorically, and sequentially. The revised model on the one hand supplemented the definition of coherence underspecified in Schiffrin's work; on the other hand, it seems to overlook how coherence in a discourse is achieved. According to Liu (2004), a discourse or a conversation should engage at least a speaker and a listener, between whom turn-taking takes place naturally. 'Turn' is defined as the exchange of identities between the speaker and the listener repeatedly and continuously over the course of conversations (Liu, 2004, p.46). In particular, Sack, Schegloff and Jefferson (1974) put forward a model to account for the occurrence of turn-taking in conversations: turn-taking occurs when i) the current speaker is choosing the next speaker; ii) the absence of the next speaker provides an open floor to other participants in the conversation; iii) the absence of the next speaker makes the current speaker go on talking (Sack, Schegloff & Jefferson, 1974, p.704). Though, in real life conversations, the model put forward by Sack et al. cannot account for all occurrences of turn-taking in conversations, as overlap (Biq, 1998) among participants, namely more than one person speaking at the same time, may take place as well. Still, depending on the topic

of the conversation and the people involved, turn-taking usually forms a critical part of conversations. Drawing on the above work, it is fitting to say that turn-taking serves as a prominent feature in discourse. Therefore, when speaking of discourse coherence, the current study argues that discourse coherence should be achieved and assessed by all the participants, namely the speaker and the listener(s). In other words, the deletion of the exchange structure in which turn-taking is an important part of conversations in Redeker's revised model implies that she overlooks the effect DMs can have on the response of the addressee in making discourse proceed more smoothly and in achieving discourse coherence. Although in SI the exchange structure, in particular turn-taking, is not applicable as interpreters are interpreting only on the speaker's behalf, the role of the listener in a discourse should not be overlooked. Simply put, Redeker's model is still a discourse model in nature, and it should have included the role of the listener in bettering the definition of discourse coherence, which is worthy of future revisiting.

2.1.2.3 Hansen's model

In contrast to Redeker, Hansen (1998) approaches DMs from a pragmatic view, which is function-based. According to Hansen (1998), DMs are linguistic items which fulfil a non-propositional, connective function. By function, markers, semantically, are seen as processing instructions aimed at aiding listeners in integrating the unit hosting the marker into a coherent mental representation of the unfolding discourse (Hansen, 1998, p.236). This notion is similar to Schiffrin's in that DMs should provide contextual coordinates for integrating local contexts into the main contexts (Schiffrin, 1987). But more than that, Hansen's work has pointed out the role of listeners in treating DMs, that is, they are aided by DMs in processing and integrating the speaker's utterance in discourse. In other words, "a speaker uses DMs to provide semantic instructions with an attempt to cause the listener to access his own 'store' of accumulated and generalized knowledge and experience, to locate what appears to make sense of the sounds he hears" (Moore & Carling, 1982, p.161). Hansen maintains that DMs are non-conceptual and highly multifunctional in nature, indicating in various ways how their host units can be understood to make sense with respect to a mental

representation of the discourse-to-date (Hansen, 1998, p.75).

2.1.2.4 Fraser's model

Refining Schiffrin's model, Fraser (1999, p.936) defined DMs as linguistic expressions only, which is in contrast to Schiffrin as she permits non-verbal DMs such as pauses or gestures. Fraser provides a further characterization of DMs as i) having a core meaning which can either be enriched or compromised by the context; and ii) signalling the relationship that the speaker intends between the utterance the DM introduces and the foregoing utterance, rather than only illuminating the relationship, as Schiffrin suggests (Fraser, 1999, p.936). Refining the definition of DMs in Schiffrin's model, Fraser suggested that a DM does not "display" a relationship as described by Schiffrin (1987), but rather, as pointed out by Blakemore (1992) and Fraser (1990), a DM imposes a certain range of interpretations on the second sentence, providing the interpretation of the first sentence and the meaning of the DM, and a topic to be discussed subsequently that connects the first discourse segment with the second one to some extent (Fraser, 1999, p.942).

In an attempt to refine the definitions of DMs, Fraser further provided the canonical form for characterizing what can be regarded as DMs after his endeavor to grammaticalize English spoken particles. He proposed that for particles to be used as DMs, they should in general appear in the following positions: i) S1¹. DM+S2. For example, *We left late. However, we arrived home on time* (Fraser, 1999, p.939). ii) S1, DM+S2. For example, *Jack played, and Mary read* (Fraser, 1999, p.940). Following the proposal of the canonical form for characterizing DMs, he summarized that DMs are mostly drawn from the grammatical class of conjunctions, adverbs, and prepositional phrases, with some exceptions. The principle for applying the canonical form to determine what can be regarded as DMs is that DMs should signal a two-placed relationship between S1 and S2, two independent discourse segments (Fraser, 1999).

¹ In Fraser's canonical forms, S stands for discourse segment that encodes complete message. In applying the canonical forms for analysis in Chinese context, the positions of the punctuation marks and relevant symbols will be adjusted to fit into the Chinese writing system.

In other words, if a particle which appears in either of the positions stated in Fraser's canonical forms is suggesting a comment or a totally separate message, it should not be considered a DM. He thus concludes that there are two types of DMs in terms of what they relate: those that relate the explicit interpretation conveyed by the second discourse segment with some aspect of the first discourse segment; and those that relate the topic of the second discourse segment to that of the first one (Fraser, 1999, p.950).

It is fitting to say that Fraser's work has laid critical groundwork for identifying potential discourse markers from spoken particles, since the canonical forms can serve as a crucial indicator in locating potential markers based upon their positions. In addition to this, the principles put forward by Fraser, in combination with the canonical forms, can help filter out particles that seem to work like DMs but in fact do not, according to how they relate to separate segments. In other words, Fraser's model can possibly serve the interests of the current study in identifying DMs from spoken particles in the scenario of SI, starting with the canonical forms as a screening filter.

Having reviewed numerous approaches to DMs, it can be said that most researchers agree that DMs are expressions which relate speech segments and serve pragmatic functions. With numerous approaches to DMs mentioned above, one would perhaps wonder how the current study is approaching DMs, in particular in the scenario of SI. Before revealing a feasible approach to DMs in the current study, the following section extends the argument in 2.1.2.1 to bracketing and segmenting.

2.1.3 Bracketing and segmenting

In 2.1.2.1, it was argued that the notion of bracketing units of talk in discourse by Schiffrin is conceptually similar to segmenting, a technique frequently used in SI. If this is the case, does it necessarily suggest that using DMs to bracket units of talk in the scenario of SI is compatible with the technique? That is, can the use of DMs to bracket units of talk in SI serve the same function as segmenting in grouping and organizing information with the aim of preventing misinterpretation? We can, in the first place,

examine how DMs operate in bracketing units of talk in SP as proposed by Schiffrin.

2.1.3.1 Schiffrin's notion of bracketing

Markers used as brackets look both forward and back simultaneously - the beginning of one unit is the end of another and vice versa (Schiffrin, 1987). Markers act as a link as well as a divider in discourse. As Schiffrin put it (1987, p.31), markers are defined as sequentially dependent elements that bracket units of talk as stated in 2.1.2.1. Brackets can be seen as devices which are both cataphoric and anaphoric whether they are placed in initial or terminal position (Schiffrin, 1987, p.31). By bracketing, they not only mark the boundaries of units of talk but also of social life and social organization in general (Schiffrin, 1987). The purposes of using markers as bracketing devices in discourse can be many, such as providing reasons within explanations, or offering answers within question/answer pairs (Schiffrin, 1987). The use of DMs as bracketing devices relates the preceding units of talk to the forthcoming, which makes DMs anaphoric and cataphoric (Schiffrin, 1987). The following are examples that illustrate how DMs operate to bracket units of talk, taking English *and* as an example.

Debby: I don't like that.
Zelda: [I don't like] that. **And**, is he accepting it?
(Schiffrin, 1987, p.38)

In this example, *and* is the marker that terminates the preceding sentence, *I don't like that*, while opening up the following sentence in the form of a question, *is he accepting it?* By simultaneously terminating the preceding sentence and opening up the forthcoming sentence, the marker *and* sets the boundary and brackets the talk into two parts, with *I don't like that* being the first part and *is he accepting it* being the second part. In other words, *and* as a marker not only brackets the talk into two but also relates *I don't like that* with *is he accepting it* since the latter is built upon the former, with both of them referring to the same topic in the context. In this case, markers, according to Schiffrin (1987), become sequentially dependent. The following is another example using the English marker *but*.

Debby: I wanted t'stop the first week I started.

Zelda: Y'see! That's what I said. But who made y'go, your father?

(Schiffrin, 1987, p.38)

In this example, the marker *but* terminates the preceding sentence, *that's what I said*, while opening up the forthcoming sentence in the form of a question, *who made y'go, your father?* The marker *but* brackets the talk into two parts, namely, *that's what I said* and *who made y'go, your father*. Nevertheless, it relates the preceding sentence *that's what I said* with the following sentence, *who made y'go, your father*, by asking for more information or by asking for answers within a question, one purpose for using markers to bracket units of talk. By bracketing in discourse in SP, it demonstrates certain similarities with the use of segmenting in SI in terms of information management. Therefore, the following sections discuss conceptual similarities and dissimilarities between Schiffrin's notion of bracketing and segmenting as practiced in SI.

2.1.3.2 Segmenting in SI

Segmenting is a technique frequently used in the practice of SI. As the term suggests, it refers to the fact that during the process of interpreting, interpreters "chop" information into appropriate meaningful units or into similar groups of concepts as they interpret (Zhang, 2007, p.48). The reason why segmenting is generally regarded as the most important strategy in SI is because SI consumes a lot of working memory, and the tip to a successful performance in SI lies in the reduction of memory burden, often with the use of segmenting (Zhang, 2007, p.48). Therefore, appropriate segmenting can greatly enhance both the quality and the pace of an SI task. However, it should be noted that the essence of segmenting in SI lies in connecting the preceding sentence with the following, not in merely cutting an utterance into two (Zhang, 2007, p.48). In other words, the use of segmenting in SI to cut information into different groups also requires connecting different units of talk. The following are examples of how segmenting operates, taking an English-Chinese language pair as an example.

I come to China/ at an important time.

我到中國來訪問，正逢一個重要的時刻。

wo dao Zhongguo lai fangwen, zhengfeng yige zhongyaode shike

(Zhang, 2007, p.49)

In the example, the statement is segmented between *China* and the preposition *at*. It can be said that the first part of the information to be delivered and withdrawn from the memory burden of the interpreter in the statement is *I come to China*, followed by the second part of the information - *at an important time*. The Chinese particle *zheng* was added for emphasis. Through segmenting, interpreters can organize the information to be tackled first and remove this piece of information from the memory burden, with leeway provided to interpret whatever follows. It should be noted that the principle of segmenting in SI is that it should follow the order of the original sentence. That is, it would be rare to see the statement *I come to China at an important time* being interpreted into Chinese as *at an important time I come to China*. The following is another example of segmenting in SI.

They built the bridge/ in two months.

他們建這座橋，只花了兩個月。

tamen jian zhezuo qiao zhi huale liangge yue

(Zhang, 2007, p.49)

In this example, the statement is segmented between *bridge* and the preposition *in*. The first part of the statement to be interpreted is *they built the bridge*, followed by *in two months*. Therefore, the first piece of information to be tackled and removed from the memory burden of the interpreter is *they built the bridge*, followed by *in two months*. The Chinese particle *zhi* was added for emphasis. In addition to grouping information into different units with the use of segmenting, the information is connected with the addition of particles to comply with the ways in which the target language is expressed. For instance, in the second example above, the addition of *zhi huale* ('it only took') in the rendition, absent in the source language, helps to clarify the original message and fits into how Chinese is expressed. However, the addition of particles may be different from individual to individual, depending on one's style of

interpreting and how much one is able to comprehend.

In short, there are no standard answers to how a speech can be segmented in SI, as how much one can comprehend differs from individual to individual, and how experienced an interpreter is can also affect the ways in which a speech is segmented. Having singled out and explained how bracketing and segmenting operate in 2.1.3.1 and 2.1.3.2 respectively, readers should have some insight into both bracketing in SP and segmenting in SI. Nevertheless, the most interesting question, to be asked throughout 2.1.3, is what common properties do they have or how different are they? Next section illustrates further on similarities and dissimilarities between bracketing and segmenting.

2.1.3.3 Bracketing as segmenting

Judging from 2.1.3.1 on bracketing and 2.1.3.2 on segmenting, it can be argued that bracketing and segmenting do have several common features: i) they both function to set boundaries in a talk. In discourse, DMs bracket units of talk that mark social relations (Schiffrin, 1987), and in SI, segmenting serves to chop information into different meaningful units according to their concepts (Zhang, 2007), making bracketing and segmenting conceptually similar though in different contexts. One may argue that there is an inherent difference as to how the boundaries in a talk can be set using DMs and segmenting, as the former serves to mark social relations whilst the latter does not. Indeed, though they both serve to set boundaries in speech, there is room for investigating the ways in which they are different from each other. For example, it is highly likely that interpreters use segmenting not to mark social relations but mainly to reduce their memory burden as the priority. In other words, using segmenting to “bracket” units of talk in SI is, in large part, not to interact with participants as conversations would have it but to keep the rendition moving. ii) They both serve to open up the following statement or information. In discourse, DMs terminate the preceding sentence whilst opening up the following statement. In SI, segmenting does not necessarily terminate the preceding sentence but it connects the preceding sentence with the next. As Zhang (2007, p.48) puts it, the essence of employing

segmenting in SI is not to “cut” information into pieces but to “connect” the information that follows; iii) they both bear relevance to organizing information. In discourse, DMs fulfill pragmatic functions such as providing contextual coordinates for integrating the local contexts into the main contexts (Schiffrin, 1987). Segmenting in SI allows interpreters to reduce memory burden while enhancing the quality of the rendition by allowing the working memory to remain flexible to tackle and connect the incoming information with the previous (Zhang, 2007).

Therefore, it can be argued that since bracketing and segmenting share the aforementioned properties, the use of DMs in bracketing units of talk in SI may contribute positively to the production of renditions, as segmenting has been studied extensively as an established strategy in SI (Gile, 1995). Most interpreting research has investigated segmenting from the perspective of grammatical structures at word level or phrasal level, yet how a speech is segmented in SI still differs from one individual to another. The use of DMs, therefore, can be regarded as another indicator to measure how an interpreter segments or brackets speech in SI.

The current study has endeavored to integrate the use of DMs into interpreting studies mainly from the point of view of using DMs as a strategy in SI. Considering that the use of DMs as a possible strategy has not yet been widely researched, the current study also aims to provide a more holistic view on the use of DMs in SI. We therefore need to look at relevant Mandarin studies research on DMs for some inspiration and insights, to be detailed in 2.1.4.

2.1.4 Research on Chinese discourse markers

DMs are widely accepted across different cultures as a device to bracket speech, with their prime function being to mark relations between sequentially dependent units of speech (Traugott, 1995, p.5). Following the advent of Schiffrin’s (1987) classic work, a number of studies have been dedicated to researching the use of spoken particles in Chinese SP over the years (Biq, 2001; Xu, 2008; Li, 2009; Liu, 2009), among which Xu’s (2008) and Liu’s (2009) work are the most relevant to the current research. The

selection of their studies lies in the fact that they are empirically based through analyzing Chinese linguistic corpora, providing a basis for research into the use of Chinese spoken particles in terms of meaning and frequency of DMs in a totally different domain, namely in SI.

2.1.4.1 Bleaching of propositional meaning by Xu

A number of Chinese scholars have pointed out the notion of grammaticalization of Chinese particles, such as in the case of demonstratives or determiners, over the course of investigating their discourse functions in Chinese SP (Biq, 2007; Fang, 2002; Liang, 2002; Huang, 1999; Tao, 1999). Grammaticalization refers to the process by which the propositional meaning of the particle is either “reduced” or “weakened”, or to a greater extent suggests non-propositional meaning when words serve as DMs in discourse. It matches Hansen’s (1998) notion of DMs in that “markers as linguistic items should fulfill non-propositional function” (Hansen, 1998, p.236), suggesting that the particle has undergone bleaching of its original propositional meaning regardless of how this change of state is termed.

Taking Xu’s work on Chinese demonstratives for illustration, his work singles out the analysis of *Na* and *Nage*, which are commonly used as Chinese determiners in SP to specify an object or an event as anaphoric pro-form. He analyzed the corpus from the database of 城市青少年漢語口語語料庫(‘Spoken Chinese of Urban Teenagers’), totaling 141,619 words, and concluded that when spoken particles such as *Na* and *Nage* are used as DMs, they have undergone meaning change. By meaning change, Xu suggests a dramatic reduction in the particle’s propositional meaning. For example, when *Nage*, originally referring to an object distant from where the speaker stands, is used as a DM, it assumes the function of either opening up a new topic in a discourse or shifting the topic in a discourse. The particle thus assumes very little meaning of “that”, but rather is a device utilized by the speaker to change topic in the discourse.

The most important reason for including Xu’s work in this chapter relates to the meanings of DMs underspecified in Schiffrin’s work. The notion of “meaning reduction”

by Xu can provide a different approach to DMs in addition to the work on DMs by Redeker et al. in that the meanings of DMs are either procedural or can be enriched by context. Sharing a similar view with Xu, the current study assumes that when spoken particles are used as DMs in SI, their original meaning is reduced, or even missing, for the purpose of providing contextual cues to listeners, buying time to process information, or occasionally as an attempt to mask a silent pause by interpreters. That is to say, meaning reduction can serve as a critical indicator in identifying DMs from candidate particles so that their functions as DMs can be further analyzed and discussed. Moreover, meaning reduction as one indicator can be more significant if it is viewed together with the frequency of using spoken particles as described in Liu's work in 2.1.4.2.

2.1.4.2 Frequency: Liu's work

In contrast to Xu's work and most of the Chinese studies on spoken particles that address one or two types of particles, Liu (2009) took a similar approach to that of Schiffrin by surveying a collection of 14 particles, but with a different focus, namely the frequency of usage as shown in table 2-1. The corpus she analyzed was collected from her interviews with native speakers of Chinese from Mainland China on general personal matters such as hobbies or favorite TV shows, in an attempt to create a natural setting favorable for investigating the frequency of particles used in SP. The findings of her work suggested that the top five most frequently utilized spoken particles in interviews were *Ranhou* ('then'), *Juishi* ('precisely be')², *Nage/Zhege* ('that'/'this'), *Wo Juede* ('I think'), and *Sheme* ('what').

² It is equivalent to *namely* or *that is* in English. The present work follows Liu's (2009) wordings.

Speaker	ranhou 'then'	jiushi 'precisely be'	nage/ zhege 'that/this'	wo juede 'I think'	shenme 'what'	shenme (de) 'referent- final tags'	jiushishuo 'that is to say'
1 Dong	7.9	2.6	7.1	0.4	0.4	2.6	1.5
2 Feng	3.1	1.6	4.7	0	3.1	1.9	0
3 Bing	3.2	5.2	2.1	2.1	4.2	4.2	2.5
4 Lian	15.8	5.8	13.6	7.1	4.5	2.3	2.3
5 Xia	16.3	5.5	5.5	1.3	1.0	2.0	1.5
6 Qiu	11.5	8.3	9.5	2.0	0.3	0.6	0.3
7 Peng	12.1	1.6	3.9	3.9	1.2	0.8	0.8
8 Jun	9.3	11.9	4.0	4.0	1.7	0.7	2.0
9 Fang	14.4	14.5	1.4	5.1	1.4	0.9	0
10 Juan	8.7	8.9	2.5	6.9	1.0	0.3	2.5
Total	102.3	65.9	54.3	32.8	18.8	16.3	13.4
Average	10.2	6.6	5.4	3.3	1.9	1.6	1.3

Table 1 (continued)

Speaker	qishi 'actually'	haoxiang 'seem'	dui 'yeah'	na 'in that case'	suoyi 'so'	erqie 'more- over'	fanzheng 'anyway'	Total/1,000 words
1 Dong	0.4	0	0.8	0.8	0	0	0	24.5
2 Feng	0	0.4	0	0	0	0	0	14.8
3 Bing	0.7	0	0.7	0.7	0	0	0	25.6
4 Lian	0	2.6	1.3	0.3	0	0.6	0	56.2
5 Xia	0.8	0.3	0.3	0	1.0	0	0	35.5
6 Qiu	3.8	0	0	0	0.3	0.6	0	37.2
7 Peng	1.6	0	0	0	0	0	0.4	26.3
8 Jun	1.0	1.7	2.7	0	0.3	0	0.3	39.3
9 Fang	0.5	1.4	1.0	0.5	0	0	0	41.1
10 Juan	3.0	1.2	0.2	0.3	0.3	0	0	35.8
Total	11.8	7.6	7.0	2.6	1.9	1.2	0.7	336.3
Average	1.2	0.8	0.7	0.3	0.2	0.1	0.1	33.6

Table 2-1 Frequency of Chinese Discourse Markers in the Chinese Interviews (Liu 2009)

In terms of frequency, it can be observed that the most frequently utilized particles in interviews are *Ranhou* and *Jiushi* as they significantly outnumber other particles (figure 2-1). Taking a step further, *Ranhou* and *Jiushi* are used as conjunctions in SP, which implies that conjunctions as a category of spoken particles are very frequently used in SP. This provides a platform for the current study to investigate if this tendency also appears in the case of SI.

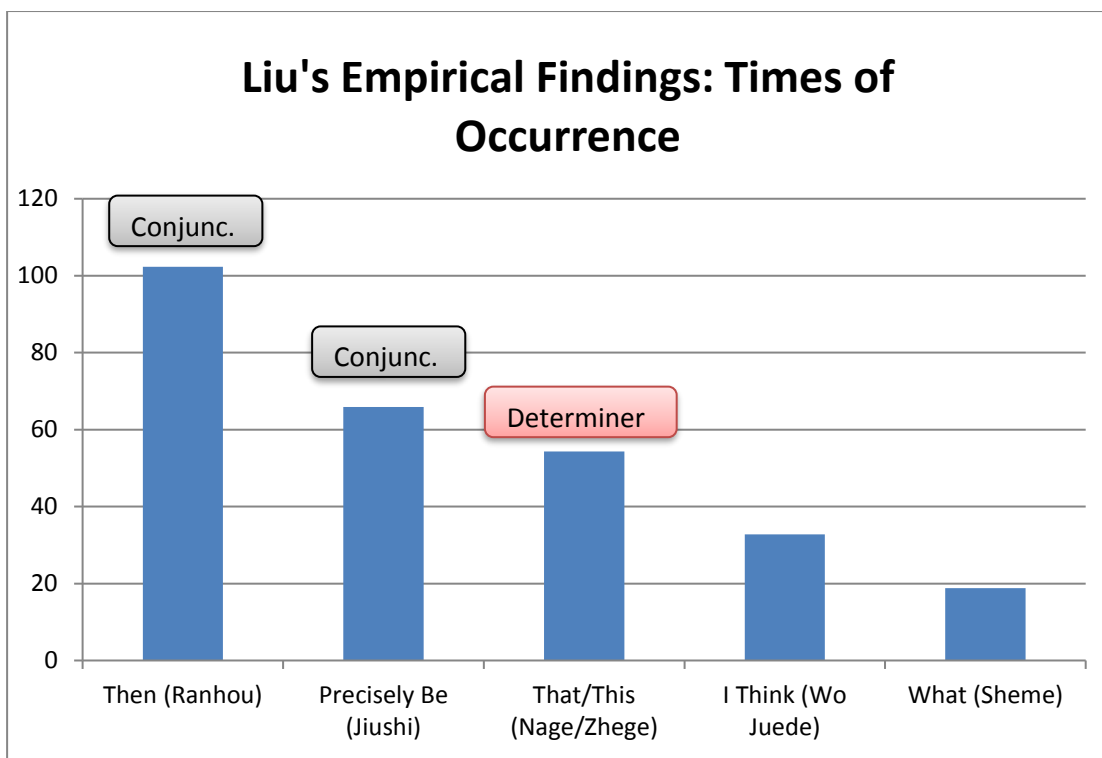


Figure 2-1 Most Frequently Utilized Particles by Occurrences (adapted from Liu 2009)

Liu's work undoubtedly lays a critical foundation for the current research to extend her findings into the scope of SI. It has also provided a strating basis for the current research to explore how spoken particles can be used in terms of frequency in SI.

2.1.5 Summary

It can be seen through the literature review so far that there have been numerous approaches to researching DMs, with focuses on definition, coherence, grammaticalization, class, or semantics. It is fitting to say that there is no one-size-fits-all approach to researching DMs, especially in the scenario of SI where relatively limited literature on the use of DMs can be found. This being the case, the current study takes a mixed approach, utilising several of the indicators mentioned throughout 2.1 in identifying potential markers from candidate particles and their effects on interpreter's renditions. These indicators include the canonical forms by Fraser (1999), meaning reduction by Xu (2008), and the syntactic features and information state proposed in Schiffrin's (1987) model.

For example, starting with Fraser's canonical forms, namely, i) S1. DM+S2. ii) S1,

DM+S2., these can serve as a preliminary filter to identify potential markers from candidate particles in SI. Then, using Xu's meaning reduction as a second indicator, it can be assumed that potential markers have undergone meaning reductions as Xu suggested. Finally, these potential markers will be investigated in terms of how they affect the renditions of interpreters from the perspective of information management and syntactic features as Schiffrin suggested in her model. In other words, for spoken particles to be used as DMs (see 2.1) in SI, they will have to undergo two screening stages in the current research, namely the canonical forms and meaning reduction, before they can be investigated in term of how they may affect interpreters' renditions from the point of information management (e.g. enhancing fluency with the provision of contextual cues).

To sum up, DMs serve the purpose of producing a coherent discourse in SP. Yet, in a more complex and intentionally-controlled situation such as in SI, the purposes and the ways in which DMs are used should be revisited and investigated with care. For example, in SI DMs are definitely not used to maintain or to preserve the floor of the speaker as suggested by Wennerstrom and Siegel (2003) since the speaker and the interpreter are speaking at the same time. By investigating the use of DMs in SI, which has not been researched extensively to date, it is possible to provide more insight into their functions and effects on renditions, and therefore integrate the use of DMs into interpreting practice. With this in mind, the next section discusses discourse management from the perspective of pragmatics, which is highly relevant to the use of DMs, with an attempt at organizing discourse segments, starting with pragmatics in 2.2.

2.2 Pragmatics

Pragmatics, by definition, is concerned with studying meaning as communicated by a speaker and interpreted by a listener (Yule, 1996). It is more related to analyzing and understanding what people mean by their utterances than what the words or phrases in those utterances may mean by themselves (Yule, 1996). As pointed out by Yule (1996, p.3),

It requires a consideration of how speakers organize what they want to say in

accordance with who they're talking to, where, when, and under what circumstances. *Pragmatics is the study of contextual meaning.*

Therefore, it involves interpreting what people mean in a particular context and how this particular context influences what is said. According to Yule (1996, p.3),

This type of study explores how a great deal of what is unsaid is recognized as part of what is communicated. We might say that it is the investigation of invisible meaning. *Pragmatics is the study of how more gets communicated than is said.*

Pragmatics is established through discourse, in particular through discourse analysis. As pointed out by Yule (1996, p.83),

In this expanded perspective, speakers and writers are viewed as using language not only in its **interpersonal function** (i.e. taking part in social interaction), but also in its **textual function** (i.e. creating well-formed and appropriate text), and also in its **ideational function** (i.e. representing thought and experience in a coherent way). Investigating this much broader area of the form and function of what is said and written is called discourse analysis.

The basis of pragmatics is that it attaches importance to studying language competence and language performance (Su, 2010, p.128). Research on language phenomena as a whole also falls into the domain of pragmatics (Su, 2010, p.128), for example, the use of spoken particles in the current study. Since the birth of pragmatics in 1970s, a number of researchers have endeavored to integrate pragmatics into subcategories of linguistics such as syntax, semantics, and language change, thus integrating language use into linguistics (Su, 2010, p.128). Having gained some background knowledge of pragmatics, let us review pragmatics in a wider context in 2.2.1.

2.2.1 The study of pragmatics

The study of pragmatics deals with analyzing and explaining the ways in which a language is used to communicate in a particular context. That is, it aims at understanding why humans are able to choose appropriate manners to express themselves meanwhile correctly interpreting others' intentions in response to the contexts they are given (Su, 2010, p.129). The notion that contexts are highly relevant

to the ways in which a language is used or how certain language performances are observed has received much attention and become one of the main streams within the family of pragmatics, for instance, the study of metaphor or the study of DMs (Su, 2010, p.130).

“Semantically, markers are best seen as processing instructions intended to aid the hearer in integrating the unit hosting the marker into a coherent mental representation of the unfolding discourse” (Hansen, 1998, p.236). Markers aid the hearers in integrating the unit hosting the marker into a coherent mental representation of the unfolding discourse suggests that DMs help listeners decipher the speaker’s intention in discourse, perhaps through what was pointed out earlier: exploring what is unsaid as part of what is communicated (Yule, 1996). It is fairly clear that DMs are of a functional-pragmatic nature (Lamiroy & Swiggers, 1991, p.123). In short, pragmatics in general is concerned with studying meaning as communicated by a speaker and how a listener perceives and interprets it (Yule, 1996).

So far, these statements have been based on a natural language setting, namely, monolingual spontaneous speech (SP) in which more than one party is engaged in discourse. This leads to the careful examination of pragmatics in SI because SI is an intentionally controlled setting where monolingual language use does not exist. This implies that pragmatics in SI may mean different things from pragmatics as we know it in general. Before delving further into this, 2.2.1.1 points out the structural differences between conversation and SI, underpinning why pragmatics in SI may be different from pragmatics in general to pave the way for 2.2.2.

2.2.1.1 A functional perspective: conversation versus interpreting structure

In a conversational structure, the pattern of the talk basically follows “I speak-you speak-I speak-you speak” (Yule, 1996, p.71), which means that it takes at least two people to continue the structure. In such a structure, speakers having a conversation are considered to be taking turns at holding the floor (Yule, 1996). This allows speakers involved to compete for the floor, given that there is only one speaker doing the talking

at one time in a conversation. From a functional perspective, in the conversational structure, it can be argued that discourse particles function to either maintain or exchange the floor with the ultimate goal of keeping the conversation going and of managing discourse. However, in SI or in the interpreting structure, a rendition does not follow this pattern. Interpreting structure does not involve turn-taking and floor-holding as interpreters are interpreting on the speaker's behalf under time pressure. Against this backdrop, how should discourse particles function? In a structure extremely different from conversation, do interpreters use discourse particles because they recognize listeners as silent interlocutors, if their intentions are not to maintain or compete for the floor?

In other words, if interpreters do not use discourse particles for the purpose of either keeping or competing for the floor over the course of SI, one can reasonably speculate that interpreters use discourse particles for a very particular purpose. That is, to alleviate their workload over the course of interpreting, which can be considered a tempting incentive on the part of interpreters. Taking a step further, it can be argued that the use of discourse particles by interpreters fulfills strategic needs such as buying time to process incoming information or making the renditions flow better to fit the ways in which the target language is expressed naturally. For example, it is highly likely that discourse particles are used by interpreters as a buffer on which they can rely in order to process incoming information more deeply. As a possible consequence, interpreting errors can be reduced or fluency can be enhanced since interpreters have bought themselves more time to process and comprehend what is being said in the source language. In short, the current research holds that the pragmatic functions of discourse particles are different in the interpreting structure from conversational structure as they no longer function to keep a conversation going by holding or exchanging the floor. Setton's (1999) work also lends support to the view that pragmatics in SI means a different thing compared to pragmatics in general, to be illustrated below.

2.2.2 Pragmatics in simultaneous interpreting by Setton

It should be acknowledged that in SI-related research, much effort has been devoted to investigating interpreting errors, the use of interpreting strategies, EVS (ear-voice-span), the effects of input structures, and interpreting assessment as independent research topics within the discipline of SI. No single SI study has clearly defined what should be categorized as pragmatics in SI. These studies each present only a fraction of interpreting performance, which lacks a more holistic and systematic view of pragmatics in SI. However, pragmatics in SI does have a different focus. Among all the relevant SI studies, Setton's model (1999) presented the most comprehensive aspects covering pragmatics in SI, upon which the methodology of the current research is based.

Setton's work (1999) was aimed at investigating the effects of input sentence structure on interpreters' oral output in English by comparing German-to-English and Chinese-to-English interpreting corpora. The results showed that the German sentences were 12 seconds long on average, compared to 5.8 seconds for the Chinese sentences, and more pauses were observed in the Chinese-to-English language pair (Setton, 1999). That is, the German-English interpreters routinely began interpreting in their own sentence structures as the input sentence unfolded; in contrast, the Chinese language being a topic-oriented language, Chinese clauses are significantly shorter, so the Chinese interpreters more often have a whole clausal proposition at their disposal before they formulate (Setton, 1999). Setton's work pointed out that the inherent differences in the input sentence structures are not the real obstacle to tackling SI tasks but issues like tense, logical scopes, and the way meanings are packaged into lexical items in different languages, which confirms that context is the most critical element in disambiguating the intention of the source language over the course of interpreting (Setton, 1999, p.173).

Although the aim of Setton's work was investigating the effects of syntactic differences between German and Chinese over the course of interpreting, his work covered a wide range of issues facing pragmatics in SI from contexts, framing-forming background knowledge, syntax and interpreting strategies to cognitive processing and discourse,

with the use of syntactic parsing as the main approach (Setton, 1999). For instance, as an element of pragmatics in SI, Setton pointed out the use of one interpreting strategy such as anticipation over the course of interpreting. "Interpreters sometimes produce not just a tentative sentential adverb, or a gambit Subject, but an actual predicate before the input predicate has appeared" (Setton, 1999, p.187).

The significance of Setton's work lies especially in the fact that his work provided a more holistic view of pragmatics in SI of the English-Chinese language pair. In other words, in addition to focusing on the inherent differences in input sentence structures between German and English, his work took the above-mentioned aspects into consideration and discussed them under the heading of pragmatics in SI as they may impact the ways in which the target language is produced by interpreters. Setton's work laid a critical foundation for ongoing studies when considering what elements should be thought of as pragmatics in interpreting studies as pragmatic elements work differently in different settings. His work confirmed that pragmatics in SI is crucially related to contexts and discourse (1999, p.191):

... simultaneous interpreters use both thematic and logical material, i.e. information not given in the text, including knowledge about the situation and the world, certain social conventions relevant to the event, and various additional attributes of the entities and relations being referred to by the Speaker. They also use deduction and inference from combined text and non-text information, including the logical structure of long segments of the discourse.

Adding to this, Setton's work also confirmed that due to cognitive complexity and differences from SP, strategies specific to the task of interpreting such as anticipation are needed (1999, p.189):

It is clear that at some points at least, the interpreter maintains some 'macro' or long-range representation of the developing discursive structure, and naturally makes deductions from the successive premises added to her own assumptions, as do the Addressees.

The aspects of pragmatics covered in Setton's work demonstrate that no single subject

came from one single discipline. For example, syntax is usually studied within linguistics; contexts and discourse are usually studied within pragmatics; interpreting strategies are studied within interpreting studies itself; cognitive processing (information processing, when using the term in the current study) is studied within psycholinguistics. It can be argued that, based upon Setton's work, pragmatics in SI observes all possible language phenomena in the interpreting setting, but this cannot be done without taking into account approaches or theories from other disciplines.

The current study holds a similar view to Setton in that pragmatics in SI should encompass any disciplinary aspects that may affect the ways in which rendered texts are produced by interpreters and the ways in which language phenomena in SI are observed and perceived. The value of Setton's work lies not only in providing a more holistic view regarding what pragmatics in SI should cover, but also in inspiring the current study to take an innovative approach to discourse analysis, especially in analyzing discourse particles with the use of parsing, to be detailed below.

2.2.2.1 Semantic parsing in the current study

In Setton's work, syntactic parsing with a parser was used as the primary approach to compare the differences in input sentence structure between German and Chinese to investigate their effects on interpreting into the target language, English. Setton's model, however, did not investigate the change of state of particles to markers. Therefore, a semantic parser that presents both the syntactic and semantic roles of the particles is used in the current study, with a particular focus on investigating the semantic role of the particles to identify their discourse functions in the text.

Through semantic parsing, the candidate particles will be examined in terms of their propositional meanings in the given texts in both scenarios, namely, SP and SI, to see if they have undergone a change of state in their propositional meanings, upon which the task of identifying Chinese DMs is based (illustrated further in Methodology). The reason why semantic parsing is adopted and used as the primary approach in the current study is because one of the critical indicators for locating Chinese DMs is

meaning reduction or meaning change. Only with the use of semantic parsing can we examine effectively the change of state in the meanings of the candidate particles, though this approach is unprecedented in interpreting studies so far, hence providing a platform where the current study can contribute and develop the field further.

2.2.3 Summary

In 2.2, distinctions have been made between pragmatics in general and pragmatics in SI, based on Setton's model, to pinpoint the inherent difference between the two scenarios in this specific aspect. The current study holds that pragmatics in SI should be regarded as a research discipline that studies language phenomena in the scenario of SI as a whole, which should take into consideration as many factors as possible which play a role in affecting interpreting performance. In most cases, these factors cannot be explained using only interpreting theories but should be examined with a combination of theories from other disciplines in order to provide a holistic view. Semantic parsing in the current study is used as an approach to studying the meanings of spoken particles within the domain of pragmatics, namely, to investigate the discourse roles the surveyed particles assume in a given text. Having pointed out the cognitive complexity involved in the practice of SI in 2.2.2, the next section illustrates this further by explaining how SI is different from SP in terms of information processing, which lends further support to the theory that discourse particles could be used differently in SI and SP as the mechanisms involved in SI are different and therefore tax the attention of interpreters more than regular language users.

2.3 Information Processing

Over the years, information processing (IP) theory has been applied to understanding the practice of SI and the mechanisms involved in processing incoming information by interpreters. IP is usually defined as a process that investigates how human beings receive and respond to information, entailing several processing stages, which sees how human brains process information as the computing process (Proctor et al., 2007). IP theory has contributed to the proposal of a number of models in language studies such as the TRACE model (McClelland & Elman, 1986), Levelt's Perceptual Loop Theory

(1983), and Massaro's model for understanding speech (1978). The most relevant models to this study are Levelt's and Massaro's models, which will be explained in the following sections.

2.3.1 Information processing in a monolingual setting

In language studies, IP has been widely researched from the point of view of language perception, production, and speech comprehension. IP in language studies in general focuses on three levels of processing, namely, word-level, syntax-level, and message-level. At word-level, taking Levelt's (1983) model for example, it deals with the detection of a word-level error and speech repair following the detection of the error. At syntax-level, it aims at solving ambiguous segments through parsing. And, at message-level, it attaches importance to indicating interconnections between different parts of a text through identifying devices such as pronouns.

Of all the IP models developed in language studies, two models are relevant to my research, namely, Levelt's Perceptual Loop Theory (1983) and Massaro's (1975) model for speech comprehension. The former is able to shed more light on the occurrence of disfluencies (Tóth, 2011; Watanabe, 2001; Brennan & Schober, 2001; Barr, 2001) from the speaker to indicate processing difficulties at a certain point, a common phenomenon which occurs in interpreters as well, to be detailed in 2.3.1.1. The latter, being a model for speech comprehension, directly contributed to the birth of significant IP model specific to SI in the late 1970s, to be detailed in 2.3.1.2.

2.3.1.1 Levelt: information processing and speech production

As IP can refer to various ways of treating information, Levelt's model (1983) deals with a certain part of IP, namely, the detection of problems in language production and self-repairs following the detection of a problem. Self-repairs are self-initiated corrections of one's own speech within the same speaking turn (Pillai, 2006, p.114). Self-repairs are considered a completely normal phenomenon in spontaneous speech, and are produced in response to a linguistic problem, for example, the inability to retrieve a lexical item (Pillai, 2006, p.114). Levelt's model has been based upon a corpus

of repairs in Dutch, assuming that speakers monitor their own speech in the the same way as they monitor the speech of others (Levelt, 1983). According to the model as shown in figure 2-2, self-repairs are divided into three major phases: monitoring and interrupting speech whenever a problem is detected, hesitating and pausing such as with the use of silence and fillers, and repairing disfluent speech segments.

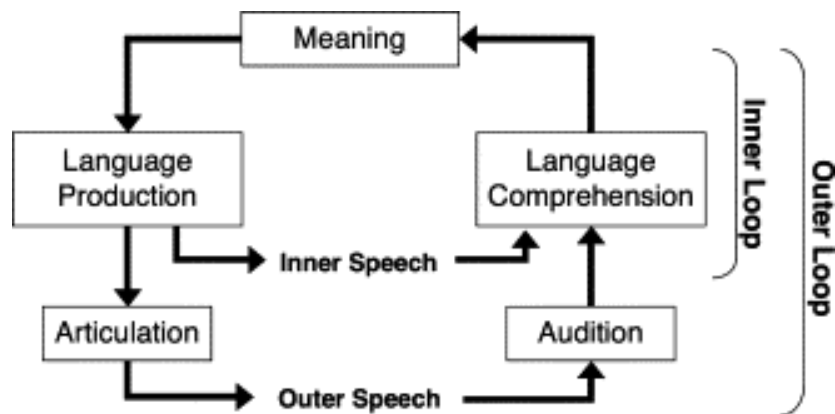


Figure 2-2 Perceptual Loop Theory (Levelt 1983, 1989)

Though SI is not a form of SP and it may seem awkward at first glance to draw upon a model designed for SP in SI research, it does provide a common ground. For example, it is not uncommon to discover self-repairs, usually termed as back-tracking in interpreters' oral output. Levelt's model is helpful to account for the appearance of disfluencies over the course of SI from the perspective of language production. It can be explained by the model that self-repair is observed inasmuch as interpreters are able to monitor their own output as they interpret and correct errors accordingly once a problem is detected. In other words, Levelt's model supports the idea that SI is multi-tasking in nature, where the interpreter's total attention is allocated to individual capacities, for instance the capacity for production, as evidenced by Gile's Effort Model (1995). It can also be the case that disfluencies such as fillers and silence occur as a result of processing difficulties facing interpreters if they fail to respond to the processing difficulties immediately, signaling that interpreters are buying more time to think or to rephrase their speech just like ordinary speakers, while monitoring their speech themselves.

Levelt's model attaches more importance to language production from the point of view of monitoring and repairing speech on the part of the speaker than language perception. In this regard, Massaro's model is more helpful in understanding how speech perception and comprehension can be achieved before an oral response can be made through a number of processing devices.

2.3.1.2 Massaro: speech comprehension

Massaro's (1975) model for speech comprehension regards speech comprehension as communication in which a sequence of internal processing stages take place, from the input of language stimulus to the oral output as response. At each stage, the system contains structural and functional components (Massaro, 1978, p.300). The structural component refers to the information available at a certain stage of processing, whilst the functional component refers to the procedures and processes operating on the information retained in the corresponding structural component (Massaro, 1978, p.300). The model distinguishes four functional components, namely, feature detection, primary recognition, secondary recognition, and rehearsal-recoding as indicated in figure 2-3.

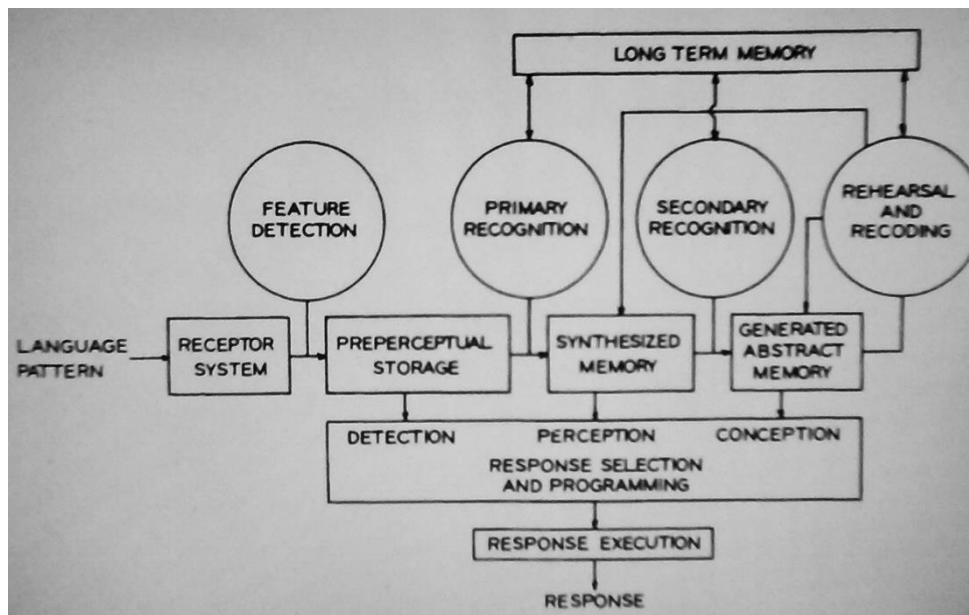


Figure 2-3 Model for Speech Comprehension (Massaro 1978)

According to the model, when a language stimulus is received, the feature detection

process is at work to identify, for example, acoustic features, and put the features in a brief temporary storage termed preperceptual auditory storage (PAS), which holds information from the feature detection process for approximately 250 milliseconds (Massaro, 1978, p.301). Then the primary recognition process integrates these features into a synthesized percept placed in the synthesized auditory memory (SAM). The synthesized percepts are then transformed by the secondary recognition into meaningful forms in generated abstract memory (GAM). That is to say, the secondary recognition process makes the transformation from percept to meaning by locating the best match between the perceptual information in SAM and the lexicon in long-term memory (LTM). Following the match between the perceptual information in SAM and the lexicon in LTM, the same abstract structure stores the meaning of both listening and reading. GAM then corresponds to the working memory of contemporary information processing theory, followed by the operation of rehearsal and recoding processes to maintain and build semantic/syntactic structures before responding.

Massaro's model provided a basis of the IP approach on which the two process models specific to SI were proposed and developed in the 1970s (Gerver, 1976; Moser, 1978). Gerver (1976) postulates the notion of buffer store in his model as temporary memory storage. Different from Massaro's model in that it specifies the different domains of work conducted by individual memory systems, buffer store holds all sorts of information, either processed or unprocessed and functions at almost every stage of processing, i.e. numerous buffer stores are involved over the course of processing in SI, to be detailed in 2.3.2.2. It should be noted that the common thread between Massaro's and Gerver's model is that the memory systems involved in the two models, whether called SAM, GAM, or buffer store, have been empirically proven to assume limited capacity (Massaro, 1978).

Part 2.3.1 briefly reviewed the development of IP theories in the scenario of the natural language setting that is monolingual in essence, and selected the two theories most relevant to the current research, Levelt's Perceptual Loop Theory and Massaro's model for speech comprehension, in an attempt to indicate their connections with the

development of IP models specific to SI, to be illustrated in detail in the following sections.

2.3.2 Information processing in simultaneous interpreting

As stated earlier, the advancement of digital computers since the Second World War has contributed to the development of IP models in several fields. Following the end of the Second World War, there was a critical need to settle international conflicts through multinational negotiation, which boosted the demand for interpreters. The advancement of digital computers during that period provided a window for the parties concerned to investigate how human beings perceived and responded to information (Cowan, 2000), for instance in trials. The dramatic demand for interpreters during the period also spurred people's curiosity in knowing how interpretation can be achieved. Therefore, various IP models were proposed in an attempt to understand how humans perceive and respond to a series of information in language studies, which later served as a stepping stone for the development of IP models within SI with the help of digital computers. IP in language studies has since then demonstrated a relatively close relationship with the development of processing models in SI which is still ongoing.

In the development of IP models specific to SI, it was not until the 1970s that a first model was proposed, by David Gerver (1976), presumably because enough knowledge had by then been collected from IP models for language studies during the post-war period. In the model, the term buffer store was coined by Gerver. Several years later, Moser-Mercer (1978) proposed a more advanced model following Gerver's based on Massaro's information-processing model of understating speech (Moser-Mercer, 2002, p.150), where prediction was made possible in SI. Following the advent of IP models specific to SI in the 1970s, Lambert (1983) tested the depth of processing in terms of consecutive interpreting (CI), listening, shadowing, and SI, using Gerver's model as a basis. By depth of processing, she meant how much one can recall following the completion of the four tasks above. In particular, the deeper one processes information, the more one can recall (Moser-Mercer, 2002, p.154). However, the measurement of the depth of processing in her study appeared very limited as her only measurement

was memory performance (Moser-Mercer, 2002, p.154). In the 1990s, Darö and Fabbro (1994) proposed a model of memory during SI derived from the principles of memory put forward by Baddeley and Hitch (1974). This model employed the notion of central executive, working memory, and long-term memory from Baddeley's work. As pointed out by Timarová (2008), the authors, interestingly, did not assign any task to the central executive, such as how it directed attention during SI in preventing processing difficulties and what kind of difficulties would occur over the course of IP in SI, making the model more general compared to either Gerver's or Moser's model (Timarová, 2008, p.16). It can be argued that the neglect of how the central executive directed attention in processing information may result from the state of the field in psychology at the time, when researchers were much more interested in the storage functions (Timarová, 2008, p.16). In this case, the direction and distribution of attention, which should have been the most important element in completing a SI task, was underspecified. The model is thus less favorable to account for SI as a multi-faceted activity that utilizes attention heavily and is not included in the current research for closer review. The following sections will therefore review the two most relevant IP models to account for the processing stages involved in the practice of SI as opposed to monolingual settings, starting with Gerver's IP model.

2.3.2.1 Gerver's model

The proposal of a memory buffer as an attempt to reinforce the notion of primary memory (James, 1890) by Baddeley et al. (Baddeley & Hitch, 1974) in the 1970s has fostered the active development of IP models in both cognitive science and interpreting studies. These have shown a relatively close relationship over the years. The proposal of a memory buffer signaled a breakthrough in the development of an IP model in interpreting studies as it directly contributed to the advent of the first IP model specific to SI, namely Gerver's (1976).

Gerver borrowed the notion of memory buffer in his model, using a different term *buffer store*, where processed information and information awaiting processing is stored as indicated in figure 2-4, to account for why interpreters are able to recall

segments uttered some time before by the speaker and insert them into the most recent segments. It should be noted that, unlike Baddeley's and Cowan's models in which the role of directing attention falls solely upon the shoulders of the central executive, Gerver's model was more able to explain how buffer store, a part of the activated memory, remains flexible over the course of IP in SI, through either holding or discarding information segments. In figure 2-4, it can be seen that the buffer store is further divided into small buffers (i.e. the diamonds) functioning at different stages of IP from the perspective of input and output.

In order to preserve the flexibility of the buffer store as a whole, each small buffer is assisted by a rectangle where the management of information takes place, for example, discarding input or decoding the target language. The model bears upon the management of information in the process of SI, which helps to give an insight into how flexibility can be achieved in the buffer store, though information management is itself a large topic in SI from today's view. It can be argued that Gerver's model somehow touches upon some measures taken in processing information, but only from the point of view of coding and discarding information, which, using today's knowledge, can be developed further into a variety of strategies designed for SI (Barik, 1994; Altman, 1994). In particular, the model did not accommodate how interpreters manage and tackle "problem triggers" (Gile, 1995, p.172) such as high speech rate on the part of the speaker, as discarding information or simply stopping interpreting is not the best alternative in these cases (Gile, 1995; Donato, 2003; Wang, 2010).

Although some then-unprecedented IP concepts proposed by Gerver in the 1970s now look slightly oversimplified in terms of how information can be managed, Gerver's model was at that time preferred in presenting the task of SI as a multi-faceted and complex activity that utilizes working memory to its extreme (Osaka et al., 2002). Despite the fact that Gerver did not specify which segment of the process is performed by working memory in his model (Timarová, 2008, p.13), it has remained a classic over the years. The proposal of Gerver's IP model very quickly led to a second, more sophisticated, IP model specific to SI by Barbara Moser-Mercer (1978).

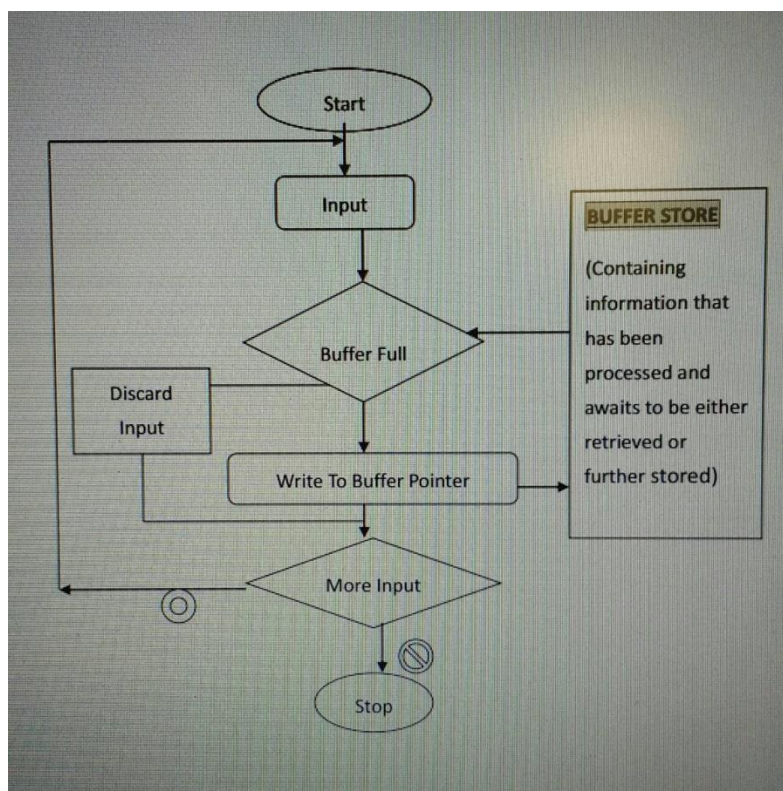


Figure 2-4 IP model (adapted from Gerver 1976)

2.3.2.2 Moser's model

Considering that discarding information and simply stopping interpreting is not the best alternative in real-time interpreting as depicted in Gerver's model, Moser-Mercer's model (1978) allowed for more flexibility in decision-making on the part of interpreters. Moser-Mercer (1978) added a construct termed *prediction possible* (i.e. the diamond in figure 2-5 that predicts word) in her model absent in Gerver's (Moser-Mercer, 2002, p.150) as a critical element for interpreters to decide whether to proceed to the next segment or to wait further as depicted in figure 2-5. In particular, Moser's model highlights the component of prediction in every stage of decision making. Compared with the model proposed by Gerver, the role of interpreters in Moser's model becomes more active in deciding what to do with the incoming information through prediction, not as a passive recipient of information. For example, by predicting the type of incoming information as a word or as a phrasal unit, it becomes easier for interpreters to decide if waiting for the next word or phrasal unit is necessary, which was absent in Gerver's model.

Moreover, the model singled out the role of long-term memory as a huge repertoire (including acoustic features, phonological rules, relations, and general knowledge etc.), where human knowledge relevant to the task of SI is retrieved and stored concurrently to strengthen interpreters' capacity for prediction as depicted in figure 2-5. It should be noted that, as an early IP model specific to SI, Moser's model is significant in that it demonstrates a more holistic picture of IP in SI as many decisions have to be made at numerous junctures. For instance, at each point of prediction in the model, interpreters may be faced with potential problems which require prediction or waiting before a decision can be made. For example, if an interpreter is not sure whether the current phrasal unit is complete enough to clarify the speaker's intention, they can decide whether waiting for the incoming word or phrasal unit is necessary. The potential problem in this case would be the possible outcome that the segment is distorted in meaning if the interpreter decides not to wait for further information.

Although the model preliminarily touches upon the use of prediction and waiting, which have been developed into several strategies designed for SI (Gile, 1995; Donato, 2003) over the years, it does not specify to what extent the use of prediction and waiting could have an impact on the output of the interpreters. For example in the model, it appears that waiting is the only resort that can be utilized by interpreters following predictions. But in reality, interpreters have more alternatives to choose from, such as omitting segments that contain secondary information or unfamiliar terms to retain processing capacities. Moser's model also underestimates how complex a string of information can be, as it limits the information that can be predicted to word and phrasal level. Yet, in a real SI setting, speech may contain cross-cultural concepts absent in the target language, and waiting may not be helpful at all. This to some extent limits the scope of strategies that can be utilized in the face of potential problems or "problem triggers" (Gile, 1995, p.172).

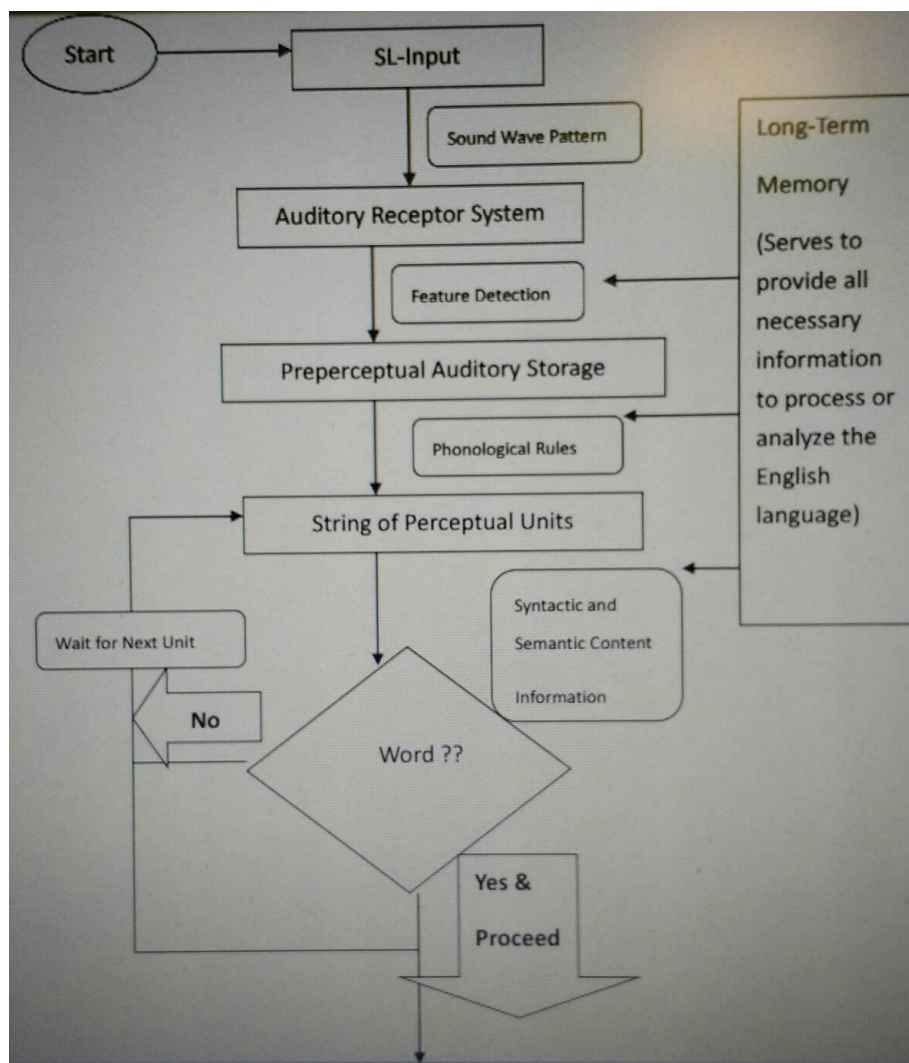


Figure 2-5 IP model (adapted from Moser 1978)

Indeed, one would argue that it is seemingly inappropriate to compare models from different generations that were designed for different purposes; this, however, has not been the intention of the current research. Rather, the provision of various established IP models from monolingual language setting and from SI aims to demonstrate the relatively close relationship between IP models in the two fields, while demonstrating that the processing stages engaged in the two separate scenarios are different in nature.

Furthermore, the inclusion of the established models provides a platform for the current research to reflect on which issues have been addressed and which have not, in preparation for more feasible approaches to investigating the use of spoken particles in

SI. Without exception, every model included in the current research, whether designed to explain how information is treated in SP in a monolingual setting or to present SI as a multi-faceted activity, has its own strengths and weaknesses. It can be said that the burgeoning of IP models proposed in language studies contributed to a platform for the later development of IP models in SI. Before the question of whether spoken particles can be used as a strategy and to what extent they influence interpreters' performance in SI can be addressed, it has provided a background for understanding what IP means in a monolingual setting and in SI, to highlight the difference between them, which may lead to different use of spoken particles across the two scenarios.

The brief review of various IP models within the scope of SI has provided inspirations for the current research in investigating the use of spoken particles in SI. Firstly, the notion of buffer store put forward by Gerver should be able to strengthen the role of focus of attention, which, according to Cowan, contains only highly relevant and urgent information (Cowan, 1995). In other words, focus of attention should entail other forms of information which may be secondary or unprocessed as depicted in the buffer store, or a collection of spoken particles to be utilized over the course of SI to justify the occurrence of spoken particles. Secondly, the notion of *prediction possible* put forward by Moser-Mercer is helpful in specifying the role of the central executive in directing attention in advance, if prediction is helpful in deciding which particle to choose from. For instance, through prediction, interpreters are able to decide if they should devote more effort to monitoring what they are producing with the use of spoken particles once they are tackling familiar topics. Thirdly, IP models specific to SI should place more emphasis on the treatment of potential processing difficulties and the performance of oral output following the treatment of potential processing difficulties. Since the aim of the current research is to investigate the use of spoken particles in SI and to what extent they can affect interpreters' performance, the treatment of processing difficulties should not be overlooked in order to gain insights into how interpreters tackle them so that the practice of SI can continue to progress.

The ways in which information is treated and processed are different in the scenario of SI and SP, as has been demonstrated throughout 2.3, and would hence require particular tactics. This therefore paves the way for the use of strategies specific to SI as interpreting tasks are much more complex than SP in terms of IP, to be illustrated in the following section of 2.4: strategies in interpreting studies.

2.4 Strategies in Interpreting Studies

In the development of interpreting studies, interpreting strategies as a topic has been widely researched in many language pairs over the decades, usually accompanied by error analysis in SI (Barik, 1994; Altman, 1994; Gile, 1995; Donato, 2003; Wang, 2010). The current study extends Wang's earlier work in which the effect of adding particles to renditions still awaits further analysis. Though in Wang's work (2010) it was concluded that inappropriate segmentation in SI can lead to the most severe distortion in renditions compared to other strategies, it was not yet clear how the addition of particles can affect interpreting performance. Hence, one of the focuses of the current study will be on how the addition of spoken particles may affect interpreters' oral output. 2.4.1 starts with what it means by strategies in simultaneous interpreting.

2.4.1 What is a strategy in simultaneous interpreting?

When people speak of strategy in general, it refers to the ability to acquire and to retrieve stored information from memory to solve various problems in a complex environment, thus allowing living organisms to be able to adapt to the surrounding world and consequently, as the ultimate goal, to be able to survive (Thompson, 1986; Sherry & Schacter, 1987). However, in the field of SI, the definition of strategy may be slightly different. For example, Kalina (1998) defined interpreting strategy as a "goal-oriented process under intentional control" (Kalina, 1998, p.99). Though it was not made clear what kind of goal interpreters are possibly pursuing given that the goals in real-time interpreting can be many (such as reducing and preventing interpreting errors, enhancing flow and coherence, or buying time to process information), it was clear that interpreting strategies should appear under intentional control. In other words, when speaking of interpreting strategies in SI, they are used consciously by

interpreters. Another definition of strategy in SI was given by Gile (1995), termed differently as “coping tactics” (Gile, 1995, p.191). According to Gile (1995), the term coping tactics refers to a set of fundamental practical skills in interpreting. They are taught within the framework of practical exercises, most often by trials on the part of the students and corrections from instructors (Gile, 1995). In his work, he has categorized the tactics further, to be detailed in 2.4.2.

2.4.2 Gile’s categorization of interpreting strategies

In Gile’s work, he categorized interpreting strategies, which he termed coping tactics, into three categories, namely, comprehension, preventive, and reformulation tactics (Gile, 1995). Comprehension tactics are “used when comprehension problems arise, and when they *threaten* to arise under time-related or processing capacity-related pressure” (Gile, 1995, p.192). Tactics within this category are i) delaying the response: for example, when comprehension difficulties occur, interpreters may seek to delay their interpretation for a while, so as to gain some time for thought as they receive more information from the speech in the source language (Gile, 1995). ii) Reconstructing the segment with the help of the context: “when interpreters have not properly heard or understood a technical term, name, number, or other type of speech segment, they can try to reconstruct it in their mind using their knowledge of the language, the subject, and, the situation” (Gile, 1995, p.192). However, as Gile put it, the tactic of reconstructing the segment with the help of the context may still entail some waiting before the context in the situation can be fully utilized (Gile, 1995, p.192). iii) Using the boothmate’s help: in real time interpreting, there are usually two interpreters working in the booth. One is active while the other is passive. In other words, the active one is interpreting simultaneously (both listening and producing renditions) as the source language proceeds and the passive one is only listening to the source language before his/her next switch with the active colleague. In this case, the passive colleague is more likely to comprehend the whole source text than the active one (Gile, 1995). According to the author’s own experience, the boothmate’s help is most needed when dealing with figures and numbers, usually in the form of writing down the exact number on a note. iv) Consulting documents in the booth: in the

situation where there is no passive colleague, an interpreter can consult the documents at hand or slides in front of his/her screen to help interpret. These tactics can be used concurrently and mutually in conference interpreting in an attempt to optimize interpreting performance.

Preventive tactics are used when “interpreter believes a problem may arise or is about to occur” (Gile, 1995, p.194) due to time or processing capacity pressure over the course of interpreting. As the name suggests, preventive tactics are used to limit or to prevent the risk of interpreting failure. These tactics include i) note-taking: for example, if the subject matter involves a number of lengthy technical terms, it would be ideal to note down these terms with their translations in advance to reduce conversion difficulty. ii) Changing the Ear-Voice-Span (EVS). EVS is “the time lag between comprehension and reformulation” (Gile, 1995, p.195). In conference interpreting, it is highly likely that interpreters may have to deal with high speech rate, which is common in the real world. In this case, shortening EVS, that is, shortening the lag between receiving the source language and production of the target language can reduce the burden of working memory. Nevertheless, it should be noted that shortening EVS might also risk failing to capture the complete message in the source language as interpreters have to interpret immediately after what is being said (Gile, 1995). iii) Segmentation: as pointed out by Gile, when there is a potential overload of working memory, for instance, with the source language being syntactically very different from the target language as in the case of English-Chinese interpretation, interpreters may opt for reformulating speech segments earlier than they would normally do (see also 2.1.3.3). In doing so, interpreters can release the information stored in the memory load earlier while at the same time receiving the incoming message (Gile, 1995). In other words, segmentation as a preventive tactic can save short-term memory capacity through unloading information from memory faster. iv) Changing the order of elements in an enumeration: “enumerations are high-density speech segments that impose a high load on short-term memory” (Gile, 1995, p.196). In tackling the situation, “one tactic often observed consists of reformulating the last elements first so as to free memory from the information, and then to move on to other elements” (Gile, 1995, p.196) on the

part of interpreters. But, as Gile admitted, no analysis has yet been done as to why this tactic should reduce memory load (Gile, 1995). One possible explanation, according to Gile, is that through reformulating the last elements first, it is possible for interpreters to “pick them up before they have been processed in depth and integrated fully into the semantic network, thus saving processing capacity” (Gile, 1995, p.196).

Reformulation tactics are used to reformulate speech segments in an attempt to “eliminate the potential consequences of production problems or short-term memory problems” (Gile, 1995, p.197). The first three tactics in this category are the same as presented in the category of comprehension tactics. Within this category, reformulation tactics include i) delaying the response: “the idea being that the waiting period is used for a subconscious search for the missing term or sentence structure” (Gile, 1995, p.197), which can then be applied to be integrated into the reformulation process as interpreters produce the renditions. ii) Using the boothmate’s help: Gile suggested that the boothmate’s help is in most cases given in the form of notes or indicators for reformulation rather than as explanations of what is being said, which is reasonable under time constraints (Gile, 1995). iii) Consulting documents in the booth: whenever possible, documents are used in the booth for the purpose of reformulation, particularly “where glossaries and dictionaries are concerned” (Gile, 1995, p.197). iv) Replacing a segment with a superordinate term or a more general speech segment: in the situation where “interpreters find themselves incapable of fully understanding a speech segment or reformulating it in the target language, one possible solution is to reformulate the message in a less accurate manner by using a superordinate in the case of a single word, or by constructing a more general segment in the case of a whole clause or sentence” (Gile, 1995, p.197). For example, if the interpreter is incapable of capturing the exact number of two hundred and thirty-three million in a conference, he/she can interpret the figure as “around two hundred and thirty million” and seek to input the exact number later on if time allows. v) Explaining or rephrasing: as interpreting in nature also deals with interpreting cross-cultural elements, it is not uncommon to find that a term in the source language may not have an equivalent in the target language. In this case, this term can only be explained by the interpreters

using the target language (Gile, 1995). vi) Reproducing the sound heard in the source language speech: “when encountering a name or technical term which is not known or recognized, the interpreter may try to reproduce the *sound* as heard” (Gile, 1995, p.198). This tactic, however, can only be considered as an expedient measure under time pressure and cannot be used too frequently as it might undermine audience’s trust in interpreters. In other words, if possible, further explanation of the term from the context is suggested given no equivalents can be found. vii) Instant naturalization: when interpreters are unable to locate an appropriate term in the target language, “they may *naturalize* the source language term, adapting it to the morphological or phonological rules of the target language” (Gile, 1995, p.198). For example, the English computer term ‘driver’ was translated into Japanese as ‘doraibâ’. viii) Transcoding: this tactic consists of “translating a source-language term or speech segment into the target language word for word” (Gile, 1995, p.199). For example, the English word Husky, a dog species, was transliterated into Chinese as ‘ha shi qi’; although Husky is usually called and conceptually associated with ‘a dog that carries a sled’ in Chinese as ‘xue qiao quan’, this translation did not undermine people’s understanding of the term. And like naturalization, transcoding can also lead to existing target language terms in the repertoire of the target language (Gile, 1995). Taking Japanese as a target language for example, the English word ‘lighter’ is in the repertoire of Japanese as ‘raitā’ as a consequence of naturalization and transcoding.

The following five techniques within the category of reformulation tactics are not used as frequently as those above but can be used as extreme measures in the face of harsh conditions in conference interpreting as suggested by Gile (1995). They include ix) informing the delegates (the listeners) of an interpretation problem: when interpreters are convinced that they have missed an important message, they may opt for informing the delegates of the loss of information, for example, by informing the delegates of the loss of a number in the speech. Following the circumstance, what interpreters can do, if possible, is to ask the speaker to repeat the missing information to make up for the loss (Gile, 1995). Nevertheless, this tactic cannot be used too frequently as this will undermine both the delegates’ and the speaker’s trust in interpreters and it also

disrupts the proceeding of a conference. x) Referring the delegates to another information source: in specialized conferences, for example, in a conference on urban development, other than solely relying on interpreters' renditions, interpreters can advise the delegates to refer to the handouts they have for pictures and slides, which can complement interpreters' explanations in the target language. xi) Omitting information: occasionally, interpreters may miss information without even noticing it, for they might have overused their working capacity (Gile, 1995). However, omitting information as a tactic in SI refers to the fact that interpreters may intentionally decide not to interpret a piece of information for the purpose of saving some effort for later use. It should be noted that, if omitting information is used deliberately by interpreters, they should still preserve the gist of the source text and not distort what has been said by the speaker. xii) Parallel reformulation: this tactic is used in a situation where the interpreter's working conditions are particularly poor, and where interpreters feel the desperate need to continue producing renditions in spite of the inability to listen, comprehend, and reformulate properly (Gile, 1995). In this situation, they may invent a speech segment seemingly compatible with the idea of the source text but not completely faithful as an emergent yet expedient measure (Gile, 1995). This tactic is an extreme one and is not recommended in real-time interpreting as it faces the risk of "getting caught" by experienced interpreting service users who understand both the source and the target language. xiii) Switching off the microphone: this tactic is indeed an extreme one. It is suggested by some purists that this tactic be used when the working conditions are extremely poor and interpreters feel they are unable to provide a decent service (Gile, 1995). In other words, indicating that interpretation would be worse than non-interpretation (Gile, 1995). In the real world, this is a very rare attitude on the part of interpreters.

In Gile's work on categorizing interpreting tactics as mentioned above, he mainly provides instructions for trainers in interpreting programs to follow in the teaching of interpreting strategies. It can be argued that some tactics, in particular the extreme ones, are not highly recommended in real conference interpreting as they may jeopardize interpreters' reputations and should be considered as a last resort. However,

Gile's work on categorizing interpreting strategies has inspired other scholars to contribute to the subject matter, such as the work by Donato (2003), who also proposed several categories of interpreting strategies to be detailed in 2.4.3, though some are conceptually redundant to those of Gile's.

2.4.3 Donato's categorization of interpreting strategies

The question of why interpreters need interpreting strategies formed the core of Donato's (2003) study. In her study, it was identified that interpreters need interpreting strategies to face the peculiar conditions of SI. By peculiar conditions, she refers to the overlapping of listening and speaking or the overlapping of comprehending and reformulating, and the inability to interrupt the information flow and to foresee the entire development of the source text, with which interpreters are faced (see also Reccardi, 1999; Salevsky, 1987; Kalina, 1998). Therefore, interpreting strategies acquire a vital role in SI (Donato, 2003).

An answer to the question of why interpreters may need interpreting strategies was provided by Lederer (1981) in that the true difficulty underlying SI is the simultaneity of comprehension and production, not the meaning of the message and of the words in which it is expressed. Therefore, from Lederer's view, only factors impairing comprehension in monolingual communication can impair the interpreter's performance, namely, the surface structures of the languages (Lederer, 1981, p.147). Lederer may have provided one of the many answers to the question, but it is far from enough and that the problem is not appropriately addressed in SI where interpreters are exposed to bilingual communication under time pressure that could greatly compromise their comprehension. Moreover, in the situation where the source language is syntactically extremely different from the target language, such as in the case of English-to-Chinese interpreting, to successfully tackle the conversion of the surface structure between English and Chinese makes interpreting strategies even more necessary.

Numerous scholars (Gile, 1990; Kalina, 1998; Donato, 2003) have supported the theory

of language-specific strategies in tackling the structural asymmetries between the source language and the target language. For example, Gile and others (Gile, 1990; Kirchhoff, 1976; Le Ny, 1978; Kalina, 1998) “underscore the impact of diverging syntactic structures in interpreting between languages that are syntactically very different: by forcing interpreters to process longer chunks or to restructure the message completely” (Donato, 2003, p.103). As a consequence, the complete restructuring of the message may result in the overloading of the interpreter’s total processing capacity, thus giving rise to the loss of vital information; hence the requirement for language-specific interpreting strategies is suggested (Gile, 1990). The use of interpreting strategies is also supported by Setton’s work (1999) in which it is regarded as a part of pragmatics in SI.

Sharing the same view, Donato (2003) compared strategies adopted by trainee interpreters between the English-Italian and the German-Italian language pairs. She categorized interpreting strategies adopted by trainee interpreters into three categories: comprehension strategies, reformulation strategies, and emergency strategies. The proposal of these three categories is in fact an integration of other scholars’ work on interpreting strategies.

Comprehension strategies in Donato’s work are mainly drawn from Gile’s (1995) categorization and definition, which were stated earlier in 2.3.2. However, the subcategories included in comprehension strategies by Donato are slightly different from Gile’s. These subcategories include i) stalling by using neutral materials: this strategy aims to buy time to think on the part of the interpreter by producing generic utterings absent in the source language, which do not add new information to the renditions (Donato, 2003). This strategy is taken from descriptions by Gile (1995), Setton (1999), and Kirchhoff (1976) who describe it as a strategy that involves the use of neutral, non-committal utterings in the target language. ii) Anticipation: described by Kalina (1998) as a strategy that involves the production of a chunk in the target language before it is truly uttered by the speaker in the source language. iii) Time-lag: this refers to the fact that in SI, interpreters usually produce their rendition slightly

behind the source language, which forms an interval between the receiving of the source language and the production of the target language (Donato, 2003). It has been described by Goldman-Eisler (1972) as a variable that may be subject to specific language pair. In analyzing time-lag, its length mainly depends on what source language the interpreter is tackling (see 2.2.2 for details).

Following comprehension strategies are reformulation strategies, which are based on Falbo's (1999) categorization containing three subcategories: morphosyntactic reformulation, synthesis, and expansion (Donato, 2003, p.107). Morphosyntactic reformulation includes i) morphosyntactic transformation: for example, "transformation of a subordinate clause into a main clause, of a negative clause into an affirmative clause and of a noun phrase into a verb phrase or viceversa" (Riccardi, 1999, p.172). ii) Syntactic segmentation: for example, "dividing long clauses into shorter clauses" (Riccardi, 1999, p.173). iii) Least-commitment strategy: "it consists in leaving the clauses open to add coordinate or subordinate clauses if faced with the so-called garden path sentences" (Riccardi, 1998, p.178). iv) Changing the order of phrases or elements within a clause: this strategy is taken from Kirchhoff (1976) and Gile (1995), and is comprised of reformulating various elements in the source language into different positions in the target language.

Synthesis entails the compression of the text in the source language through i) generalization: "replacing a segment with a superordinate term or a more general speech segment" (Gile, 1995, p.197), ii) simplification: using lexical or stylistic simplification to simplify the original message (Kalina, 1998, p.120), iii) deletion: reprocessing the text in the source language through deleting superfluous or redundant information by means of screening and selection of information (Kalina, 1998, p.120).

Expansion is the addition of various elements to the target language through i) explanatory additions: lexical and the content expansion with an aim to clarify the message (De Feo, 1993), ii) additions to maintain coherence: this is a strategy aimed at explicating coherence relations in an attempt to confer logical continuity to the text (De

Feo, 1933, p.33), iii) repetition: repeating previously mentioned or processed elements as a means of enhancing lexical accuracy through synonyms or synonymic phrases, iv) paraphrase: described by Gile as "explaining or paraphrasing" (Gile, 1995, p.198), this consists of explaining the meaning of a term or wording in the source language when the interpreter is unable to find a suitable equivalent in the target language.

Emergency strategies are employed when comprehension problems occur or when the benefits of using comprehension strategies are not prominent or they are being unsuccessful (Donato, 2003, p.108). By employing emergency strategies, interpreters are able to avoid failure or impasse over the course of interpreting (Donato, 2003). These strategies include i) transcoding: as stated earlier in 2.3.2, this refers to "translating a source-term or speech segment into the target language word for word" (Gile, 1995, p.199). ii) Approximation: "the interpreter finds a wording or term which is more or less what he was looking for and produces it, then adds one which he has meanwhile activated and which fits even better and so on" (Kalina, 1992, p.254). iii) Evasion: the total deletion of a segment in the source language as an intentional choice by the interpreter to avoid interpreting problems (Kalina, 1998). This strategy can be seen as a large-scale omission which is done purposefully, not because of the fact that the interpreter is on the edge of collapsing. iv) Substitution: the use of a term or wording in the target language which, though different from that originally pronounced by the speaker, is plausible and understandable in the speech context (Kohn & Kalina, 1996, p.132). It can be said that Donato's work on categorizing interpreting strategies to some degree overlaps with that of Gile but is not exactly the same, as Donato also drew upon several other scholars' work on the subject matter to form her model.

Having compared interpreting corpora from trainee interpreters on two language pairs, namely English-Italian and German-Italian, with the use of the above-mentioned categorizing criteria, the results of Donato's work can be discussed in terms of comprehension strategies, reformulation strategies, and emergency strategies. On comprehension strategies, the result suggested that anticipation was used far more frequently in the German-Italian group than in the English-Italian group: 49 occurrences

in the German-Italian group and 5 in the English-Italian group. Time-lag patterns also differed across two groups. It was revealed that time-lag (i.e. evident interval between receiving the source language and production of the target language) was observed most frequently in the NP+VP+NP pattern in the English-Italian group, totaling 139 occurrences whilst in the German-Italian group, time-lag for the same pattern was observed only 43 times. Whereas in the German-Italian group, time-lag occurred most frequently in the NP+VP pattern, totaling 149 occurrences. This difference might result from a language-dependent factor, namely, the prevalence of the NP+VP+NP structure in English, which is syntactically more frequently observed in English than in German (Donato, 2003) or may be due to the existence and frequency of cognates.

On reformulation strategies, the results in general did not reveal significant discrepancies across the two groups in terms of how individual strategies within this category were used. What can be mentioned here is that in the German-Italian group, morphosyntactic transformation was observed 93 times whereas in the English-Italian group, 48 times. Simplification was used slightly more frequently in the English-Italian group, totaling 51 occurrences, than in the German-Italian group, totaling 27 occurrences. Other than these two individual strategies within the category, both groups presented a similar tendency in the use of reformulation strategies. On emergency strategies, the results did not suggest significant differences between both groups, either. However, it was observed that the English-Italian group resorted to transcoding 50 times whilst the German-Italian group, only 13 times. On average, both groups presented a similar tendency in the use of emergency strategies.

Nevertheless, one may argue that Donato's work can only be seen as a case study as it only focuses on two language pairs, namely English-Italian and German-Italian pairs, which are all European languages. In other words, language similarity may explain the overall similar tendencies in the use of strategies from different categories across two groups, as can be seen in the use of reformulation strategies and emergency strategies. In addition, taking merely the number of occurrences of individual strategies across two groups in fact narrowed the scope of the study. That is, Donato's work

would have been more convincing had she also investigated the effect of using individual strategies in tackling interpreting difficulties. As admitted by Donato, the selection of the texts, the number of 20 participants, and the participants being trainee interpreters have all limited the scope of her research, which cannot be generalized and thus requires further research (Donato, 2003). As with all studies, Donato's work may have left unaddressed issues considering the scale of her research, it nevertheless yielded findings on revealing patterns of the use of language-specific interpreting strategies by trainee interpreters and paved the way for the current research to explore the effects of using particles as a reformulation strategy in SI.

Unlike Gile (1995), who proposed categories of interpreting strategies for the purpose of instruction only, Donato's empirical work has shown that the ways in which previous scholars categorized interpreting strategies to be feasible. Researchers are now given a more holistic view in terms of when and how to use a particular strategy, no longer as one single isolated strategy. For example, when an interpreting strategy is labeled as a subcategory of comprehension strategies, we will know that this particular strategy is used to tackle comprehension problems or to enhance comprehension on the part of interpreters.

To sum up, both Gile's and Donato's work have laid a critical foundation for studies on interpreting strategies: the former unprecedentedly proposed concrete categorizations of interpreting strategies aimed at providing teaching instructions for interpreting trainers whilst the latter built upon previous scholars' work on interpreting strategies to empirically investigate the use of these strategies in different language pairs to identify how language-dependent factors such as syntax can determine how frequently one particular strategy is employed. Wang integrated both Gile's and Donato's work on categorizing interpreting strategies to investigate to what extent the use of interpreting strategies can affect interpreters' oral output, a scope underspecified in Donato's work, to be detailed in 2.4.4.

2.4.4 Wang's work on categorizing interpreting strategies and effects

Through integrating both Gile’s (1995) and Donato’s (2003) work, in my previous work (Wang, 2010) I proposed a model to account for interpreting strategies in which some modifications and adjustments were made, making the model slightly different from Gile’s and Donato’s as shown in table 2-2. Definitions of individual strategies are the same as Gile’s and Donato’s, given that this model is derived from their work. The categorizations in Wang’s work excluded the extreme measures (see 2.4.2) that might be taken by interpreters as suggested in Gile’s coping tactics. In short, the categorizations consist of four main types of interpreting strategies, namely, comprehension, preventive, reformulation, and emergency strategies, with individual subcategories included.

Preventive Strategies	a. Taking notes
	b. Changing EVS
	c. Segmentation
Comprehension Strategies	a. Using neutral terms
	b. Anticipation
	c. Adjusting time-lag
Reformulation Strategies	a. Morphosyntactic reformulation
	b. Synthesis (generalization, simplification)
	c. Expansion (addition)
Emergency Strategies	a. Word-for-word translation
	b. Approximation
	c. Evasion (aka. large-scale deletion)
	d. Substitution

Table 2-2 Interpreting Strategies Proposed (Wang 2010)

Given that merely calculating the occurrences of the use of a particular strategy can limit the scope of the research as seen in Donato’s work, my previous work has focused on not only the frequency of the use of strategies but also the effects of these strategies on interpreters’ oral output. To optimize the model for interpreting strategies, I also drew upon Barik’s (1994) work on categorizing interpreting errors as shown in table 2-3 as the second criteria in response to the misuse of a certain strategy.

Errors are divided into three main categories, namely, omissions, additions, and

substitutions/errors. The category of omissions contains i) Skipping omission: “omission of a single word or a short phrase” (Barik, 1994, p.122), which does not change the grammatical structure of the sentence and only results in very minimal loss of meaning. ii) Comprehension omission: “omission where it appears that the interpreter fails to comprehend or is unable to interpret part of the text” (Barik, 1994, p.123), which results in definite meaning loss and “bits and pieces” of the oral output (Barik, 1994, p.123). iii) Delay omission: happens when the interpreter was giving their interpretation of a segment in the source text, the speaker resumed speaking, with the consequence that some of what the speaker said did not seem to “register” with the interpreter, who would have to either wait until the beginning of a new segment or simply bypass what had been said in order to keep up (Barik, 1994, p.123). iv) Compounding omission: refers to the situation where the interpreter seems to recombine or compound speech elements from different clause groupings by omitting some material in the source text, giving rise to slightly changed meaning in the sentence though the gist of what was said is overall maintained (Barik, 1994, p.124).

The term “additions” in Barik’s work, though being categorized as one main type of interpreting error, does not necessarily suggest that whenever additions are used over the course of interpreting they are considered errors, which is in fact case-dependent. In Barik’s work, the use of additions refers to elements which are added outright to the target text by the interpreter, the consequence of which can be either positive or negative. Additions include i) Qualifier addition: the “addition of a qualifier or a qualifying phrase not in the original version (Barik, 1994, p.125), which does not affect the meaning of the source text. ii) Elaboration addition: the “addition in the form of elaboration or other straight addition to the text” (Barik, 1994, p.125) aimed at providing more explanation, which does not change the meaning or the gist of the source text. iii) Relationship addition: the “addition of a connective or of other material, which results in a relationship of elements or of sentences not present in the original” (Barik, 1994, p.126). The result of relationship addition is case-dependent, depending mainly on how well interpreters comprehend the original message. iv) Closure addition: an addition which is accompanied by rephrasing, omission, or misinterpretation on the

part of the interpreter and which functions to give “closure” to a segment, without adding anything substantial to the renditions (Barik, 1994, p.126).

The category of substitution and errors refers to elements which are substituted by the interpreter for something said by the speaker (Barik, 1994, p.127). The consequence of using substitution can be case-dependent as well. For example, the substitution may involve a single word or a short phrase. The degree of altering what is said depends on what is substituted and may or may not distort the meaning of the source segment. But, when it comes to substituting a whole clause or sentence, serious errors may occur as a result. The category of substitution and errors contains i) Mild semantic error: inaccurate interpretation of some lexical terms, which only slightly distorts the intended meaning with the main gist preserved (Barik, 1994, p.128). ii) Gross semantic error: inaccurate interpretation of some lexical terms crucial to the understanding of the source text, which substantially changes the meaning of what is being said (Barik, 1994, p.128). iii) Error stemming from assumed misunderstanding: the interpreter misunderstands some lexical terms possibly because of a homonym or near-homonym, or because of getting confused with a near-sounding word (Barik, 1994, p.128). iv) Error of false reference: possibly stemming from confusion of the subject of the subordinate clause with that of the principal clause (Barik, 1994, p.128). v) Error of meaning: different from semantic error, error of meaning here refers to the situation when a segment or a comment given by the speaker on a certain subject is mistakenly placed by the interpreter on the wrong subject. vi) Mild phrasing change: the interpreter does not say quite the same thing as the speaker, but the gist of what is said is preserved (Barik, 1994, p.130). vii) Substantial phrasing change: as the name suggests, it refer to a change in phrasing which is more pronounced and thus leads to a difference in meaning, but the overall gist of what it said by the speaker is not too distorted (Barik, 1994, p.131). In other words, substantial phrasing change leads to distortions, but listeners can still capture the general idea of the source text. Finally, viii) gross phrasing change: results in great loss of meaning (Barik, 1994, p.131).

Categorization of Interpreting Errors	Subcategories of Error Type
Omissions	a. Skipping omission
	b. Comprehension omission
	c. Delay omission
	d. Compounding omission
Additions	a. Qualifier addition
	b. Elaboration addition
	c. Relationship addition
	d. Closure addition
Substitution and Error	a. Mild phrasing change
	b. Substantial phrasing change
	c. Gross phrasing change
	d. Mild semantic error
	e. Gross semantic error
	f. Error stemming from assumed misunderstanding
	g. Error of false reference
	h. Error of meaning

Table 2-3 Categorization of Interpreting Errors (Barik 1994)

In order to investigate the effects of using interpreting strategies on a trainee interpreter's performance, my previous work invoked Barik's work on interpreting errors in addition to Gile's and Donato's work on interpreting strategies so as to examine the use of strategies and their effects, within which scope errors can be considered as one type of effect if strategies are not used properly. Having set up these two criteria, an empirical study on how trainee interpreters used interpreting strategies and what effects these strategies had on their performance was conducted. The results of my previous work suggested that over the course of English-to-Chinese interpreting, evasion, paraphrasing, summarizing, and waiting (stalling) were used most frequently by the trainee interpreters. The results also revealed that the use of segmentation, as a subcategory of preventive strategies, led to the most severe meaning distortions in the renditions if the trainee interpreter failed to segment properly. As for inappropriate anticipation, the result was case-dependent, but in most cases the gist was preserved.

Inappropriate substitution, according to the result, was in most cases limited to lexical or phrasal distortion whilst the gist of the speech was maintained and the renditions were understandable. In terms of inappropriate waiting, the gist of the speech was in most cases maintained. My earlier work laid critical groundwork for the current research to investigate one particular aspect of the use of interpreting strategies, which still awaits in-depth investigation, namely, the addition of particles within the category of reformulation strategies and its effects on interpreting performance.

2.4.5 Summary

The working conditions facing interpreters can be peculiar and challenging at times as they greatly consume the attention needed to tackle the task of SI on the part of interpreters. This explains why strategies specific to SI are necessary but are absent in a monolingual discourse setting. As the present study is an extension of Wang's earlier work and strategies such as expansion (or addition of spoken particles) still await thorough investigation, the current study will adopt Wang's (2010) categorizations of interpreting strategies based on Gile's (1995) and Donato's (2003) work and Barik's (1994) model to investigate how the use of spoken particles in SI, in particular the addition of spoken particles, can influence interpreters' renditions. To investigate the effects therefore requires measurement. To measure interpreting performance, the next section illustrates what interpreting assessment should revolve around and the interpreting assessment model adopted in the present study.

2.5 Interpreting Assessment

Interpreting assessment can take many forms and be viewed from many different angles. For example, interpreting can be assessed by interpreters themselves, interpreters' colleagues, the speakers, the trainers, and indeed, the audience. The criteria adopted may vary from case to case and from one context to another. However, it has been generally agreed that when assessing interpreting performance, ensuring quality is the most important thing (Pöchhacker, 2001; Kalina, 2005). Yet, merely pointing out that quality is the most critical element that interpreters are supposed to secure is ambiguous. The very first question that should be asked is how is quality

defined in interpreting?

2.5.1 Perspectives on defining interpreting quality

The quality of interpreting performance or of interpreting services confronts interpreters, interpreting trainers, users, and researchers with many problems (Kalina, 2005). These problems can be: interpreters and trainers may feel they can assess the quality of their colleagues or trainee interpreters based on their own experience and professionalism, but may be unable to express their judgments or critiques by objectively measurable standards (Kalina, 2005); users of interpreting services may not trust interpreters given that they are unable to control their rendering (Kalina, 2005); researchers have not been able to agree on a universal and generally accepted quality model that can be applied in all types of interpreting (Kalina, 2005). These have all made defining interpreting quality a very challenging task. It can be said that what interpreting quality means cannot be expressed thoroughly and clearly in just one sentence as different groups of people view it differently and with different expectations, all of which disfavor the proposal of a universal and one-size-fits-all assessment model for interpreting performance.

As challenging as defining interpreting quality appears to be, several scholars have endeavored to propose definitions to help assess interpreting performance. For example, Gile (1988) “defines interpreting quality from a processing view as the optimum balance between different processing efforts, and explains deterioration in quality as caused by an excessive constraint on total processing capacity due to overloading of one of the processing efforts (listening, memorizing, or production)” (Gile, in Kalina, 2005, p.770). And, if interpreting quality is defined as appropriate strategic processing (Kalina, 1998), “the deterioration of interpreting quality indicates that strategic processing becomes more difficult or has broken down” (Kalina, 2005, p.770), which does not lead to an adequate target text. However, it would require further study to determine which type of loss of quality is due to which kind of overload or strategic error, and also to establish a comprehensive model to measure the relationship between them (Kalina, 2005). Pöchhacker (1994) defines quality within the framework

of a hypertext situation in which “hypertext” refers to the conference setting as a whole (Pöchhacker, 1994). That is, interpreters should produce “a textual product which provides access to the original speaker’s message in such a way as to make it meaningful and effective within the socio-cultural space of the addressee.” (Pöchhacker, 2001, p.421). Mack (2002) suggests that interpreting, as translation presented in an oral form, is the transfer of textual information between two languages; it hence requires the skill of being able to establish equivalence according to content, shape and performance (Mack, 2002). Interpreting, as a special type of interlingual communicative act in a complex social network of relations, should aim to achieve speech acts with optimum effect (Mack, 2002). Quality can then be measured as the rate of success in this regard (Kalina, 2005).

In discussing different perspectives on interpreting quality that have been proposed over the years, it should be noted that quality may mean very different things to different groups of people or different service users. For example, Moser-Mercer (1996) defines optimum quality in interpreting as “the quality an interpreter can provide if external conditions are appropriate” (Moser-Mercer, 1996, p.44). This means that “...an interpreter provides a complete and accurate rendition of the original that does not distort the original message and tries to capture any and all extralinguistic information that the speaker might have provided subject to the constraints imposed by certain external conditions” (Moser-Mercer, 1996, p.44). For Vuorikoski (2004), interpreting quality means “sense consistency with the original” on which good conference interpreting is based (Vuorikoski, 2004). And according to Vuorikoski (2004), it is the shared responsibility between the speaker and the interpreter to achieve good interpreting quality through cooperation (Vuorikoski, 2004, p.88). On the other hand, from Garzone’s (2002) point of view, ensuring interpreting quality is the sole responsibility of the interpreter, as he/she should be held accountable for the finished product, namely the renditions (Garzone, 2002, p.118). Against such a backdrop, academia has made parallel efforts through empirical research to better define the elements of interpreting quality.

2.5.2 In search of quality through empirical studies

Empirical studies in search of interpreting quality can be divided into survey research, experimentation, corpus-based observation, and case study, among which survey research has been the most popular (Pöchhacker, 2001, p.414). For instance, Macías (2006) employed survey research to probe quality criteria in SI (see 7.3.1 for details).

2.5.2.1 Survey research

Survey research based on questionnaires or structured interviews has been conducted among interpreters, users, and clients since the 1980s (Pöchhacker, 2001) to find out what they consider necessary for good interpreting or what is meant by interpreting quality. For example, Hearn (1981) and co-workers surveyed a total of 65 interpreters in Australia and yielded such criteria as knowledge of both languages and the migrant culture, objectivity, socio-communicative skills, reliability, responsibility, honesty, politeness and humanity (Hearn et al., 1981, p.61). Bühler (1986) surveyed 47 conference interpreters and yielded such criteria as endurance, poise, pleasant appearance, reliability and ability to work in a team (Bühler, in Pöchhacker, 2001).

Service users' criteria are different from interpreters themselves. For instance, in the context of court interpreting, Kadric (2000) surveyed a total of 200 local court judges in Vienna, and she discovered that "interpreting skills" was rated as the most important factor, followed by "linguistic and cultural competence", "basic legal knowledge", and "knowledge of court organization and procedure" (Kadric, in Pöchhacker, 2001). However, it is worth mentioning that though both speakers and listeners fall into the category of service users, their expectations toward the role of interpreters are not always the same. In particular, listeners tolerate a greater extent of intervention from interpreters whilst speakers show strong preference for the "ghost role" (i.e. invisibility of interpreters) of interpreters and favor a close rendition of the speakers' words and even mistakes (Kopcynski, 1994, p.195). Nevertheless, the problem with user surveys is that users are highly likely to assess interpreting output based on the standards they know from monolingual communication (Kalina, 2005) where no language conversion is involved compared to SI. The standards from monolingual communication may not be

applicable in the scenario of SI although successful communication is expected to be the sole purpose for both scenarios.

Clients, defined as the individuals or the institutions that pay for interpreters' services, also viewed the criteria differently from the above-mentioned two groups. For example, in courtroom interpreting, clients relate interpreting quality with "smooth facilitation of communication" and also raise additional concerns such as costs and fees (Kadric, 2000, p.126-136). In conference interpreting, a major survey has been undertaken by the Joint Interpreting and Conference Service of the European Commission, the world's largest client of interpreting services. It was not surprising to find that cost and management considerations were added to the list of quality-related concerns in addition to facilitating smooth communication (Kahane, 2000).

2.5.2.2 Experimentation

In addition to survey research, experimental studies on interpreting since the 1960s have also shown a keen interest in the impact of a variety of input parameters (Pöchhacker, 2001). "Many experiments were designed in such a way as to measure the presumably essential parameter of accuracy" (Pöchhacker, 2001, p.418). For example, error counts (Barik, 1971), scores of "informativeness" and "comprehensibility" (Gerver, 1971), and a number of types of propositional or verbal accuracy scores (Mackintosh, 1983; Tommola & Lindholm, 1995; Lee, 1999a) and even acoustic synchronicity patterns (Lee, 1999b; Yagi, 1999) were all used to measure interpreting accuracy. Still, some scholars have questioned whether the parameter of accuracy can really reflect interpreting quality as a whole given that "scoreable textual parameters" reveal only a certain aspect of interpreting quality (Pöchhacker, 2001, p.418). As stated by Gile, "...while there may be intersubjective agreement on large differences in interpretation quality, at more subtle levels, the interpreting research community is still groping in the dark and has not found a valid, sensitive and reliable metric to measure interpreting performance" (Gile, in Niska, 1999, p.120).

Therefore, one way of overcoming the methodological limitations of conventional

experiments is accepting and viewing quality not as the dependent but as the experimental input variable (Pöchhacker, 2001, p.418). For example, such an approach was pioneered by Berk-Seligson (1988) in the scenario of court interpreting. She presented a group of mock jurors with two stylistically different versions of a court interpreter's renditions of witness testimony and was able to show that variations in register (politeness) significantly affected the way in which listeners perceived and judged the original speaker's credibility, as a witness in this case (Pöchhacker, 2001, p.418). In addition to the approach of experimentation, corpus-based observation was also used.

2.5.2.3 Corpus-based observation

Compared with the volume of work done on the basis of surveys and experiments, the literature on interpreting quality contains few corpus-based observational studies (Pöchhacker, 2001). For instance, Cokely (1992) analyzed "interpreting miscues" in a corpus of ten authentic sign language interpretations in the context of conference interpreting. Pöchhacker (1994) described quality-related properties of the text surface such as interference, hesitation, slips and shifts, along with problems of coherence in five pairs of original speeches and interpretations. Kalina (1998) lists "product analysis" on authentic as well as experimental corpora as the methodological basis of a dozen empirical studies, which includes research on such issues as intonation, interference, errors, and self-corrections.

Nevertheless, these examples of corpus-based observation are subject to the same limitations seen in the experimental studies discussed above, namely, what researchers can gain out of the observation is only one dimension of quality rather than assessing quality as a whole. As a result, there is a distinct awareness that observational studies on the basis of authentic textual corpora alone will not be sufficient to complete the task of evaluating quality in concrete communicative interactions (Pöchhacker, 2001). Does this suggest case study may be a better option?

2.5.2.4 Case study

By definition, case study lends itself to the combination of various observational techniques (Robson, 1993, p.5). If interpreting quality is deemed as a “multidimensional socio-psychological and textual phenomenon within a specific situational context of interaction, the observational study of quality is arguably best served by methods that allow researchers to collect a maximum of information on a single case” (Pöchhacker, 2001, p.420). For research on interpreting quality, the design of case study would suggest the combination of corpus-based observation, survey research (interviews included), participant observation, and documentary analysis in order to maintain a more holistic view of quality at the levels of intended effect and successful interaction (Pöchhacker, 2001, p.420). This approach was adopted by Gile and others (Gile, 1990; Marrone, 1993; Pöchhacker, 1994; Wadensjö, 1998) in the 1990s in search of what interpreting quality consists of. Of all the case studies devoted to interpreting research in search of quality, Wadensjö’s (1998) work has been the most successful by avoiding discussing her data in terms of quality but rather in terms of the prospects of applying her methodological approach to “the whole issue of evaluating interpreters’ professional skills.” (Wadensjö, 1998, p.286). While it may be challenging to present a holistic view of what consists of interpreting quality and the aims and criteria used for assessing interpreting quality may vary from one model to another, Wadensjö’s notion of evaluating interpreters’ professional skills is compatible with and will be adopted in the current study for investigating how trainee interpreters utilize spoken particles in their renditions. By evaluating trainee interpreters’ skills in using spoken particles and the effects on the renditions over the course of interpreting, the possibility of failing to present interpreting quality as a whole could be reduced.

2.5.3 Quality: a common ground

Throughout 2.5.1 and 2.5.2, there have been a variety of perspectives and empirical approaches proposed in search of quality in interpreting. Unfortunately, there have also been outstanding issues that prevent interpreting researchers from presenting a holistic view of quality. These outstanding issues are many (Pöchhacker, 2001, p.422):

the difficulty of obtaining a sufficient number of responses to surveys among

users, the obtrusiveness of interactive data collection for studying a phenomenon that is often expected to be 'invisible' in the client's communicative event, the problem of contextual bias when abstract expectations are studied within concrete interpreted events, the delicate issue of observing and evaluating the work of (fellow) professionals, limited access to professional subjects for experimental or simulation studies, and the lack of a single product parameter for use as a reliable indicator of quality

These issues all stand in the way of empirical research on establishing agreed and universal assessment models which researchers can go on to apply.

However, there are at least some agreed standards or indicators within academia when one is considering quality in interpreting: accuracy and clarity (fidelity), equivalent effect, and communicative interaction (Pöchhacker, 2001). According to Gile (1991), accuracy and clarity is associated with product-oriented perspective and focuses primarily on the interpretation or target-text as a "faithful image" (Gile, 1991, p.198) or "exact and faithful reproduction" (Jones, 1998, p.5). The notion of clarity in this criterion is more listener-oriented, referring to the target-text comprehensibility on the part of listeners (Pöchhacker, 2001). Meanwhile, given that interpreters are expected to "represent fully" the original speaker and his/her interest and intentions (Gile, 1991, p.198), Déjean Le Féal (1990) formulated the criterion of "equivalent effect" (Déjean Le Féal, 1990, p.155). As Gile (1991) put it, quality essentially means "successful communication" among the interacting parties in a particular context of interaction (Gile, 1991, p.193ff), hence the criterion of communicative interaction (see also Wadensjö, 1998, p.21ff).

2.5.4 Interpreting assessment in the present study

In the current research, with limited participant numbers from a group of trainee interpreters, focusing on the use of spoken particles, a qualitative study with the use of multi-strategy approach is more suited to make the most of the data. Having pointed out the empirical approaches the current study is taking, what are the criteria to be adopted in the current study to assess interpreters' performance?

2.5.4.1 Assessing interpreting: the assessment model

The current study is going to adopt the assessment model developed by Liu et al. (2007), whose model focused on two aspects of interpreting quality, namely, faithfulness (accuracy) and fluency (coherence). However, given that the use of spoken particles is directly associated with coherence by the provision of contextual coordinates (Schiffrin, 1987) and therefore fluency of a text, it would be stretching to investigate the effect of using spoken particles from the perspective of influencing accuracy. Therefore, the present study will be examining only how the use of spoken particles may influence fluency, adopting Liu et al.s' model as shown in table 2-4. Apart from fluency, as stated earlier in 2.1.2, the use of spoken particles in discourse serves certain pragmatic functions to reach the goal of communication which bear close relevance to interpersonal relations. Therefore, in terms of pragmatic functions, the present study also looks at the many possible discourse functions a given surveyed particle can provide in a given text in order to reach the goal of communication. These pragmatic functions can be identified with the use of listener surveys, which will be illustrated in detail as part of the multi-strategy approaches in 3.3.5.7.

Assessment of Fluency from English to Chinese	
5	The rendition is very clear and coherent in meaning, with very rare inappropriate use of language, wordings, and grammar. The expression of the rendition flows well, with almost no hesitations, repetitions, or fillers observed.
4	The rendition is generally comprehensible with coherence in meaning and very minimal inappropriate use of language, wordings and grammar. Though minimal errors can be observed, the expression of the rendition is overall smooth, with a minimum of hesitations, repetitions, or fillers.
3	The rendition is overall understandable with occasional inconsistent flow in coherence. There are numerous errors or inappropriate use of wordings and grammar. The expression of the rendition is not smooth with numerous hesitations, repetitions, or fillers.
2	Upon hearing the rendition, its meaning is difficult to understand; however, one is still able to manage to guess the content.
1	The rendition is on average incomprehensible. One is unable to guess the gist of the original passage.

Table 2-4 Criteria for Interpreting Assessment

2.5.5 Summary

Throughout 2.5, a variety of perspectives and empirical approaches to defining interpreting quality in academia over the years have been reviewed. Given the outstanding issues yet to be overcome as discussed in 2.5.3, the current research chose to focus on one aspect of interpreting quality, namely, fluency in SI, to investigate how student interpreters utilize spoken particles that may possibly influence interpreting performance. Although this may indicate that the results of the present study are unlikely to be generalizable to all interpreting scenarios, it is particularly suited to the teaching of interpreting strategies, in particular the addition of spoken particles as part of reformulation strategies, for example, to what extent a given particle can enhance fluency and its pragmatic functions in the scenario of SI. Next in Chapter 3, the overall research design and methodology of the present study is explained.

Chapter 3. Methodology

The many variables that may interact in the scenario of SI pose challenges to methodology. In particular, over the course of studying language phenomena, many factors can play a role in contributing to a certain language phenomenon. Therefore, a researcher has to choose a focus and a strategy tailored to his/her study. The present study aims to describe and investigate the use of spoken particles by trainee interpreters using text-based examples. To find a suitable methodology for the present study, this chapter starts by asking the three research questions set out in the first chapter to refresh the reader's memory.

The first question is *How different is the frequency of use of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* By asking this question, the present study attempts to determine whether the frequency of discourse particles in English-to-Chinese SI is different from Chinese SP and provide explanations for any difference in frequency observed. The second question is *How different are the discourse functions of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* The third research question is *To what extent does the use of discourse particles impact fluency in English-to-Chinese simultaneous interpreting and Chinese spontaneous speech?* As stated in the second chapter, the use of particles has to do with discourse management regarding listeners' perceptions. By asking this question, the present study attempts to describe the effect of individual particles on text-based speech segments based on listeners' perceptions. With the three research questions in mind, the research design of the present study is presented below in 3.1.

3.1 Research Design

Investigating the use of spoken particles by trainee interpreters based on text analysis within the framework of pragmatics requires a number of approaches such as the collection of corpora, interviews, and listener surveys to better understand how spoken

particles are used as a language phenomenon in both SP and SI. The present study starts with the pilot study to identify if there is a difference in the use of spoken particles in SI from SP. Following the identification of the difference in the pilot study, the main study is conducted to see firstly, if the tendency of using spoken particles across the two scenarios is consistent with that of the pilot study, and, adding to that, to locate frequently used particles across the two scenarios for comparison. This requires the collection of two corpora in order to compare, namely the corpus for Chinese SP and the corpus for English-to-Chinese SI through interviews and mock-conference respectively.

Secondly, in order to know more about the discourse roles of the surveyed particles in the text-based examples regarding discourse management, the discourse roles of the surveyed particles are examined using semantic parsing, an automatic process in which the surveyed particle will be assigned meaning through which its discourse function is established by inputting the text for analysis. This provides the present study with a basis for pragmatic functions of the surveyed particles in the given text to be investigated. The meaning and discourse role identified by the semantic parser will also serve as a basis for comparison at a later stage in identifying DMs together with the use of a variety of criteria and listener surveys.

Thirdly, to investigate the effects of using spoken particles in SP and SI, namely, how they affect discourse and fluency with the discourse functions they assume, listener surveys are employed as the primary assessment tool to rate the fluency and discourse functions of the surveyed particles. Though the notion of comparing different corpora and parsing in the present study is inspired by and based on Setton's model (see 2.2.2.1), the focus of the present study is different, leading to different approaches within the current framework. This section describes the research design of both the pilot study and the main study.

3.2 Pilot Study

A small-scale piece of research was conducted as a pilot study for the current research

to find out preliminary differences between SP and SI in the use of discourse particles. The reason why a pilot study was conducted was to know if discourse particles are used differently in the scenario of SI. The methods adopted in the current research could (i) help identify any such differences, and (ii) investigate what effects such differences may have on trainee interpreters' performance, in particular from the point of view of fluency and discourse functions. The pilot study was also a testing bed to investigate the use of discourse particles in SI, as SI is a form of communication extremely different from spontaneous speech. In 3.2.1, the procedures of the pilot study are explained.

3.2.1 Procedures of the pilot study

Two corpora were used for analysis in the pilot study. The first was retrieved from the ready-made interpreting archive of the interpreting program of National Changhua University of Education (NCUE), Taiwan, and was composed of recordings from five final-year trainee interpreters who were interpreting during their professional exam. This is an exam that all interpreting students at NCUE have to take before they graduate, to find out which area or discipline is more suited to their own interest and to prepare the students to enter the market. The reason for including final-year trainee interpreters as participants in the pilot study is because it is assumed that they have received complete training in terms of both theories and skills, which in turn can enhance the validity of their performance. The five participants were coded A to E. The speech they were tackling was an excerpt on environmental protection no longer than fifteen minutes, with a speech rate of 110 words per minute. As suggested by Seleskovitch (1978) in an empirical study, the ideal rate for interpreting is 120 words per minute, so this should rule out any negative effect of fast speech rate on trainee interpreters' performance. All the recordings were completed in standard interpreting suites and collected to form the corpus.

Following this, the second corpus was retrieved from research findings by Liu (2009), who discovered that in Chinese discourse or SP, conjunctions are used very frequently, much more frequently than other types of Chinese discourse particles. Hence, Liu's work was exploited to form the second corpus, the corpus for Chinese SP. However,

given that Liu's work was conducted in Mainland China with small selection of particles, there is a risk that the regional differences in language use between Mainland China and Taiwan could undermine the validity of the two corpora. The "word sketch engine", a UK-based online linguistic database containing numerous corpora in different languages, was therefore used to enhance validity. Selecting spoken Taiwanese Mandarin in the database, it also suggested that conjunctions are used much more frequently than other types of particles on a per-million-word basis. So, having retrieved the two corpora ready for comparison, 3.2.2 presents data analysis and the findings of the pilot study.

3.2.2 Data analysis and findings of the pilot study

Considering that Liu's work had already suggested which type of discourse particle is used most frequently in Chinese SP, with ready-made results, the data collected from the corpus for SI were transcribed and analyzed to find out if the type of discourse particles most frequently used in SI was different from SP to form the core of the pilot study. The results of the pilot study are discussed below in 3.2.2.1. The use of discourse particles in SI in terms of frequency are summarized with a focus on how this connects to the main study.

3.2.2.1 Results on the use of discourse particles in SI: frequency

The results of the use of discourse particles in SI are presented in table 3-1. Among all the fourteen surveyed particles, it is evident that the most frequently utilized discourse particles by trainee interpreters in the pilot study were *Zhexie* (these), followed by *Lai*, *Zhe*, *Zhege*, and *Suoyi* as indicated in figure 3-1. The reason for singling out the top five most frequently utilized particles was because they on average appeared almost once per thousand words or more. Among the top five most frequently utilized particles in SI in the pilot study, *Zhexie* (these) as a determiner ranked top in terms of frequency. In addition, three out of the top five most frequently utilized particles in SI in the pilot study were determiners, namely, *Zhexie* (these), *Zhe*, and *Zhege*. Although *Lai* ranked second, it belongs to neither of these categories (i.e. conjunctions or determiners) as it is often used as a deictic in SP. It will nevertheless be interesting to identify the

discourse function of *Lai* in SI in the main study to understand why it was used by trainee interpreters so frequently in the pilot study. *Suoyi*, as a conjunction, only ranked fifth in SI in the pilot study. To summarise, it can be said that in SI, determiners are used more frequently than conjunctions, unlike in spontaneous speech. This confirms that the use of discourse particles in SI is a worthwhile subject of in depth analysis in the main study, in terms of both frequency and more importantly, discourse functions.

Participants	A	B	C	D	E	TOTAL	AVG.
Particles							
<i>Zhexie</i> (these)	4.7	9.9	0.9	7.0	7.5	30.0	6.0
<i>Lai</i> (come)	1.7	1.6	6.6	8.3	3.0	21.2	4.2
<i>Zhe</i> (in this case)	1.7	3.3	7.9	1.8	3.0	17.7	3.5
<i>Zhege</i> (this)	1.7	0.8	1.8	4.3	1.5	10.1	2.0
<i>Suoyi</i> (so)	1.7	0	1.8	0	1.5	5.0	1.0
<i>Jiushi</i> (precisely be)	0	0.8	1.3	0.6	0.4	3.1	0.6
<i>Erqie</i> (moreover)	0	0	1.3	0.9	0	2.2	0.44
<i>Na</i> (in that case)	0.4	0.4	0	0.9	0.4	2.1	0.42
<i>Naxie</i> (those)	0.4	0	0.9	0	0.8	2.1	0.42
<i>Qu</i> (go)	0	0	0	1.5	0	1.5	0.30
<i>Qishi</i> (actually)	0	0	0	0	0.8	0.8	0.16
<i>Sheme</i> (something)	0	0.4	0	0	0	0.4	0.08
<i>Nage</i> (that)	0.4	0	0	0	0	0.4	0.08
<i>Ranhou</i> (then)	0.4	0	0	0	0	0.4	0.08

Table 3-1 Frequency Ranking in SI (occurrences per thousand words)

The results of the pilot study confirmed that the frequency of discourse particles in English-to-Chinese SI is different from Chinese SP, in response to the first research question. However, in the pilot study, it remained unknown (i) what caused the difference in frequency, namely that more determiners were observed in SI rather than conjunctions and (ii) how this difference would affect trainee interpreters' performance. For example, is it likely that with the use of more determiners in the renditions, trainee

interpreters were able to enhance the fluency of their renditions? (iii) what discourse functions do these particles assume? All these unaddressed issues in the pilot study are now for the main study to research and address in depth.

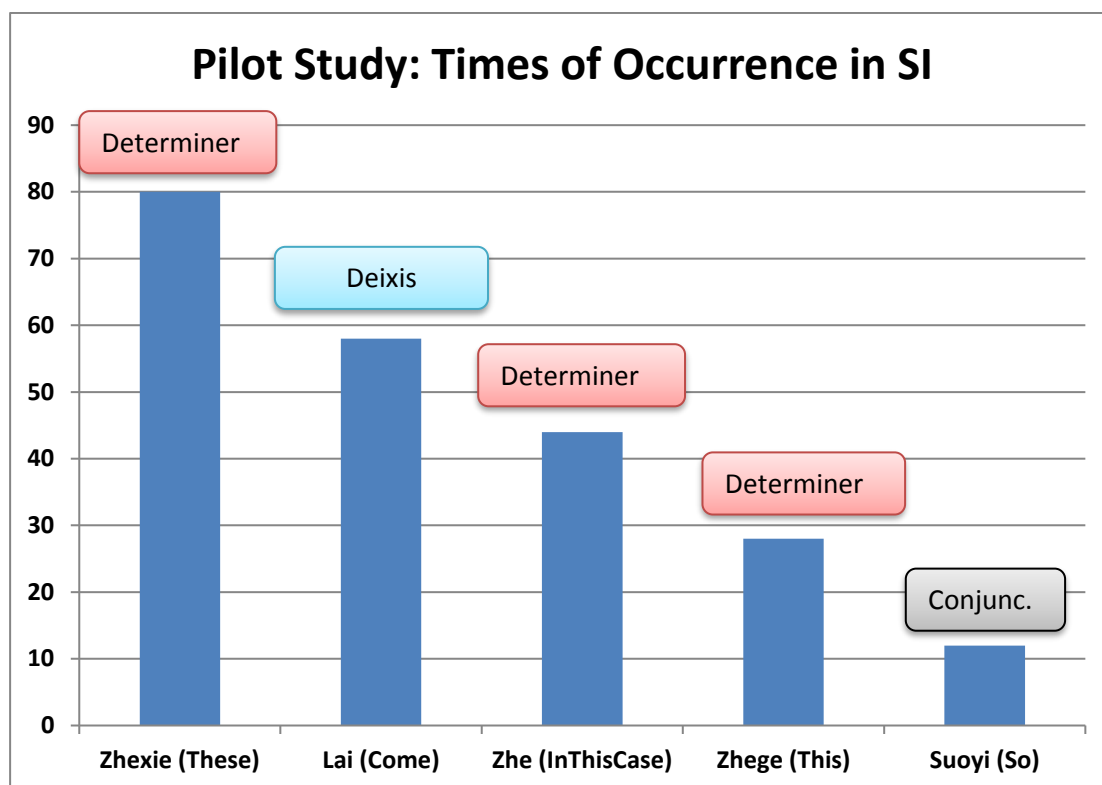


Figure 3-1 Top 5 Most Frequently Used Particles in SI

3.3 Main Study

The procedures of the pilot study were improved and used in the main study. The main study was conducted in the form of both interviews and a simulated interpreting conference (mock-conference), with an attempt to create two corpora, namely, a corpus of Chinese SP and a corpus of English-to-Chinese SI respectively, similar to the procedures in the pilot study. To tackle the issues unaddressed in the pilot study more effectively and thoroughly, the procedures of the main study were improved, based on the research design stated in 3.1. This section presents the characteristics of the participants (3.3.1), instruments (3.3.2), data recordings, storage, and transcribing (3.3.3), procedures of the main study (3.3.4), and the approaches to data analysis (3.3.5).

3.3.1 Participants

In the main study, seven stage two trainee interpreters were recruited as participants with the aim of creating a corpus for later use. They are all native speakers of Chinese from Mainland China. Unlike the pilot study, recruiting only participants from Mainland China only in the main study enhances the consistency of language use. All the participants met the criteria for English proficiency regulated by the translating and interpreting program of Newcastle University. Specifically, all participants scored at least seven out of nine in IELTS (International English Language Testing System, a world-wide standardized test for international students who want to study in the commonwealth) overall band score, and speaking and listening sections. They were coded A to G. They participated in both the interviews and the simulated interpreting conference where the linguistic data for the two scenarios were recorded, transcribed, and analyzed. In 3.3.2, the instruments used in the main study to collect data are described.

3.3.2 Instruments

In order to create the corpora for Chinese SP and English-to-Chinese SI, both the questionnaire and the mock-conference were exploited as instruments for the main study. The questionnaire for the interviews (see Appendix A) was designed to collect data in a natural environment suitable for the participants to talk and to share their experiences as much as possible. The questions covered such general issues as study experience at Newcastle University, favorite food, and travel experience in the UK, to create favorable conditions to collect data on the use of discourse particles in a monolingual and spontaneous setting in Mandarin Chinese. As for the mock-conference, it was conducted in a simulated scene similar to where international conferences are held with interpreting services. That is, interpreters work in interpreting suites with their renditions recorded and received by service users in the audience. All interviews with the participants and the content of the mock-conference were recorded and transcribed into texts, as detailed in section 3.3.3.

3.3.3 Data recordings, storage, and transcribing

For both the interviews and the simulated interpreting conference, all the data were recorded in digital audio/video files, stored, and transcribed for analysis. For the interviews, the output of both the interviewer and the interviewees were recorded, but only the output of the interviewees, namely the participants, was transcribed and analyzed. For the simulated interpreting conference, both the original speeches and the renditions by trainee interpreters were recorded as video files and transcribed into texts for analysis. In the following section, 3.3.4, the procedures of the main study are illustrated.

3.3.4 Procedures of the main study

The main study was composed of two corpora collected from interviews and a simulated interpreting conference for comparison, whose procedures were similar to those in the pilot study but on a larger scale. For the interviews with individual participants, the role of the researcher was to provide questions for the interviewees to answer. The simulated interpreting conference is part of the formal training modules for all interpreting students at Newcastle University and is held on an annual basis, which means that there is always an interpreting archive available for research purposes. The details of the procedures of the interviews and the simulated interpreting conference are illustrated in 3.3.4.1 and 3.3.4.2 separately.

3.3.4.1 Procedures of the interviews

For the interviews, the length of each session was regulated at fifteen minutes. All the contents were recorded in the form of digital audio. Before each session began, the researcher as the interviewer briefed the interviewee about the task the interviewee was about to undertake, which was very simple - try to talk as much as possible in the way in which they usually chat with friends. Each of the seven interviewees was asked six questions, ranging from their university life at Newcastle University to their travel experience either in or outside the UK. The aim was to relate the questions to their own experience so that they would find it easier to share with the interviewer and talk as much as possible. The contents of all the interviews were recorded and transcribed into texts for analysis.

3.3.4.2 Procedures of the simulated interpreting conference

As part of the formal training modules for all interpreting students at Newcastle University, a simulated interpreting conference is held on an annual basis. As the name suggests, a simulated interpreting conference is to create an environment as similar as possible to real international conferences at which an interpreting service is provided. All seven participants were given sufficient time to prepare for the English speech sessions to be interpreted into Chinese. When each session began, participants interpreted from English to Chinese in the interpreting suites as the speaker gave a talk, with their renditions being recorded in video files via the microphone, the computer, and the camcorder wired into individual suites to be stored and collected afterwards. It should be noted that SI by its nature is an extremely energy-consuming task, which is why in most cases, there are two interpreters working as a team in one interpreting suite so that they can switch whenever needed. This pattern also applies to the simulated interpreting conference. After each session came to an end, the recorded video files were collected by the researcher to be transcribed into texts for analysis. In 3.3.5, approaches to data analysis in the main study are illustrated.

3.3.5 Investigating discourse particles: a multi-strategy approach

All the data collected in the main study were analyzed in terms of frequency and meaning, followed by the assessment at the end to investigate the pragmatic functions of candidate discourse particles in the scenario of both SP and SI, to assess what discourse functions they assumed and the effects they had on the oral output. The results of the main study on the use of discourse particles were divided into two parts, to be discussed in the scenario of SP and in SI in the fourth and fifth chapter respectively. In both scenarios, the target particles were analyzed and compared in terms of frequency, fluency, and discourse functions to identify any differences across the two scenarios. To achieve this, one single approach is far from adequate. Therefore, the approaches to data analysis in the main study are multi-strategy in nature, using as a basis Setton's (1999) model (see 2.2.2). Though Setton's model for comparing input structures between German and Chinese provided inspiration for the current study in terms of data analysis, the aim of the current study is different. In particular, the

current study attaches more importance to fluency and discourse functions than syntax. This explains why the current research is taking mixed approaches to data analysis, since Setton's model does not include fluency or discourse functions. These approaches include frequency count (3.3.5.1), parsing (3.3.5.2), meaning reduction (3.3.5.3) canonical forms (3.3.5.4), Schiffrin's model (3.3.5.5), prosodic features (3.3.5.6), and listener survey (3.3.5.7) for fluency rating and identifying discourse functions, most of whose rationales have been explained in detail in the literature review. The mixed approaches to data analysis begin with frequency count, to be explained in 3.3.5.1.

3.3.5.1 Frequency count

The data collected from both SP and SI were first analyzed by frequency to identify the most frequently used candidate particles in the two scenarios to compare and analyze their discourse functions later on. The adoption of this approach is aimed at identifying and comparing the frequency of spoken particles between the two scenarios in response to the first research question, in more depth than the pilot study in which determiners were found to be used more frequently in English-Chinese SI rather than conjunctions in Chinese SP. It is expected that the same tendency should appear in the main study. To conduct frequency count, the software "Babel Pad", which can locate, calculate, and replace any targeted particles with different codes in the texts (i.e. transcriptions), was used to run frequency count whilst avoiding human errors in calculating.

3.3.5.2 Parsing

Following the frequency count, which attempted to identify frequently utilized particles in SP and in SI respectively for further analysis, parsing was then used to analyze and compare the discourse roles of the candidate particles based on the assigned meaning by the parser in both scenarios. The results of parsing will also serve as a basis for meaning investigation to distinguish potential DMs from regular particles with the help of a variety of adopted criteria and the listener survey at a later stage. This approach provides a starting point from which the present study can gain preliminary insight into the pragmatic function of a given particle in text-based discourse regarding discourse

management, in response to the second research question.

The Chinese semantic parser adopted in the current study was developed by the Chinese Knowledge Information Processing Group (CKIP), a Taiwan-based research group under the Academia Sinica. CKIP's parser is an exploratory tool for researching the language functions of spoken particles. It provides easier access to understanding of the possible discourse functions one particle could assume in a given text. Nonetheless, the semantic parser has its limits in surveying discourse particles, such as the fact that it only deals with written texts and that verbal linguistic features such as hesitation or pauses cannot be input into the parser. This constrains the scope of the results by the parser, which makes other approaches crucial in expanding the scope. There is no difference between Mainlanders' and Taiwanese Mandarin using this parser as it simply analyses what is inputted both syntactically and semantically, with the latter being the focus of the current study. When inputting texts into the parser, either a comma or a period can be used to set boundaries between each sentence, and no punctuation is needed within each sentence. In deciding whether a comma or a period is needed or not in inputting texts into the parser, it is mainly judged by both the length of the pause and the tone of the speaker in the oral data. This semantic parser contains sixty semantic categories (see Appendix B) to analyze the discourse role of a given particle in a given text.

While at first glance, it may seem effortless to analyze the discourse role of a given particle by relying on the semantic parser, it, admittedly, has its limits. For example, the parser is unable to tell directly whether a particular particle in a given position is used as a discourse marker (DM) or not, because the discourse roles proposed by the parser are propositional. Although the reports by the parser serve as a basis for comparing the discourse roles of the surveyed particles, it is unable to assess how the use of a particular particle could affect the oral output, for example fluency, which is why the current study needs other approaches to help locate DMs.

Despite the convenience the parser can offer, locating DMs is not one of them.

Therefore, in the following sections from 3.3.5.3 to 3.3.5.7, the approaches adopted are all used as indicators aimed at helping distinguish DMs from regular particles, which is expected to shed more light on using DMs to manage discourse and also on the influence of DMs on fluency in response to the third research question.

3.3.5.3 Meaning reduction

Xu's work (2008) pointed out that for Chinese discourse particles to be used as DMs in Chinese discourse, most of them have undergone reductions in their propositional meanings (Xu, 2008). In other words, when discourse particles are used as DMs, they assume pragmatic functions which bear relevance to social and interpersonal relationships such as opening up a new topic, shifting the topic, and signal of turn-taking. Many Chinese studies on DMs have held the same perspectives (Yao, 2012; Wu, 2012; Liu, 2009). Semantically, meaning reduction can therefore serve as an indicator of which candidate particles are being used as DMs in order to see what pragmatic functions they assume. Given the many features DMs could represent, in addition to meaning reduction, Fraser (1999) argues that, syntactically, DMs tend to occur in the initial position in a discourse segment, which helps the current research to delve further into investigating potential DMs, to be detailed below.

3.3.5.4 Canonical forms

In Fraser's work (1999), he proposed the canonical forms to identify potential DMs from discourse particles. In particular, he proposed that DMs tend to occur in the segment-initial position in discourse in the form of either $S1 \cdot DM + S2$ or $S1 \circ DM + S2$. Fraser's work was proposed with an attempt to locate English DMs in English discourse. To the best of my knowledge, the idea of the canonical forms put forward by Fraser has not been put to the test yet in Chinese studies on DMs, let alone in the scenario of SI. However, using the canonical forms in the current study may help address the issue that the parser is unable to differentiate potential DMs in the texts and provide an easier and quicker way of singling out potential DMs from the surveyed particles. Furthermore, Fraser also argues that DMs should be syntactically optional, meaning that their removal does not affect the understanding of the text. In addition to Fraser's

work, Schiffrin (1987) proposed that, syntactically, DMs should also bracket units of talk, to be illustrated below.

3.3.5.5 Schiffrin's model

In 2.1, Schiffrin pointed out that DMs should bracket units of talk in discourse. Each unit of talk should encode a complete message. Bracketing units of talk is achieved by relating different units of talk to a different degree in terms of the contextual coordinates a given DM provides in the text, not necessarily through making a visible mark between each unit. This can also serve as a criterion for examining potential DMs. However, the above mentioned approaches such as parsing, canonical forms, and bracketing units of talks can be regarded as the conventional method of discourse analysis, namely, by analyzing discourse in the form of written texts. Discourse analysis in the form of written texts would not be able to account for verbal phenomena such as prosody to truly reflect language use in the real world. This leads to the inclusion of temporal relations and prosody as additional examining criteria in the present study, to be illustrated below.

3.3.5.6 Temporal relations and prosody

Previous studies (Tseng et al., 2006; Xu, 2008; Yang, 1996) have shown that duration and prosody play a significant role in determining the discourse functions of spoken particles. As pointed out by Yang (1996, p.441):

The variations of intonational shapes in discourse are a forceful expression of the continual changes in the cognitive and emotional states of speakers. These shapes are of key significance in communicating the emotional, relational, and judgmental meaning which accompanies the presentation of semantic content.

Duration is also a significant indicator to account for the occurrence of fillers concerning how they affect the perception of a speech segment or of the role of a spoken particle in the segment. The discourse roles of spoken particles can be subject to whether the particle is stressed or not, or if the particle is lengthened in its pronunciation. In

particular, intonational shapes and variations have been proved to be of significance in discourse management from topic organization and discourse interactional organization, to managing emotions (Yang, 1996). Therefore, adding to analyzing the transcript, investigating the surveyed particles based on prosodic features allows the present study to delve further into how discourse particles are utilized in order to be a step closer to reflecting human language use in the real world and to discover possible linguistic elements overlooked by text analysis in written form in determining the discourse functions of the surveyed particles. Given that no single feature can be said to serve as the determining criterion for defining DMs, the present study employs listener surveys as the final assessment tool for identifying the discourse functions of the surveyed particles and investigating the effects they have on oral output.

3.3.5.7 Assessment: listener surveys

The task of the listener surveys (see Appendix C) is aimed firstly at fluency rating (3.3.5.7.1) and secondly at identifying the discourse functions of the surveyed particles (3.3.5.7.2). The former serves to answer the third research question whilst the latter serves to answer the second research question. In the listener surveys, 19 participants were recruited. They were all native Chinese speakers from Mainland China. All of them received bachelor degrees in China and were then studying at Newcastle University in a variety of programs at postgraduate level ranging from TESOL, translation and interpreting, linguistics, engineering, to accounting. In general, they had higher English language proficiency level that allowed them to study at Newcastle University at postgraduate level. Among them, 11 were stage two trainee interpreters and 8 were from non-interpreting backgrounds. By dividing the listeners into two groups, namely, one with prior exposure to interpreter training and one without it, the current study will be able to compare the difference across the two groups in perceiving the use of discourse particles in addition to investigating fluency and discourse functions.

3.3.5.7.1 Fluency rating

To investigate to what extent the use of discourse particles can affect fluency in both Chinese SP and English-to-Chinese SI, fluency rating is adopted. This approach follows

that of Macías (2006), who probed quality criteria in SI through listener surveys. Admittedly, the term fluency lacks a generally accepted definition (Guillot, 1999). However, some studies have pointed out what can be regarded as the parameters for fluency, such as hesitations and repetitions (Nation, 1989) or pauses (Macías, 2006). Using these as a basis, the current study employs the model for assessing fluency put forward by Liu et al. (2007) as shown in table 2-4, whose model encompasses the practice of hesitations, repetitions, and fillers on rating fluency on a range from 1 to 5 (1 = the surveyed particle played no role in enhancing fluency, 5 = the surveyed particle played a significant role in enhancing fluency). Both groups in the listener surveys based their ratings on this adopted model to assess to what extent the surveyed particle plays a role in influencing fluency of a speech segment. The data were then analyzed to obtain descriptive statistics and tested with SPSS Version 22. Considering the number of variables and the scale of the data, One-Way-Anova was used to measure differences in fluency rating across the two answer groups.

3.3.5.7.2 Identifying discourse functions

In addition to fluency rating, the second part of the listener surveys aims to identify discourse functions from the perspectives of human language users. As mentioned earlier, given that the parser is an exploratory tool in identifying the discourse roles of the surveyed particles and that it deals with written texts only, it is highly likely that human listeners will be able to identify discourse roles absent in the parser. Therefore, for each of the surveyed particles, participants are given a number of potential discourse functions to choose from for each question, known as multiple response survey. The number of possible selections contained in each question or for each surveyed particle differs from one to another. For example, on surveying the particle of *Haoxiang*, three possible selections are provided for the participants to choose from, that is, (i) epistemics, as reported by the parser, (ii) to make the speaker's utterance less subjective, based on existing literature, and (iii) meaningless filler. On surveying the particle of *Na*, four selections were given, namely, (i) evaluation, as reported by the parser, (ii) topic shift as reported in existing literature, (iii) adding new information based on existing literature, and (iv) meaningless filler. In short, the number of

selections contained in each question or for each surveyed particle, is determined by the number of discourse roles identified by the parser and the number of discourse functions proposed by previous studies, in addition to one selection of filler. All 37 of the questions abide by this pattern. However, participants are given the choice to add in any discourse functions they think the surveyed particles assume in a given text which are not present in the selections provided. More details regarding the analysis and the results with the use of the parser and listener surveys are provided from Chapter 4 to Chapter 6. Next chapter presents the analysis of the results regarding use of discourse particles in Chinese SP.

Chapter 4. Analysis of Use of Discourse Particles in Chinese Spontaneous Speech

This chapter addresses the frequency of discourse particles in Chinese spontaneous speech (SP) in response to the first research question, *How different is the frequency of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* and the discourse roles of the surveyed particles in response to the second research question, *How different are the discourse functions of the discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* The findings in this chapter will then be compared with the findings in the scenario of English-to-Chinese SI as the research proceeds.

Seven stage two trainee interpreters whose first language is Chinese took part in the main study as participants. To assess how discourse particles are used in SP and if the results of the main study are consistent with the finding in the pilot study that conjunctions are used most frequently in Chinese SP, the seven participants took part in interviews where the SP data was collected and analyzed. The first section of this chapter presents frequency analysis with regard to how candidate particles were screened in the current study. 4.2 states the general trend in use of discourse particles in SP by participants. 4.3 presents the qualitative analysis and results of the discourse roles the surveyed particles assume as reported by the parser. 4.4 is the summary of the findings of this chapter.

4.1 Screening Candidate Particles

In considering what particles should be investigated in terms of frequency, the main criterion was based on the study by Liu (2009), who selected lexical units that have been studied previously with established discourse functions. The reason for doing so is because, in the current study, the attempt to identify the discourse roles of the surveyed particles with the use of CKIP's semantic parser is exploratory, as stated earlier in the third chapter. Therefore, by surveying particles with more established

discourse functions, during listener surveys, listeners will be provided with more discourse functions to choose from as human language users, thus yielding more room for discussion in analyzing and reporting the results of listener surveys and also examining discourse functions absent in the parser. In this chapter, the selection and the presentation of the text-based examples is based on the discourse roles that have been identified by the parser. That is, the examples demonstrated in this chapter have included all the discourse roles of the surveyed particles in the data identified by the parser. With the use of the semantic parser and listener surveys, the current study will be able to expand the repertoire of the discourse functions of the surveyed particles.

Based on Liu's (2009) model in which a total of fourteen particles were surveyed to identify their discourse functions, the current study also surveyed fourteen particles similar but not identical to Liu's in terms of frequency. Among them, four were conjunctions, *Ranhou*, *Jiushi*, *Suoyi* ('so'), *Erqie* ('moreover'). Four were adverbs, *Qishi* ('actually'), *Jushishuo* ('that is to say'), *Fanzheng* ('anyway'), and *Haoxiang* ('seem'). Four were determiners, *Nage*, *Zhege*, *Na* ('in that case'), and *Zhe* ('in this case'). Two were deixis, *Lai* ('come') and *Qu* ('go'). These particles have been studied by Mandarin scholars, giving generally-acknowledged discourse functions to examine against the results as reported by the parser (Wang, 1998; Biq, 2001; Cui, 2008; Xu, 2008; Yao, 2009; Yao & Yao, 2012; Wu, 2012). Having explained the criterion for how candidate particles were screened for analysis, the next section presents findings on the frequency of discourse particles in SP by reporting the general trend.

4.2 General Trend in Chinese SP

As indicated in table 4-1, the results reveal that conjunctions are used most frequently in Chinese SP, with *Ranhou* and *Jiushi* topping the others and registering an average of 15.1 and 12.6 occurrences per thousand words per person. The particle *Jiushishuo* is used the least in terms of frequency. This finding is consistent with that of the pilot study that in Chinese SP, conjunction is the most frequently utilized type of particle.

Participants \ Particles	A	B	C	D	E	F	G	Total	Avg.
<i>Ranhou</i> (then)	17.7	16.8	13.7	15.8	19.7	9.3	13.1	106.1	15.1
<i>Jiushi</i> (precisely be)	30.1	7.6	11.4	7.2	12.4	7.3	12.2	88.2	12.6
<i>Qu</i> (go)	7.2	13.7	9.1	9.4	8.2	3.4	11.2	62.2	8.8
<i>Nage</i> (that)	9.1	5.3	2.7	9.0	3.6	5.4	7.8	42.9	6.1
<i>Lai</i> (come)	5.2	6.8	6.3	5.8	2.7	10.8	3.9	41.5	5.9
<i>Suoyi</i> (so)	4.5	0.7	3.6	4.0	3.6	2.9	3.4	22.7	3.2
<i>Haoxiang</i> (seem)	1.3	1.5	3.1	1.3	3.2	0	3.4	13.8	1.9
<i>Qishi</i> (actually)	0.6	3.0	2.7	3.1	0.4	0.9	0.9	11.6	1.6
<i>Erqie</i> (moreover)	1.3	0	2.7	3.1	0	1.9	1.9	10.9	1.5
<i>Zhege</i> (this)	0.6	0.7	0.4	2.2	1.3	0.9	0.4	6.5	0.9
<i>Na</i> (in that case)	0	1.5	0	0.9	0	0	0.4	2.8	0.4
<i>Fanzheng</i> (anyway)	1.3	0.7	0	0.4	0.4	0	0	2.8	0.4
<i>Zhe</i> (in this case)	0	0	0.9	0.4	0	0	0.4	1.7	0.2
<i>Jiushishuo</i> (that is to say)	0	0	0	0	0	0	0	0	0

Table 4-1 Frequency of Chinese Discourse Particles in SP
(per 1,000 words)

An interesting phenomenon to note was that among all participants, participant A employed the particle of *Jiushi* much more frequently over the course of their interview, registering 30.1 occurrences per thousand words. Also, compared to the others, participant F seemed to have a more condensed or “clean” output as five out of the fourteen surveyed particles were not observed at all in their utterances. Following the

results based on frequency, section 4.3 reports the analysis and findings by the parser on the use of these discourse particles.

4.3 In Search of Discourse Roles in Chinese SP: Feature-based Analysis

To investigate how candidate discourse particles function in managing speech in Chinese SP and further distinguish DMs within the candidate particles, and given that in the field of DM research, no single feature can be said to determine DMs (Lenk, 1998), a variety of properties should be taken into consideration. As discussed in the previous chapter, these include semantic, syntactic, and pragmatic features. For semantic features, this study mainly utilizes a semantic parser to investigate the discourse role of the surveyed particles to see if they have undergone meaning change or meaning reduction (Xu, 2008), which serves as one criterion in identifying DMs. Put differently, the discourse roles reported by the parser are propositional, and these results are utilized as a basis for investigating whether reductions in the propositional meanings are observed.

For syntactic features, this study mainly exploits Fraser's (1999) canonical forms to investigate the surveyed particles, namely, DMs tend to appear in a segment-initial position. It should be noted that apart from examining the positions where the surveyed particles appear, Fraser (1988) also pointed out that, syntactically, DMs are optional in discourse, which is why Fraser calls them "lexical adjuncts". In other words, the removal of DMs from discourse has very little effect on understanding the utterance. Furthermore, Schiffrin (1987) put forward the notion that DMs bracket units of talk. And particularly, that each unit of talk should encode a complete message. This provides another ground for investigating DMs in terms of their syntactic features.

For pragmatic features, with the help of the semantic parser, this study is able to explore what discourse functions the surveyed particles assume in the given texts to provide contextual coordinates (Schiffrin, 1987) in discourse, by looking at the discourse roles of individual particles in the text identified by the parser.

Apart from the above criteria, given that this study also aims to discover whether the use of the surveyed particles can enhance fluency or not, temporal relationship is employed to gain insight into understanding how the speech segment is perceived with the use of surveyed particles in terms of fluency. To make the most of the temporal relationship and gain insight into the relationship between particles and the temporal relationship, durations of the surveyed particles are reported based on milliseconds. Throughout this study, criteria on assessing fluency are based on Liu et al.'s (2007) model, which was presented in Chapter 3 as the model for assessing fluency. This model examines fluency based on a number of parameters such as hesitations, repetitions, and fillers, which is supported by previous studies (Nation, 1989; Riggensbach, 1991). Another important reason for utilizing this model is because it provides a basis for understanding various degrees of fluency on a scale from 1 to 5, which is also utilized consistently in listener surveys, to be detailed in Chapter 6.

4.3.1 In search of discourse roles using text-based examples

In the current study, fourteen particles were analyzed based on frequency. As stated earlier, the purpose of conducting frequency count was not only to identify the most frequently utilized type of particle in Chinese SP but also to analyze the discourse functions of the surveyed particles, using frequency as a filter. In other words, higher frequencies suggest more patterns in which the candidate particles appear and more discourse roles to be discovered, which will in turn offer more discourse functions to be observed and discussed as this research proceeds. In the end, the main study included those that had an average of more than one occurrence per thousand words per person for qualitative analysis. Therefore in SP, there were a total of nine particles to be surveyed for qualitative analysis to investigate the features described above. The positions where the surveyed particles appear are highlighted in red in the acoustic pattern so that it is easier to investigate their occurrence relative to the context given. These particles include *Ranhou*, *Jiushi*, *Qu*, *Nage*, *Lai*, *Suoyi*, *Haixiang*, *Qishi*, and *Erqie*.

It should be pointed out that in every example to be presented starting with 4.3.2, only one surveyed particle is analyzed and discussed regardless of the fact that other

surveyed particles may occasionally co-occur with the target particle in the example. This is because in the design of listener surveys, each survey question was aimed at examining a single target particle in terms of fluency and discourse functions. Therefore, every given example addresses only one target particle. A comma is marked to indicate a shorter pause. A period is marked to indicate a longer pause. In the examples, (...) shows omitted utterances in that turn by the speaker. The following is the abbreviations of the Mandarin Chinese gloss when there is no lexical English equivalent (Li & Thompson, 1981).

ASSOC	Associative Meaning (de)
BA	Chinese ba Structure
CL	classifier
COMP	comparative
CRS	currently relevant state (le)
CSC	complex stative construction (de)
EXP	experiential aspect (-guo)
GEN	genitive (-de)
NOM	nominalizer (de)
PFV	perfective aspect (-le)
PL	plural
PRT	particle

From section 4.3.2 to 4.3.10, example-based findings on the use of the surveyed particles are presented, starting with the discourse roles of *Ranhou* as reported by the parser.

4.3.2 The discourse roles of *Ranhou*

In the parser, the particle *Ranhou* is categorized as an adverb. Nevertheless, given that the current study is based on Liu's categorization of discourse particles, her categorization is followed, which means *Ranhou* is categorized as a conjunction. It was observed that using the parser, there is only one discourse role for *Ranhou*, which is

time, where its discourse function is to mark the time point at which an event occurred. It appeared in three positions in a given utterance. The first position is: **S1 · Ranhou + S2**, as indicated in Example 1a.

Example 1a:

Chinese Text:

但是就是它裡面還可以學到很多好的用語，然後說話特別幽默。

Romanized and Word-for-word Text:

danshi	jiushi	ta	limian	hai	keyi	xue	dao
but	precisely	be	it	inside	still	can	learn
						go	

hen	duo	hao	de	yongyu
very	many	good	NOM	choice of words

<u>ranhou</u>	shuohua	tebie	youmo
then	speak	especially	humorous

Free Gloss:

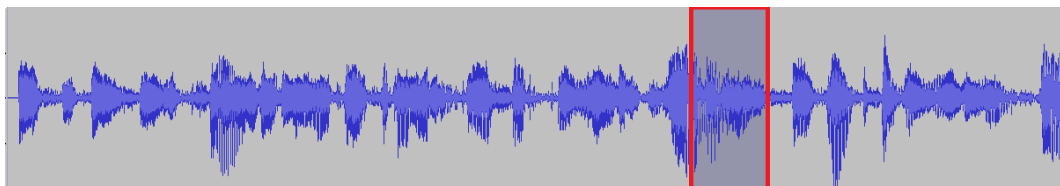
‘But you can learn a lot of good expressions from it, and the talk is particularly humorous.’

Results by the Parser:

S(contrast:Cbca: 但是 |uncondition:Cbba: 就是 |agent:NP(property:Nhaa: 它 |Head:Ncdb: 裡面)|time:Dbab: 還可以 |Head:VC2: 學到 |goal:NP(quantifier:Nega: 很多 |property:V · 的 (head:VH11: 好 |Head:DE: 的))|Head:Nac: 用語))# , (COMMACATEGORY) VP(time:Dd: 然後 |Head:VA4: 說話 |complement:VP(Head:VH11: 特別 |Head:VH11: 幽默))# 。 (PERIODCATEGORY)

Timespan:

0.000 – 4.444 seconds



但是就是它裡面還可以學到很多好的用語然後說話特別幽默

The parser reports the discourse role of *Ranhou* in this example is time, so semantically, this would only suggest the propositional use of the particle to indicate a time point. Nevertheless, in this example, no apparent time point can be found to suggest chronological order. It would be stretching to say that the particle *Ranhou* in this

example suggests propositional meaning to refer to a time point and thus non-DM use. Instead, it can be argued that *Ranhou* might have undergone reduction in its propositional meaning to assume functions different from indicating chronological order, for instance, adding in more information.

As far as syntactic features are concerned, if we examine *Ranhou* based on Fraser's canonical forms, it appears in the initial position of the second discourse segment in the Chinese text. This fits into the pattern of **S1** , **DM + S2** proposed by Fraser, suggesting DM use. Moreover, it can be said that the removal of *Ranhou* hardly affects our understanding of the utterance, making the particle syntactically optional, which also fits into the features of DMs put forward by Fraser. And, using Schiffrin's notion, *Ranhou* brackets the talk into two parts, namely, the first and second discourse segments, which are both still relevant in terms of speech topic. This also demonstrates a syntactic feature of DMs. Nevertheless, one may argue that hesitation phenomena such as fillers are also highly likely to occur at the beginning of an utterance (Barr, 2001), so how do we distinguish DMs from fillers?

Examining fluency with the help of the temporal relationship, the particle *Ranhou* lasting for 553 milliseconds occurred at the time point of 2.917 seconds following a short pause lasting for 138 milliseconds, marked as a comma in the ST. Judging from the graph, the Chinese verb *shuo*, meaning 'say' in English, appeared right after the particle *Ranhou* with no pause, repetitions or hesitations observed in between. This rules out the likelihood that the particle *Ranhou* is used as a filler.

The second position observed for *Ranhou* is in the middle of a discourse segment as indicated in Example 1b.

Example 1b:

Chinese Text:

我就需要早上六點起床然後去坐公交車。

Romanized and Word-for -word Text:

wo jiu shuyao zaoshang liudian qichuang ranhou qu

I next need morning six o'clock get up then go
zuo gongjiaoche
sit bus

Free Gloss:

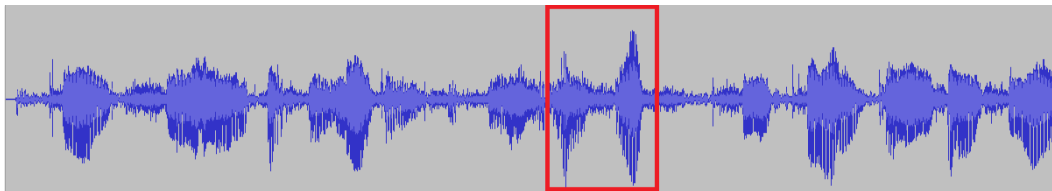
'I need to get up at six o'clock in the morning and then take the bus.'

Results by the Parser:

S(theme:NP(Head:Nhaa: 我)|time:Dd: 就 |Head:VK2: 需 要
|goal:NP(property:Ndabe:早上|quantifier:DM:六點|predication:VP(Head:VA4:起
床|complement:VP(time:Dd:然後|deixis:Dbab:去|Head:VA12:坐))|Head:Na:公交
車))# ◦ (PERIODCATEGORY)

Timespan:

0.000-4.728 seconds



我就需要早上六點起床然後去坐公交車

In Example 1b, the discourse role of *Ranhou* reported by the parser is also time, which again suggests that its discourse function is propositional meaning to refer to a time point. Indeed, in this example, one can easily discover the adverb of time in the Chinese text, namely, *zaoshang* ('morning') and *liudian* ('six o'clock'). Therefore, it would be reasonable to think that *Ranhou* serves as a chronological conjunction, which is not reduced in its propositional meaning. Although it may be the case that *Ranhou* is suggesting propositional or non-DM use in this example, we should still examine the particle against a number of criteria.

As far as syntactic features are concerned, *Ranhou* here does not fit into the canonical forms to appear in the initial position of a discourse segment. The appearance of the particle in the medial position is absent in Fraser's canonical forms; the forms put forward by Fraser may have overlooked the possibility that DMs can appear in medial or final position (Brinton, 1996). However, if we remove *Ranhou* from the Chinese text, it does not undermine our understanding of this utterance, thus making the particle syntactically optional in this text. In this regard, it is demonstrating one feature of DMs.

In addition, *Ranhou* might bracket this utterance into two units, or more precisely, two actions - to get up and to take a bus. This increases the likelihood that it is being used as a DM.

From the perspective of fluency, *Ranhou* lasting for 426 milliseconds appeared at the time point of 2.451 seconds in the Chinese text. No pause was observed before it as *Ranhou* followed closely after the end of *chuang* ('bed') in the Chinese text. However, a pause lasting for 292 milliseconds was observed at the time point of 2.897 seconds in the Chinese text, although it would be more fitting to say "taking a breath" as in the oral data, the speaker was running out of breath upon uttering *Ranhou*. As a consequence, a buffer was observed before she could start the following utterance. It would be stretching to think that *Ranhou* is a filler as no hesitations or repetitions were observed following *Ranhou* to indicate processing difficulties.

The third position observed is **S1** ◦ ***Ranhou*** + **S2** as indicated in Example 1c.

Example 1c:

Chinese Text:

十歲那個是兩歲就去中國了。然後基本上是在中國上了小學， (...)

Romanized and Word-for-word Text:

shi	sui	nage	shi	liang	sui	jiu	qu	zhongguo	le
ten	age	that	is	two	age	next	go	China	PFV

<u>ranhou</u>	jibenshang	shi	zai	zhongguo
then	basically	is	at	China

shang	le	xiaoxue	(...)
up	PFV	elementary school	(...)

Free Gloss:

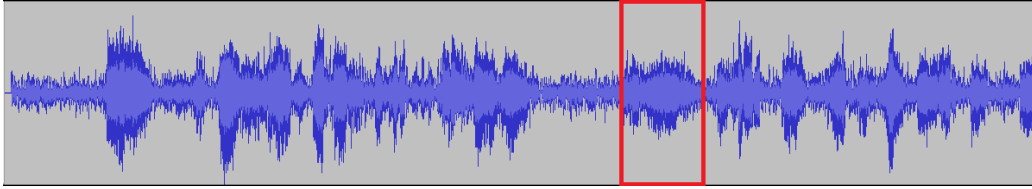
'That ten-year-old kid went to China at the age of two. Then, basically, she attended elementary school in China.'

Results by the Parser:

S(theme:DM: 十歲 |theme:DM: 那個 |Head:V_12: 是 |range:VP(time:DM: 兩歲 |time:Dd: 就 |Head:VC1: 去 |goal:NP(Head:Nca: 中國))|particle:Ta: 了)# ◦ (PERIODCATEGORY) S(time:Dd: 然後 |theme:NP(property:Nad: 基本 |Head:Ncda:

上)|Head:V_12:是|range:VP(location:PP(Head:P21:在|DUMMY:NP(Head:Nca:中國))|Head:VC1:上|aspect:Di:了|goal:NP(Head:Ncb:小學)))#

Timespan:
0.000-5.799 seconds



十歲那個是兩歲就去中國了然後基本上是在中國上了小學

In Example 1c, as indicated by the parser, the discourse role of *Ranhou* is time, whose discourse function is to mark the time point at which an event occurred. It is tempting to think that *Ranhou* serves as a conjunction particle to refer to chronological order. Chronological order in this example refers to the time point at which the girl went to China and stayed there to receive her elementary education. It may be the case that *Ranhou* is functioning as a conjunction particle in this example, referring to a time point without reduction in meaning; however, is it possible that *Ranhou* could be functioning as a DM?

From the perspective of DMs' syntactic features, *Ranhou* complies with the canonical form **S1 • DM + S2** by appearing in the initial position of a discourse segment. In addition, if we remove *Ranhou* from the Chinese text, it does not compromise our understanding of the utterance. In other words, *Ranhou* not only abides by the notion of canonical form in identifying DMs but is also syntactically optional in the example, which increases the likelihood that it should be regarded as a DM. Moreover, using Schiffrin's notion, it can be said that *Ranhou* brackets the talk into two units, namely, the unit of "when the girl went to China" and the unit of "the girl attended a local elementary school afterwards". So, despite the semantic features indicated by the parser, all syntactic features seem to indicate that *Ranhou* can be regarded as a DM in Example 1c. What if we examine the particle from the perspective of fluency? Could it be a different story?

From the perspective of fluency, the particle *Ranhou* lasting for 397 milliseconds appeared at the time point of 3.466 seconds in the Chinese text. A pause lasting for 508 milliseconds marked as a period was observed before *Ranhou*. No pause, repetitions or hesitations were observed following *Ranhou* as *jibenshang* ('basically') appeared right after *Ranhou* in the Chinese text. This shows that fluency was not disrupted by the use of the particle *Ranhou* and that *Ranhou* is unlikely to be used as a filler here.

4.3.3 The discourse roles of *Jiushi*

Using the parser, three discourse roles were observed in the use of *Jiushi* in my data. The first discourse role is uncondition³, whose discourse function is to mark assumptions by the speaker. The second discourse role is reason, whose discourse function is to mark a causal relationship. The third discourse role is addition, whose discourse function is to mark additional information or situations introduced to a given context. Apart from the discourse roles identified, it was observed that *Jiushi* appeared in both the initial and medial position in a discourse segment.

Example 2a provides an insight into the use of *Jiushi* when it appears in the medial position in a discourse segment, with its discourse role identified as uncondition.

Example 2a:

Chinese Text:

但是，課後的時間就是可以讓自己利用。

Romanized and Word-for-word Text:

danshi	ke	hou	de	shijian	<u>jiushi</u>	keyi
but	class	after	ASSOC	time	precisely be	can
rang	ziji	liyong				
let	self	use				

Free Gloss:

'But, the time after class can be utilized by myself.'

Results by the Parser:

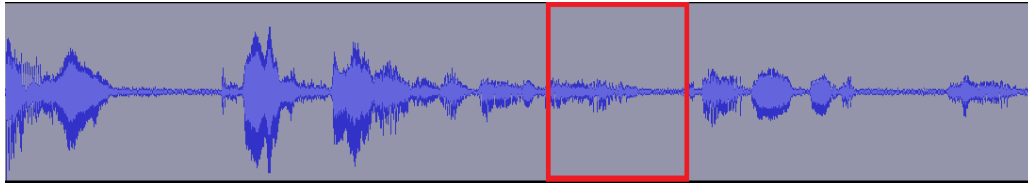
S(contrast:Cbca:但是|causer:NP(property:GP • 的(head:GP(DUMMY:NP(Head:Nac:

³ The term uncondition is a label use by the parser, not a term coined by the author.

課)|Head:Ng: 後)|Head:DE: 的)|Head:Nad: 時間)|uncondition:Cbba: 就是
|deontics:Dbab: 可以 |Head:VL4: 讓 |goal:NP(Head:Nhab: 自
己)|theme:VP(Head:VC2:利用))#。(PERIODCATEGORY)

Timespan:

0.000-4.691 seconds



但是課後的時間就是可以自己利用

In Example 2a, the discourse role of *Jiushi* is uncondition, whose discourse function is to mark assumptions made by the speaker. The assumptions here could refer to all possible arrangements after class by the speaker in this text. So, semantically, the particle *Jiushi* may be suggesting propositional meaning to indicate that the speaker is making assumptions as reported by the parser. But, until we examine this particle based on other criteria, it would be too early to suggest non-DM use in this example.

From the perspective of syntactic features, the medial position in which the surveyed particle appears does not fit into the canonical forms put forward by Fraser. However, as pointed out earlier, DMs can also appear in medial or final position in a discourse segment. Therefore, the canonical forms are not applicable against such a backdrop. If we remove the particle from the Chinese text, it does not undermine our understanding of the utterance. That is, *Jiushi* is syntactically optional, making it a potential DM in this regard. In addition, it can be said that *Jiushi* brackets the talk into two units, namely, “the spare time after class” and “what one can do about it”. This feature also makes *Jiushi* a possible DM. What about from the perspective of fluency? Is it possible that *Jiushi* may disrupt fluency?

In terms of temporal relationship and fluency, *Jiushi* lasting for 609 milliseconds occurred at the time point of 2.364 seconds in the Chinese text. No pause or repetitions were observed either before or after it. Nonetheless, it should be pointed out that the particle itself was elongated when the speaker was uttering *shi*, the second phonetic

part of *Jiushi*. In particular, the speaker spent 407 milliseconds on pronouncing *shi* out of 609 milliseconds on pronouncing *Jiushi*. Judging from the recordings, it shows a sign of hesitation or a sign of thinking before the appearance of the following speech segment, hence making the particle *Jiushi* show possible hesitation disfluency (Corely, 2008). In other words, fluency in the Chinese text may have been disrupted by the use of *Jiushi*, which increases the likelihood that *Jiushi* could be functioning as a filler rather than as a DM.

Example 2b demonstrates the use of *Jiushi* in the form of **S1** , ***Jiushi* + S2**.

Example 2b:

Chinese Text:

但是我覺得談不上國菜吧，**就是**有點太澀如果是國菜的話。

Romanized and Word-for-word Text:

danshi	wo	juede	tan	bu	shang	guocai		ba
but	I	feel	talk	no	up	national cuisine		PRT

<u>jiushi</u>	yodian	tai	se	ruguo	shi
precisely be	a little	too	unsmooth	if	is

guocai	de	hua
national cuisine	NOM	utterance

Free Gloss:

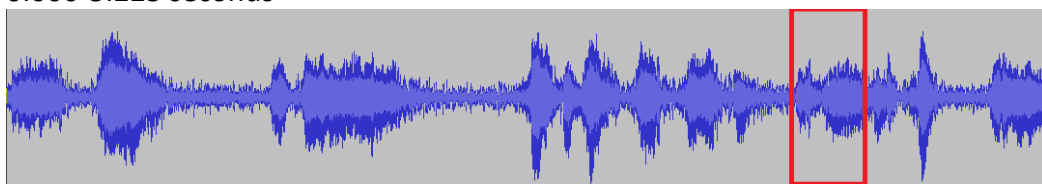
'But I think it is still far from national cuisine. For a national cuisine, it does not taste smooth.'

Results by the Parser:

S(contrast:Cbca: 但是 |experiencer:NP(Head:Nhaa: 我))|Head:VK1: 覺得 |goal:VP(Head:VG2: 談不上 |range:NP(Head:Na: 國菜))|particle:Tc: 吧)#,(COMMACATEGORY) VP(addition:Cbba:就是|degree:Dfa:有點|degree:Dfa:太 |theme:VH11:澀|hypothesis:Cbaa:如果|Head:V_12:是|range:NP(possessor:N • 的 (head:Na:國菜|Head:DE:的)|Head:Nac:話))#。(PERIODCATEGORY)

Timespan:

0.000-5.223 seconds



但是我覺得談不上國菜吧就是有點太澀如果是國菜的話

In Example 2b, the discourse role of *Jiushi* is identified by the parser as addition, functioning to suggest additional information introduced to the context following the target particle. In this example, additional information could refer to the speaker's comment on how the cuisine tastes. Given the temptation to regard the use of *Jiushi* as suggesting propositional use as reported by the parser, it would still be more meaningful if we can examine the particle with other criteria before we can tell which is more likely to be the case.

As far as syntactic features are concerned, the particle *Jiushi* appears in the form of **S1** , **DM + S2**, which complies with the notion put forward by Fraser to be viewed as a DM. Also, syntactically, if we remove the particle *Jiushi* from the Chinese text, it does not undermine our understanding of the utterance. This makes *Jiushi* syntactically optional, which demonstrates another feature of DMs. In addition, it can be said that *Jiushi* brackets the talk into two units, namely, the first unit of "the speaker's feeling about the cuisine" and the second unit of "how the cuisine tastes" or "why the cuisine is not qualified to be considered a national cuisine". Therefore, the syntactic features employed in the current study would lead us to think that *Jiushi* may be functioning as a DM in this example, since it fits into all the adopted syntactic features of DMs. How about from the perspective of fluency? Is it possible that the use of *Jiushi* is optional?

In terms of fluency and the temporal relationship, the particle of *Jiushi* lasting for 350 milliseconds occurred at the time point of 4.557 seconds in the Chinese text following a pause of 194 milliseconds, marked as a comma in the Chinese text. No hesitations or repetitions were observed either before or after it to indicate processing difficulties. In addition, compared to Example 2a in which *Jiushi* was elongated to up to 609 milliseconds, *Jiushi* is relatively short in terms of its duration in Example 2b, showing no sign of hesitations. It can be said that fluency is not disrupted with the use of *Jiushi*, hence reducing the likelihood of it being filler.

Example 2c is a special case in which the surveyed particle *Jiushi* appears twice in the text, namely in the medial position in the first discourse segment and in the initial position in the second discourse segment. However, given that the medial position in which the surveyed particle *Jiushi* appears has been analyzed in Example 2b, Example 2c therefore focuses on the second *Jiushi*, which appears in the second discourse segment as presented below.

Example 2c:

Chinese Text:

愛丁堡就是感覺跟英格蘭這邊都不一樣。就是建築什麼的也更有味道。

Romanized and Word-for-word Text:

aidingbao	jiushi	ganjue	gen
Edinburgh	precisely be	feel	follow

yinggelan	zhebian	dou
England	here	all

bu	yiyang	<u>jiushi</u>	jianzhu	sheme	de
no	same	precisely be	building	what	ASSOC

ye	geng	you	weidao
also	more	have	taste

Free Gloss:

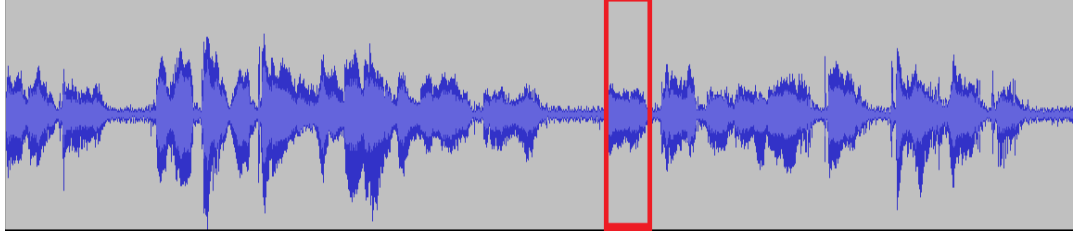
'It feels to me that Edinburgh is different from England. Its constructions are more unique.'

Results by the Parser:

S(experiencer:NP(Head:Nca: 愛丁堡)|uncondition:Cbba: 就是 |Head:VK1: 感覺 |goal:VP(location:PP(Head:P63: 跟 |DUMMY:NP(property:Nca: 英格蘭 |Head:Ncdb: 這邊))|quantity:Dab: 都 |negation:Dc: 不 |Head:VH11: 一樣))# 。 (PERIODCATEGORY) NP(reason:Cbba: 就是 |Head:NP(Head:Nab: 建築 |Head[NP]:NP(predication:N • 的 (head:Nep: 什麼 |Head:DE: 的)|predication:VP(evaluation:Dbb:也|manner:Dh:更|Head:V_2:有)|Head:Nad:味道)))# 。 (PERIODCATEGORY)

Timespan:

0.000-7.285 seconds



愛丁堡就是感覺跟英格蘭這邊都不一樣就是建築什麼的也更有味道

In Example 2c, the discourse role of *Jiushi* is reported by the parser as reason, whose discourse function is to mark causal relationship. The causal relationship here is linked with the speaker's own experience and perception of why she thinks Edinburgh is different from England. Although it may be tempting to think that the surveyed particle *Jiushi* is used to suggest propositional use as reported by the parser, it can be argued that instead of marking causal relationship only, *Jiushi* could be providing explanations as part of its discourse functions. In other words, it may have undergone reduction in marking causal relationship. What about from the perspective of different criteria?

Observing syntactic features, the surveyed particle *Jiushi* appears in the canonical form of **S1 ◦ DM + S2** put forward by Fraser, leaving room for it to be considered a potential DM. If *Jiushi* is removed from the second discourse segment in the Chinese text, it does not compromise our understanding of the utterance as what follows *Jiushi* in the second discourse segment is still conceptually connected to the first discourse segment. In addition, it can be said that *Jiushi* brackets the talk into two units, namely, the unit of "Edinburgh is different from England" and the unit of "what makes the difference". The syntactic features adopted here all indicate that the surveyed particle *Jiushi* is suggesting DM use.

The particle *Jiushi* lasting for 260 milliseconds appeared at the time point of 4.110 seconds in the Chinese text. Compared to the particle *Jiushi* lasting for up to 609 milliseconds in Example 2a, no elongation was observed here to suggest processing difficulties. A pause lasting for 430 milliseconds marked as a period in the ST was observed before *Jiushi* prior to the beginning of the second discourse segment. No pause, hesitations or repetitions were observed following *Jiushi* to suggest processing

difficulties, reducing the likelihood of this instance of *Jiushi* being viewed as filler.

4.3.4 The discourse roles of *Suoyi*

On the use of *Suoyi*, only one discourse role was observed using the parser. The discourse role is result, whose discourse function is to mark the consequence of an event. Two positions were observed in the use of *Suoyi*. The first position is: **S1** › **Suoyi** + **S2**, as indicated in Example 3a.

Example 3a:

Chinese Text:

因為之前就同學都是中國同學，所以就覺得和之前沒有太大的差別。

Romanized and Word-for-word Text:

yinwei zhiqian jiu tongxue dou
because before next classmate all

shi zhongguo tongxue
is China classmate

suoyi jiu juede he zhiqian meiyou tai da
so next feel and before not have too big

de chabie
NOM difference

Free Gloss:

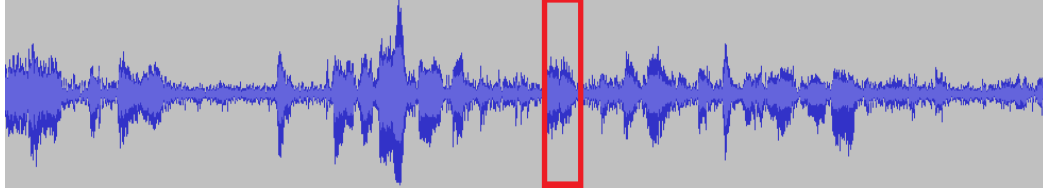
‘Because in the past, all the classmates were local Chinese, so it makes no huge difference now.’

Results by the Parser:

S(reason:Cbaa: 因為 |time:Nddc: 之前 |time:Dd: 就 |theme:NP(Head:Nab: 同學)|quantity:Dab: 都 |Head:V_12: 是 |range:NP(property:Nca: 中國 |Head:Nab: 同學))#, (COMMACATEGORY) VP(result:Cbca: 所以 |time:Dd: 就 |Head:VK1: 覺得 |goal:PP(Head:P35: 和 |DUMMY:NP(property:VP • 的 (head:VP(time:Nddc: 之前 |negation:Dc: 沒有 |degree:Dfa: 太 |Head:VH13: 大))|Head:DE: 的))|Head:Nad: 差別)))#。(PERIODCATEGORY)

Timespan:

0.000-6.203 seconds



因為之前就同學都是中國同學所以就覺得和之前沒有太大的差別

The discourse role of *Suoyi* is identified by the parser as result, therefore what follows the particle of *Suoyi* can be regarded as the consequence of the event, the speaker's feeling resulting from the situation. Judging from the parser only, semantically and pragmatically it would lead us to think that *Suoyi* expresses causal relationship with no reduction in meaning. If *Suoyi* is not used as a DM, does that mean that the removal of *Suoyi* from the Chinese text would undermine our understanding of the utterance?

In terms of the position where the surveyed particle *Suoyi* appears, **S1** , **DM** + **S2**, it fits into the canonical form of DMs, but if we remove the particle *Suoyi* from the Chinese text, it would be stretching to say our understanding of the utterance is greatly compromised, although the intensity of the connection between the two discourse segments would be reduced. Apart from this, it can be said that the particle *Suoyi* brackets the talk into two units, that is, the unit of the reason, "classmates were all local Chinese", and the unit of consequence, "the feeling that it makes no huge difference". So, syntactically, we may be inclined to think that the surveyed particle *Suoyi* can potentially be identified as a DM.

In terms of fluency and the temporal relationship, the particle *Suoyi* lasting for 221 milliseconds appeared at the time point of 3.187 seconds in the Chinese text. A relatively short pause lasting for 114 milliseconds marked as a comma in the Chinese text was observed before *Suoyi*. No pause, hesitations or repetitions were observed to suggest processing difficulties following *Suoyi* in the second discourse segment. Nor was the particle *Suoyi* elongated. Overall it seems unlikely that the surveyed particle could have been used as a filler. In this case, fluency in the Chinese text has not been disrupted with the use of *Suoyi*.

Another position observed in the use of *Suoyi* is **S1** ◦ **Suoyi + S2**, as indicated in Example 3b.

Example 3b:

Chinese Text:

它很多地鐵我找不到電梯。所以比較辛苦。

Romanized and Word-for-word Text:

ta	hen	duo	ditie	wo	zhao	bu	dao	dianti
it	very	many	subway	I	find	no	go	lift

<u>suoyi</u>	bijiao	xinku
so	COMP	hard time

Free Gloss:

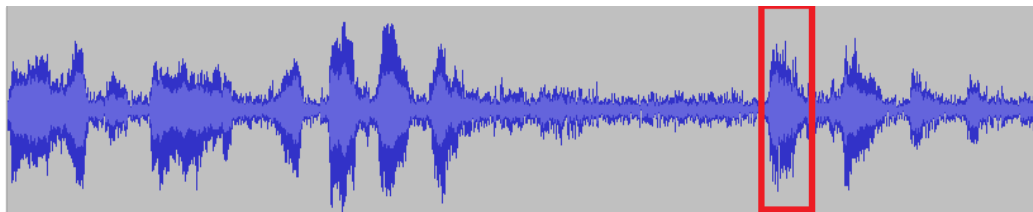
'I was not able to find lifts in its subway system, so I had a hard time.'

Results by the Parser:

S(agent:NP(apposition:NP(possessor:Nhaa:它|quantifier:Neqa:很多|Head:Nab:地鐵)|Head:Nhaa:我)|Head:VC2:找|location:PP(negation:Dc:不|Head:P61:到|DUMMY:NP(Head:Nab:電梯)))# ◦ (PERIODCATEGORY) VP(result:Cbca:所以|degree:Dfa:比較|Head:VH16:辛苦)# ◦ (PERIODCATEGORY)

Timespan:

0.000-3.976 seconds



它很多地鐵我找不到電梯所以比較辛苦

In Example 3b, the particle *Suoyi* again assumes the discourse role of result, whose discourse function is to mark the consequence of an event, in this case the feeling of the speaker that it was more energy-consuming to travel because of not being able to find a lift. With the semantic meaning and the discourse function of *Suoyi* identified by the parser as result to mark causal relationship, it may be tempting to think that *Suoyi* is suggesting propositional meaning only and hence non-DM use in this example.

But, from the perspective of syntactic features, the particle *Suoyi* appears in the form of

S1 ◦ DM + S2, which increases its likelihood of being viewed as a DM. Apart from the canonical form, the next syntactic feature of DMs covers whether the surveyed particle can be removed from the Chinese text without undermining our understanding of the utterance. Following that notion, if we remove the particle *Suoyi* from the Chinese text, we can still understand the utterance; however, the connection between the two discourse segments is somewhat compromised. In terms of bracketing, it can be said that the particle *Suoyi* brackets the talk into two units, namely, the unit of the cause, “I was not able to find a lift in the subway system”, and the consequence, “I had a hard time”. Hence, syntactically, it would lead us to think that the use of *Suoyi* in Example 3b may be DM use, in contrast to what its semantic features suggest.

In terms of fluency and the temporal relationship, the particle *Suoyi* lasting for 190 milliseconds occurred at the time point of 2.901 seconds in the Chinese text. Compared to *Suoyi* in Example 3a that lasted for 221 milliseconds, the duration of the particle in Example 3b is relatively short. A pause lasting for 1016 milliseconds marked as a period in the Chinese text was observed before *Suoyi*, prior to the beginning of the second discourse segment. No pause, hesitations or repetitions were observed following *Suoyi* in the second discourse segment to indicate either processing difficulties or the disruption of fluency with the use of the surveyed particle.

4.3.5 The discourse roles of *Lai*

On the use of *Lai*, seven patterns were observed in my data when *Lai* was employed in SP. These patterns were *Lai* + verb, *Lai* + noun, verb + *Lai*, *Lai* + *Le*, *Yuanlai* (‘originally’), *Houlai* (‘after’), and *Lai* + *De*. Among them, only when the particle of *Lai* was used in the form of *Lai* + verb did it assume the discourse role of deixis, whose discourse function is to mark the tendency of a movement, in which case propositional meaning might have undergone reduction to serve this purpose. Patterns such as *Yuanlai* and *Houlai* are fixed collocations in Mandarin with the former indicating a sense of evaluation and the latter indicating chronological order. In both expressions, *Lai* cannot be detached and analyzed separately. It was observed in my data that the form of verb + *Lai* occurred in fixed expressions as well in Mandarin such as in the case of *Huilai*

(‘come back’) and *Guolai* (‘come here’), forming a verb phrase as a whole, and *Lai* therefore cannot be analyzed separately in these examples. Other patterns such as *Lai* + Noun, *Lai* + *De*, and *Lai* + *Le* all indicated that the particle of *Lai* is categorized as a verb indicating the English verb ‘come’ using the parser. Therefore, the only pattern to be analyzed in the current study in the use of *Lai* is *Lai* + Verb, when it is semantically identified by the parser as a deictic as shown in Example 4.

Example 4:

Chinese Text:

然後出國之後就一切都是你要自己來安排嘛。

Romanized and Word-for-word Text:

ranhou	chuguo	zhihou	jiu
then	go abroad	after	next

yiqie	dou	shi	ni
everything	all	is	you

yao	ziji	<u>lai</u>	anpai	ma
want	self	come	arrange	PRT

Free Gloss:

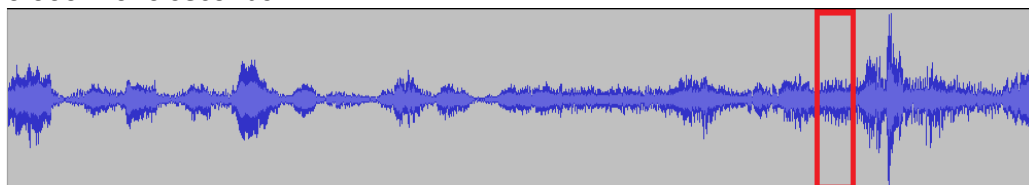
‘Then when you go abroad, you have to arrange everything by yourself.’

Results by the Parser:

S(time:GP(DUMMY:VP(time:Dd:然後|Head:VA13:出國)|Head:Ng:之後)|time:Dd:就|quantity:Neqa:一切|quantity:Dab:都|Head:V_12:是|range:S(agent:NP(Head:Nhaa:你)|deontics:Dbab:要|manner:NP(Head:Nhab:自己)|deixis:Dbab:來|Head:VE12:安排|particle:Ta:嘛))#。(PERIODCATEGORY)

Timespan:

0.000-4.026 seconds



然後出國之後就一切都是你要自己來安排嘛

In this example, the discourse role of *Lai* is identified by the parser as deixis, whose discourse function is to mark the tendency of a movement or situations that co-occur

with the actions taken. So, in this text, situations that could co-occur with the actions taken (i.e. going abroad) may refer to all possible events to be arranged and dealt with by the speaker after going abroad. In this case, the result by the parser is sensible since it points out the tendency of a movement as the propositional meaning of the particle *Lai* suggests no reduction in meaning, and hence non-DM use. Nonetheless, is this still the case if we examine the surveyed particle from the perspective of DMs' syntactic features?

In terms of the position in which the surveyed particle appears, namely, the medial position in the discourse segment, it does not fit into the canonical forms of DMs appearing in the initial position. However, as pointed out earlier, this does not take into account the possibility that DMs can also appear in the medial position. Therefore, another syntactic feature to examine the use of *Lai* is whether the removal of the surveyed particle will undermine our understanding of the utterance or not. It turns out that the removal of the particle *Lai* from the Chinese text does not compromise our understanding, thus making *Lai* syntactically optional, demonstrating one feature of DMs. From the viewpoint of bracketing, it can be argued that the particle *Lai* brackets the talk into two units, namely, the first unit of the situation, "after going abroad", and the second unit of the action taken, "arrange everything on one's own". Although the particle *Lai* does not fit into the canonical forms of DMs proposed by Fraser, the second and third syntactic features seem to suggest the use of *Lai* as a potential DM. What about from the perspective of fluency? Could it be something entirely different?

As far as fluency and temporal relationship is concerned, the particle *Lai* lasting for 133 milliseconds appeared at the time point of 3.179 seconds in the Chinese text. No pause, hesitations or repetitions were observed either before or after the surveyed particle *Lai* to indicate processing difficulties or disruptions of fluency with the use of the particle. In other words, it is highly unlikely that *Lai* was used as a filler in this example.

4.3.6 The discourse roles of *Qu*

On the use of *Qu*, a similar tendency to *Lai* was observed in my data. One difference to

note was that compared to *Lai*, six patterns were observed rather than seven. These patterns were *Qu* + verb, *Qu* + noun, *Qu* + *De*, *Qu* + *Le/Guo*, *Qudao* + noun, and verb + *Qu*. Among them, only when the particle of *Qu* was used in the form of *Qu* + verb did it assume the discourse role of deixis, whose discourse function is to mark the tendency of a movement, in which case this pattern is most likely to have undergone meaning reduction to serve as a DM. When the particle of *Qu* appeared in all other forms, it served as a verb indicating go in meaning. Therefore, the discourse role to be analyzed in this study in the use of *Qu* is that of deixis in the form of *Qu* + verb as shown in Example 5.

Example 5:

Chinese Text:

我是比較喜歡那種你看完了真的能去做點什麼菜吃的那種節目。

Romanized and Word-for-word Text:

wo	shi	bijia	xihuan	nazhong	ni	kan	wan	
I	is	COMP	like	that kind	you	watch	end	
le	zhende	neng	<u>qu</u>	zuo	dian	sheme	cai	
PFV	real	can	go	do	a little	what	cuisine	
chi	de	nazhong	jiemu					
eat	CSC	that kind	program					

Free Gloss:

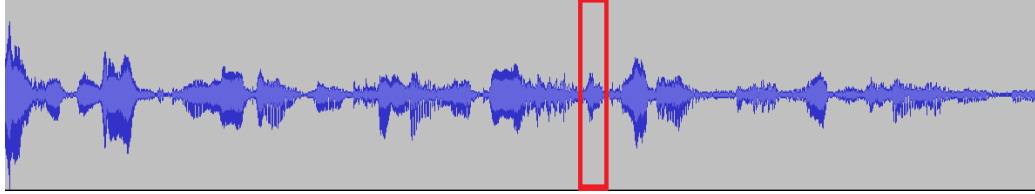
'I prefer watching the type of TV program from which you can really learn to make a dish afterwards.'

Results by the Parser:

S(theme:NP(Head:Nhaa: 我))|Head:V_12: 是 |range:NP(predication:VP • 的 (head:VP(degree:Dfa:比較 |Head:VK1:喜歡 |goal:VP(time:GP(DUMMY:S(time:DM:那種 |agent:NP(Head:Nhaa: 你))|Head:VC2:看完 |aspect:Di:了))|Head:Ng:之後))|evaluation:Dbb:真的 |deontics:Dbab:能 |deixis:Dbab:去 |Head:VC31:做 |degree:Dfb:點))|goal:VP(theme:NP(quantifier:Nep: 什麼 |Head:Nab:菜))|Head:VC31:吃))|Head:DE:的))|quantifier:DM:那種 |Head:Nac:節目))#。(PERIODCATEGORY)

Timespan:

0.000-4.780 seconds



我是比較喜歡那種你看完了真的能去做點什麼菜吃的那種節目

In Example 5, the discourse role of *Qu* is identified by the parser as deixis, whose discourse function is to mark the tendency of a movement or situations that may co-occur with the actions taken. In this example, the situations that would co-occur with the actions taken (i.e. watching how to make a dish on TV) may refer to the situation that the speaker is about to try to make a dish after watching the show. Following the notion by the parser, this would lead us to think that the surveyed particle *Qu* assumes the semantic meaning of deixis to indicate the tendency of a movement as its discourse function, suggesting that the particle has not undergone reduction in its meaning that would indicate DM use. However, is this really the story if we investigate the particle using different criteria?

From the point of view of syntactic features, the position in which the surveyed particle *Qu* appears in the text is in the medial position of the discourse segment. Although it does not fit into the canonical forms of DMs adopted in the current study to identify DMs in discourse, there is still a possibility that it may be a DM. For example, if we remove the surveyed particle *Qu* from the Chinese text, it can be said that the meaning of the speech is not undermined at all. In other words, the inclusion of *Qu* in the Chinese text is syntactically optional, at the will of the speaker. This syntactic feature makes it a potential DM. Apart from this, the particle *Qu* brackets the piece of talk into two units, namely, the unit of “the preference on the part of the speaker to watch a show” and the unit of “what type of show the speaker is referring to and what you can learn from it afterwards”. *Qu* therefore fits into another feature of DMs. These syntactic features leave room for us to think that the use of *Qu* may be suggesting DM use. Is there a possibility that the use of *Qu* could disrupt fluency?

From the perspective of fluency and the temporal relationship, the surveyed particle *Qu*

lasting for 121 milliseconds appeared at the time point of 2.658 seconds in the Chinese text. No pause, repetitions or hesitations were observed before or after the particle *Qu* to indicate any processing difficulties. This reduces the likelihood that fluency in the Chinese text may be disrupted with the use of *Qu*. *Qu* (go) is highly unlikely to have been used as filler in this example.

4.3.7 The discourse roles of *Nage*

On the use of *Nage*, three positions were observed in my data, namely as the head of a discourse segment in the forms **S1 ◦ *Nage* + S2** and **S1 , *Nage* + S2** as well as in the middle of a discourse segment. Two discourse roles were observed using the parser, namely, theme and quantifier.

Example 6a demonstrates the use of *Nage* as a quantifier particle in the form of **S1 , *Nage* + S2**.

Example 6a:

Chinese Text:

然後撞死了一個無辜女子，那個女子的丈夫後來潛入他的宅子把他用槍打死了。

Romanized and Word-for-word Text:

ranhou	zhuang	si	le	yi	ge	wugu	nuzi
then	hit	die	PFV	one	CL	innocent	woman

<u>nage</u>	nuzi	de	zhangfu	houlai	qianru
that	woman	GEN	husband	after	sneak into

ta	de	zhaizi
he	GEN	house

ba	ta	yong	qiang	da	si	le
BA	he	use	gun	hit	die	PFV

Free Gloss:

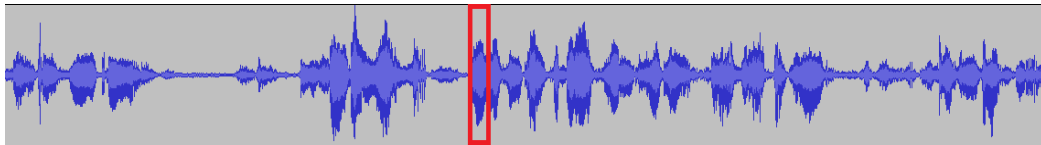
‘Then an innocent woman was hit by a car and died. That woman’s husband later sneaked into the offender’s house and shot him dead.’

Results by the Parser:

VP(time:Dd: 然後 |Head:VC2: 撞死 |aspect:Di: 了 |goal:NP(quantifier:DM: 一個 |property:VH11: 無辜 |Head:Nab: 女子))#,(COMMACATEGORY)
 S(theme:NP(property:NP · 的 (head:NP(quantifier:DM: 那個 |Head:Nab: 女子)|Head:DE: 的)|Head:Nab: 丈夫)|time:Nddb: 後來 |Head:VC1: 潛入 |goal:NP(possessor:N · 的 (head:Nhaa: 他 |Head:DE: 的)|Head:Nab: 宅子)|complement:VP(goal:PP(Head:P07: 把 |DUMMY:NP(Head:Na: 他用槍))|Head:VC2:打死|aspect:Di:了))#。(PERIODCATEGORY)

Timespan:

0.000-10.131 seconds



然後撞死了一個無辜女子那個女子的丈夫後來潛入他的宅子把他用槍打死了

In Example 6a, the discourse role of *Nage* identified by the parser is quantifier, whose discourse function is to modify or specify the object that the speaker is referring to. In this example, the object being specified in the second discourse segment is “the woman” mentioned earlier in the first discourse segment. The relationship between the discourse role and the discourse function of the surveyed particle *Nage* is self-evident in this example. It is reasonable to think that *Nage* is suggesting propositional meaning as that is what *Nage* represents. Under the circumstances, the meaning of *Nage* is not reduced which thus suggests non-DM use. Nonetheless, although there is reason to regard the use of *Nage* as non-DM use both semantically and pragmatically in this example, we should not overlook other criteria.

From the perspective of syntactic features, the surveyed particle *Nage* appears in the form of **S1 · DM + S2**, which complies with the canonical forms of DMs. Although we can still understand the talk after removing the particle *Nage* from the Chinese text, it can be argued that the connection between the woman in the first discourse segment and the woman in the second discourse segment is somewhat reduced. In terms of whether the surveyed particle *Nage* brackets the talk into units or not, it would be stretching to say it brackets the talk into two units in this example. How so? Although “an innocent woman was bumped into by a car and died” is clearly the first unit of the talk, the second unit is not the segment following the particle of *Nage* in the second discourse

segment. Rather, the second unit of the talk should be the whole unit of “that woman’s husband later on sneaked into the offender’s house and shot him dead” in which the particle *Nage* is only a modifier specifying the woman. As far as syntactic features are concerned, only the canonical form could lead us to think that there is a possibility that *Nage* was used as a DM here.

From the perspective of fluency and the temporal relationship, the particle *Nage* lasting for 152 milliseconds appeared at the time point of 4.539 seconds following a pause of 446 milliseconds marked as a comma in the Chinese text. No pause, repetitions, or hesitations were observed following the surveyed particle *Nage* to indicate processing difficulties. This suggests that fluency was not disrupted following *Nage*. It is highly unlikely that *Nage* was utilized as filler, especially as its main function is to modify a noun.

Example 6b, which is shown below in the form of **S1 • *Nage* + S2**, is however, a different case as hesitation was observed.

Example 6b:

Chinese Text:

你想要我說話。那個你有沒有吃過就是東歐有很多豬蹄膀，很好吃。

Romanized and Word-for-word Text:

ni	xiang	yao	wo	shuohua
you	think	want	I	Speak

<u>nage</u>	ni	you	meiyou	chi
that	you	have	not have	eat

guo	jiushi	dongou
PFV	precisely be	Eastern Europe

you	hen	duo	zhutipang	hen	hao	chi
have	very	many	pork knuckle	very	good	eat

Free Gloss:

‘You want me to speak. Have you ever tried pork knuckles in Eastern Europe?’

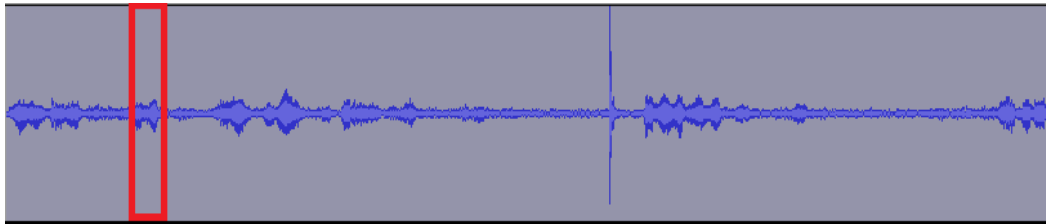
They've got plenty of them. It is really tasty. '

Results by the Parser:

S(theme:DM: 那個 |agent:NP(Head:Nhaa: 你)|reason:Dj: 有沒有 |Head:VC31: 吃 |aspect:Di: 過 |complement:S(uncondition:Cbba: 就是 |theme:NP(Head:Nca: 東歐)|Head:V_2: 有 |range:NP(quantifier:Neqa: 很多 |Head:Nab: 豬蹄膀)|complement:VP(degree:Dfa:很|Head:VH11:好吃)))# ◦ (PERIODCATEGORY)

Timespan:

0.000-9.419 seconds



你想要我說話那個你有沒有吃過就是東歐有很多豬蹄膀很好吃

In Example 6b, the discourse role of *Nage* identified by the parser is theme, whose function is to mark the subject matter of a talk referred to by the speaker. The subject matter here is the experience that the speaker is sharing on how tasty the pork knuckle was during her trip to Eastern Europe. In this case, it is evident that *Nage* is not used to modify or specify any object following it. Rather, instead of marking theme as reported by the parser, it would be more precise to say that *Nage* serves to initiate a theme or a topic in discourse (Xu, 2008). Against this backdrop, it can be argued that the particle of *Nage* may be reduced in its propositional meaning, not to mark the subject matter of a talk but to indicate topic initiation. If *Nage* is highly likely to show DM use in the example, is it syntactically optional?

As far as syntactic features are concerned, the surveyed particle *Nage* appears in the form **S1 ◦ DM + S2**, which complies with the notion of DMs' canonical forms proposed by Fraser. Provided that it has undergone reduction in its meaning as stated in the previous paragraph, it should be syntactically optional. If we remove the particle of *Nage* from the Chinese text, it can be seen that the gist of the talk is not compromised and we can still understand the utterance. In this regard, *Nage* is indeed syntactically optional, which manifests a syntactic feature of DMs. Apart from this, the surveyed

particle *Nage* also brackets the talk into two units in the Chinese text. The first unit is the intention of the interviewer to encourage the participant to talk, as pointed out by the participant in discourse - “you want me to talk”. The second unit is the experience that the participant is sharing with the interviewer - how tasty the pork knuckle was during her trip to Eastern Europe. In this regard, the surveyed particle also abides by Schiffrin’s notion of DMs bracketing units of talk. In addition, judging from the units of talk in this example, it can be said that the discourse topic between the two units sees a huge gap or the second can be said to be highly irrelevant to the first. In other words, this may lend support to the use of *Nage* as a DM to indicate topic shift or topic initiation as its discourse function. But, given that hesitations were observed in the use of *Nage* in this example, there is also a possibility that *Nage* can be nonfunctional as it may be deemed to disrupt fluency, to be detailed in the following paragraph.

In terms of fluency and the temporal relationship, the particle *Nage* lasting for 313 milliseconds was added at the time point of 1.103 seconds following a pause of 453 milliseconds marked as a period in the Chinese text. A pause of 464 milliseconds was observed following the particle of *Nage* in the second discourse segment. This shows a sign of processing difficulty in recalling the experience on the part of the interviewee. In other words, the particle demonstrates the feature of hesitation disfluency in that *Nage* appears in the initial position of a discourse segment followed by a pause. Under the circumstance, this increases the possibility that *Nage* was utilized here as a filler, which can be regarded as undermining fluency.

Example 6c demonstrates a use of *Nage* in the medial position, as shown below.

Example 6c:

Chinese Text:

而且不會有那個羊身上的腥羶味。

Romanized and Word-for-word Text:

erqie	bu	hui	you	<u>nage</u>	yang
moreover	no	can	have	that	goat

shenshang	de	xingshanwei
-----------	----	-------------

body ASSOC odor

Free Gloss:

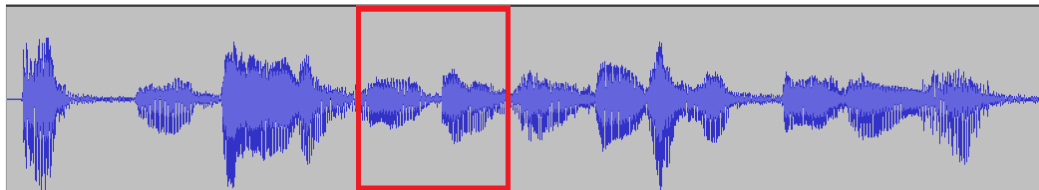
‘Moreover, it does not have the smelly odor from the goat.’

Results by the Parser:

VP(addition:Cbc: 而 且 |epistemics:Dbaa: 不 會 |Head:V_2: 有
|range:NP(property:NP • 的 (head:NP(property:NP(quantifier:DM: 那 個
|possessor:Nab: 羊 |Head:Nab: 身)|Head:Ncda: 上)|Head:DE: 的)|Head:Na: 腥 羶
味))# ◦ (PERIODCATEGORY)

Timespan:

0.000-3.337 seconds



而且不會有那個羊身上的腥羶味

Here, the discourse role of *Nage* is quantifier, whose discourse function is to modify the object following the particle. Judging from the text, it can be said that the particle *Nage* is used to modify not only one object but two. The first object being modified by *Nage* is “the goat”. The second object being modified by *Nage* is “the odor”. Or, put differently, it can be said that the particle of *Nage* is used to specify the smelly odor that comes with goats as a whole. In this regard, it can be said that the particle *Nage* may suggest propositional meaning, thus non-DM use, as a quantifier particle similar to the usage in Example 6a. Other criteria may tell a different story.

As far as syntactic features are concerned, the occurrence of the surveyed particle *Nage* does not fit into the canonical forms of DMs appearing in the initial position of a discourse segment. Rather, it appears in the medial position of a discourse segment. This, nevertheless, does not necessarily suggest that *Nage* has non-DM use. From the viewpoint of being syntactically optional, it can be said that the removal of the surveyed particle from the Chinese text does not undermine the gist of the talk and our understandings towards it. *Nage* is indeed syntactically optional, demonstrating one syntactic feature of DMs. Aside from the position where it appears and being

syntactically optional, criteria include whether the surveyed particle brackets the talk into units or not. It is stretching to say *Nage* in this case can bracket the talk into clear units. In particular, the segment preceding *Nage*, which is “it does not have” is semantically ambiguous and incomplete - it does not have what? Only the segment following *Nage*, “the smelly odor from goats”, is comprehensible and can be seen as a unit of talk. In other words, the particle *Nage* does not fit into the notion that DMs should bracket units of talk. In this case, could it be filler?

In terms of fluency and the temporal relationship, the particle of *Nage* lasting for 465 milliseconds occurred at the time point of 1.131 seconds in the Chinese text. Compared to the duration of *Nage* in Example 6a and 6b, *Nage* is longer and may have experienced elongation in Example 6c as can be seen from the acoustic pattern, although no pause, hesitations, or repetitions were observed either before or after it. This, nonetheless, shows a sign of processing difficulties in retrieving and modifying the object following the particle *Nage* by the speaker, in which case *Nage* can be regarded as filler as fluency in the Chinese text is highly likely to be disrupted. In this sense, *Nage* could be viewed as filler aside from functioning as a quantifier particle.

4.3.8 The discourse roles of *Haoxiang*

Two positions were observed in the use of *Haoxiang* in my data, namely in the initial and the medial position in a discourse segment. Example 7a demonstrates the use of *Haoxiang* in the medial position.

Example 7a:

Chinese Text:

在這裡社交生活比較少玩的東西少，不像國內好像親人和朋友都離得很近。

Romanized and Word-for-word Text:

zai	zheli	shejiao	shenghuo	bijiao	shao	wan	de
at	here	social	life	COMP	less	play	CSC
dongxi	shao	buxiang	guonei		<u>haoxiang</u>	qinren	
thing	less	unlike	in the country		seem	family members	
he	pengyou	dou	lide	hen	jin		

and friend all distance very close

Free Gloss:

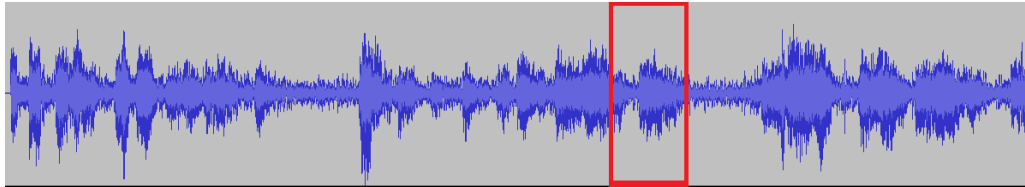
'You don't have too much entertainment in the social life here. It is not like in your home country where it is easy for you to hang out with your families and friends.'

Results by the Parser:

S(theme:NP(predication:VP · 的 (head:VP(condition:PP(Head:P21: 在 |DUMMY:NP(property:Ncdb: 這裡 |property:Nad: 社交 |Head:Nad: 生活))|degree:Dfa: 比較 |Head:VC2: 少玩))|Head VP(negation:Dc: 不 |comparison:PP(Head:P55: 像 |DUMMY:NP(Head:Ncc: 國內))|epistemics:Dbaa: 好像 |goal:NP(DUMMY1:NP(Head:Nab: 親人)|Head:Caa: 和 |DUMMY2:NP(Head:Nab: 朋友))|quantity:Dab: 都 |Head:VC2: 離 |complement: 得 · VP(Head:DE: 得 |head:VP(degree:Dfa: 很 |Head:VH13: 近)))# ° (PERIODCATEGORY)

Timespan:

0.000-6.687 seconds



在這裡社交生活比較少玩的東西少不像國內好像親人和朋友都離得很近

The discourse role of *Haoxiang* is identified by the parser as epistemics, whose discourse function is to indicate that the speaker is making a guess about whether the event following the particle is true or not. In this example, the speaker uses the particle to make her own assessment that it is easier to hang out with friends and family members in her home country compared to when she is living abroad. It can be argued that with the use of *Haoxiang* in the Chinese text, the statement becomes less direct aside from marking a guess. Under the circumstance, it is highly likely that *Haoxiang* has undergone reduction in its propositional meaning of marking a guess. Following this notion, if *Haoxiang* is functioning as a potential DM, does it fit into all the syntactic features of DMs adopted in the current study?

As far as syntactic features are concerned, *Haoxiang* appears in the medial position in the discourse segment. Although that does not fit into the canonical forms by appearing in the initial position in a discourse segment, we cannot rule out the possibility that *Haoxiang* could be a potential DM. For instance, if we remove *Haoxiang*

from the Chinese text, it does not affect our understanding of the speech, making the particle of *haoxiang* syntactically optional. In terms of whether *haoxiang* brackets units of talk or not, it can be observed that *haoxiang* brackets the second discourse segment into two units. The first unit of the talk is the comparison of “less entertainment abroad as opposed to living in the home country”, which is strongly connected with what has been mentioned in the previous discourse segment; the second unit of the talk is the assessment by the speaker that “friends and families are close to you”. Therefore, it can be said that *haoxiang* is highly likely to be regarded as a DM given the syntactic features it represents.

From the perspective of fluency and the temporal relationship, the particle of *haoxiang* lasting for 469 milliseconds occurred at the time point of 3.974 seconds with no interval observed before it as it followed closely after *guonei* (‘in the home country’) in the Chinese text. Nevertheless, a pause lasting for 430 milliseconds after *haoxiang* was observed, signaling processing difficulties on the part of the speaker. This may disrupt fluency of the speech with the use of the particle *haoxiang*. In other words, in addition to viewing *haoxiang* as a potential DM, there is also probability that it can be regarded as filler given the sign of hesitation observed following *haoxiang*.

Example 7b demonstrates the use of *haoxiang*(seem) in the form of **S1**, *haoxiang* + **S2**, although this form may be debatable.

Example 7b:

Chinese Text:

呃，好像看的不是 3D 的。

Romanized and Word-for-word Text:

uh	<u>haoxiang</u>	kan	de	bu	shi	3D	de
uh	seem	watch	CSC	not	is	3D	NOM

Free Gloss:

‘It seems that the movie I watched was not a 3D version.’

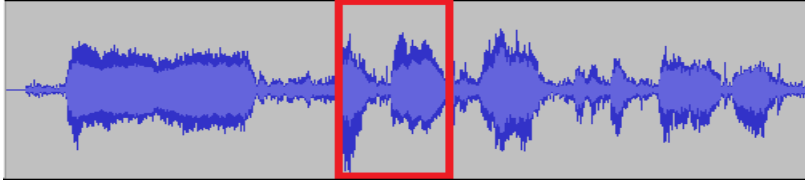
Results by the Parser:

VP(epistemics:Dbaa: 好像 |Head:VC2: 看 |complement: 的 • VP(Head:DE: 的

|head:VP(time:Dc:不|Head:V_12:是|range:NP(quantifier:DM: 3 |property:N • 的
(head:Nb:D|Head:DE:的))))# ◦ (PERIODCATEGORY)

Timespan:

0.000-2.136 seconds



呃好像看的不是 3D 的

As in Example 7b, the discourse role of *Haoxiang* is identified by the parser as epistemics, whose discourse function in this context is to indicate that the speaker is making a guess by recalling that the movie she went to a while ago was not a 3D movie. However, rather than marking a guess by the speaker, it can be argued that with the use of *Haoxiang* in the Chinese text, the statement by the speaker becomes less subjective with some degrees of uncertainties. In this sense, *Haoxiang* may have made the utterance more indirect, suggesting DM use. Despite the temptation to think so, we still need more parameters to investigate the use of *Haoxiang* on the basis of, for instance, syntactic features.

The surveyed particle of *Haoxiang* appears in the form **S1** ◦ **DM** + **S2**, which complies with the notion put forward by Fraser in identifying potential DMs. Apart from this, if we remove *Haoxiang* from the Chinese text, it does not undermine our understanding of the speech. Nevertheless, it should be pointed out that when the particle *Haoxiang* is removed from the Chinese text, the tone of the speaker changes from not being very certain about one thing to being assertive. Now, in terms of whether *Haoxiang* brackets units of talk or not, it may be stretching to say that *Haoxiang* brackets the talk into clear units. In particular, the unit preceding *Haoxiang* is a mixture of filled pause “uh” and a silent pause. It would be stretching to call it a unit or a discourse segment that represents complete semantic meaning. Only the unit following *Haoxiang* is complete in referring to the experience the speaker had in going to a movie. In this regard, the last syntactic feature adopted here is not able to provide a strong basis for *Haoxiang* to

be viewed as a potential DM. This being said, fluency and the temporal relationship may help categorize the surveyed particle.

In terms of fluency and the temporal relationship, the particle of *Haoxiang* lasting for 288 milliseconds appeared at the time point of 0.880 seconds in the Chinese text. Before it, a filled pause “uh” of 516 milliseconds and a silent pause of 218 milliseconds marked as a comma in the Chinese text were observed. No pause, hesitations or repetitions were observed following *Haoxiang*. Nevertheless, given the pause observed before *Haoxiang* in the Chinese text, it may be possible that fluency is disrupted although *Haoxiang* may be able to help maintain the ongoing discourse.

4.3.9 The discourse roles of *Qishi*

Two positions were observed for the particle of *Qishi*. The first position observed is when *Qishi* is placed as the head of a discourse segment following a filled pause “uh” as shown in Example 8a.

Example 8a:

Chinese Text:

呃其實我來之前有就是查到一些資料就說紐卡的口音會比較難懂， (...)

Romanized and Word-for-word Text:

uh qishi wo lai zhiqian jiushi you cha
uh actually I come before precisely be have search

dao yi xie ziliao jiu shuo niuka
PFV one CL information next say Newcastle

de koyin hui bijiao nan dong
ASSOC accent can COMP hard understand

Free Gloss:

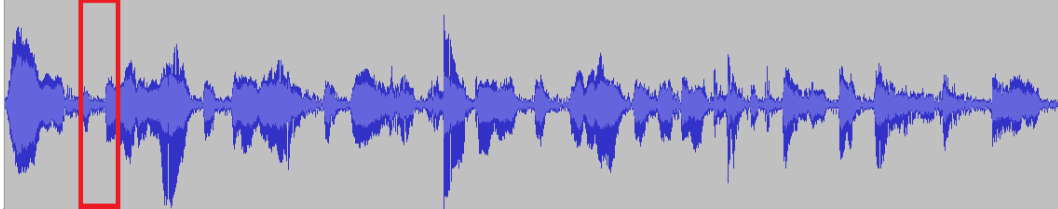
‘Before I came to Newcastle, some information that I looked for already suggested that the accent here at Newcastle can be hard to understand.’

Results by the Parser:

VP(evaluation:Dbb: 其實 |condition:GP(DUMMY:S(theme:NP(Head:Nhaa:我)|Head:VA11:來)|Head:Ng:之前)|Head:V_2:有 |complement:VP(addition:Cbba:就是 |Head:V_2: 有 |complement:VP(Head:VE2: 查 到

|goal:S(agent:NP(quantifier:Neqa: 一些 |Head:Nab: 資料)|time:Dd: 就 |Head:VE2: 說 |goal:S(theme:NP(possessor:N • 的(head:Nb: 紐卡 |Head:DE: 的)|Head:Nad: 口音)|epistemics:Dbaa: 會 |degree:Dfa: 比較 |Head:VH11: 難 懂))))# 。
(PERIODCATEGORY)

Timespan:
0.000-5.450 seconds



呃其實我來之前有就是查到一些資料就說紐卡的口音會比較難懂

In Example 8a, the discourse role of *Qishi* is identified by the parser as evaluation, whose discourse function is to mark some extent of assessment made by the speaker. In this example, the speaker is assessing that people from Newcastle may have a strong accent that is hard to understand for foreigners. The result from the parser may seem convincing as the speaker is indeed making some extent of assessment from her own perspectives. However, what can be argued is that in addition to making an assessment, the use of *Qishi* seems to have made the utterance more indirect or less subjective. In this sense, it could be the case that the meaning of assessment is reduced whereas the proportion of making the utterance less subjective is increased, making *Qishi* a potential DM from the point of view of meaning reduction.

If we examine *Qishi* in Example 8a based on Fraser's canonical forms, it follows a filled pause to be the head of the first segment to suggest sentence-initial position. It does not fit into either **S1** › **DM** + **S2** or **S1** ◦ **DM** + **S2**. Although it does not fit into the canonical forms put forward by Fraser, if we remove *Qishi* from the text, it does not undermine our understanding of the utterance, making it syntactically optional, which is one feature of DMs. In particular, the removal of *Qishi* from the text makes the utterance in the Chinese text firm and direct, which lends support to the point that *Qishi* as a DM can make an utterance more indirect (Liu, 2009). Nonetheless, it would be stretching to say that *Qishi* in the example brackets units of talk as the filled pause "uh" before *Qishi* hardly suggests any meaning.

From the perspective of fluency and temporal relationship, the particle *Qishi* lasting for 173 milliseconds occurred at the time point of 0.408 seconds in the Chinese text following a filled pause of 326 milliseconds. The observation of a filled pause before *Qishi* would signal that the speaker was having a hard time retrieving lexical items or opening up a discourse segment in discourse. No elongation of the target particle was observed. No repetitions, hesitations, or pauses were observed after *Qishi*. This reduces the likelihood that *Qishi* was utilized as a filler that could disrupt the fluency of the utterance.

The second position observed in the use of *Qishi* is when it is placed in the middle of a discourse segment as shown in Example 8b.

Example 8b:

Chinese Text:

因為他大部分時間**其實**是在做那種比較簡單的義大利家常菜。

Romanized and Word-for -word Text:

yinwei	ta	da	bufen	shijian	<u>qishi</u>	shi	zai	zuo
because	he	big	part	time	actually	is	at	do

na	zhong	bijiao	jiandan	de	yidali	jiachang
that	CL	COMP	easy	NOM	Italy	home-made

cai
cuisine

Free Gloss:

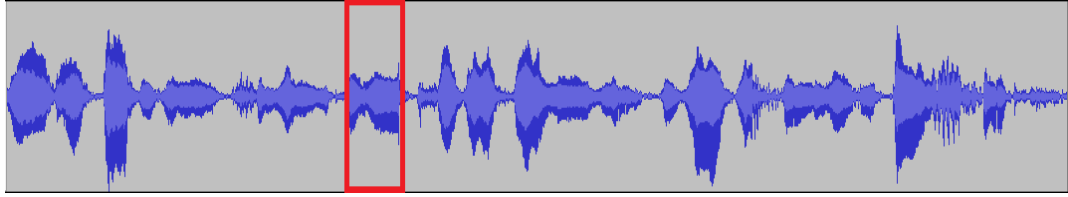
‘Because he uses most of the time making easy-to-make and home-like Italian cuisines’

Results by the Parser:

S(reason:Cbaa: 因為 |theme:NP(possessor:Nhaa: 他 |quantifier:Neqa: 大部分 |Head:Nad: 時間)|evaluation:Dbb: **其實** |Head:V_11: 是 |range:VP(agent:PP(Head:P21: 在)|Head:VC31: 做 |theme:NP(quantifier:DM: 那種 |property:VP • 的 (head:VP(degree:Dfa: 比較 |Head:VH11: 簡單)|Head:DE: 的)|property:Nca:義大利|Head:Nab:家常菜)))#。(PERIODCATEGORY)

Timespan:

0.000-5.067 seconds



因為他大部分時間**其實**是在做那種比較簡單的義大利家常菜

In Example 8b, the discourse role of *Qishi* is reported by the parser as evaluation, whose discourse function is to mark some extent of assessment by the speaker. In this example, the speaker is describing a TV show in which the chef spends most of the time demonstrating how to make home-made Italian cuisine, which, from the perspective of the speaker, is assessed as easy. Indeed, the results by the parser in this example show that, with the use of *Qishi*, assessment has been made by the speaker. Nonetheless, similar to Example 8a, the particle of *Qishi* can arguably be regarded as a cushion to make the statement more indirect by the speaker. Following this notion, the meaning of evaluation may have been reduced whilst the proportion of making the statement less subjective on the part of the speaker is increased. In this regard, *Qishi* could be a potential DM based on meaning reduction.

If we use Fraser's work as a basis, *Qishi* does not comply with the canonical forms that DMs tend to appear at the beginning of a discourse segment. However, the removal of *Qishi* does not compromise the gist of the text, making it syntactically optional as with DMs. But, the removal of *Qishi* from the text does make the statement sound firmer and more subjective. In terms of bracketing, it can be said that the particle of *Qishi* brackets the talk into two units, the first being "most of the time the chef spends" and the second being "on making home-made Italian cuisine viewed to be easy by the speaker". But, it is a stretch to say that the second unit encodes complete message and therefore should not be viewed as a comprehensible unit. It therefore does not demonstrate features of DMs from the point of bracketing.

From the perspective of fluency and the temporal relationship, the particle *Qishi* lasting for 261 milliseconds occurred at the time point of 1.621 seconds in the Chinese text

after *shijian* ('time') and before *shi* ('is'). No pauses, repetitions, or hesitations were observed between *Qishi* and *shijian* or between *Qishi* and *shi*, nor was elongation of the target particle observed. This would lend support to the notion that fluency is not disrupted with the use of *Qishi* in the speech and that *Qishi* is unlikely to have been utilized as filler.

4.3.10 The discourse roles of *Erqie*

Two positions were observed in the use of *Erqie* and only one discourse role - addition - was given by the parser. The first position is **S1** , ***Erqie* + S2** as shown in Example 9a.

Example 9a:

Chinese Text:

然後外面很香，而且也很入味。

Romanized and Word-for -word Text:

ranhou	waimian	hen	xiang	<u>erqie</u>	ye	hen
then	outside	very	smell good	moreover	also	very

ruwei

tasty

Free Gloss:

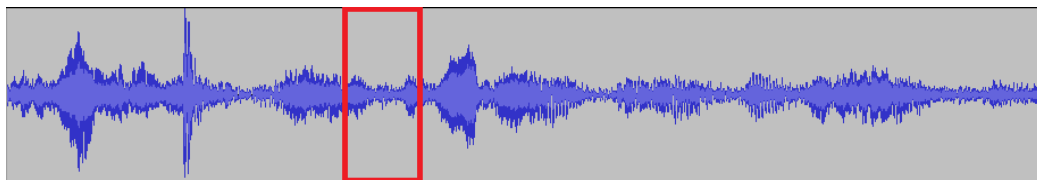
'It smells good from the outside and it tastes delicious from within.'

Results by the Parser:

S(property:GP(DUMMY:VP(Head:Dd: 然後)|Head:Ncdb: 外面)|degree:Dfa: 很|Head:VH11:香)#,(COMMATEGORY) VP(addition:Cbc:而且|evaluation:Dbb:也|degree:Dfa:很|Head:VC1:入|goal:NP(Head:Nab:味))#。(PERIODCATEGORY)

Timespan:

0.000-3.003 seconds



然後外面很香而且也很入味

The discourse role of the particle *Erqie* is identified by the parser as addition, whose discourse function is to mark additional information or situations introduced to a given

event. It can be said that in this example, the information added to the whole event is the statement of how tasty the food is on top of how it smells. This suggests propositional use without reduction in its meaning. Can there be other possibilities if different criteria are utilized?

Using canonical forms, *Erqie* in Example 9a complies with the form **S1** › **DM** + **S2** in which DMs tend to occur at the beginning of a discourse segment. In addition, the removal of *Erqie* from the Chinese text does not compromise our understanding of the text, making the particle syntactically detachable. What can be argued about the removal of *Erqie* from the Chinese text is that the stress of the tone seems to be reduced although the idea remains intact. It can also be seen that the particle *Erqie* brackets the talk into two units, the first being “the cuisine smells good from the outside” and the second being “it is also tasty”, which demonstrates another feature of DMs based on Schiffrin’s work.

From the perspective of fluency and the temporal relationship, *Erqie* lasting for 237 milliseconds appeared at the time point of 0.981 seconds following a short pause of 53 milliseconds, marked as a comma in the Chinese text. No pauses, repetitions or hesitations were observed following *Erqie*, nor was elongation of the target particle observed. This makes it unlikely that *Erqie* is utilized as a filler.

The second position observed in the use of *Erqie* is **S1** ◦ ***Erqie*** + **S2** as manifested in Example 9b.

Example 9b:

Chinese Text:

因為就一年嘛。而且他們還算挺好玩的。

Romanized and Word-for-word Text:

yinwei	jiu	yi	nian	ma	<u>erqie</u>	tamen	hai
because	next	one	CL	PRT	moreover	they	still
suan	ting	hao	wan	de			
count	pretty	good	play	NOM			

Free Gloss:

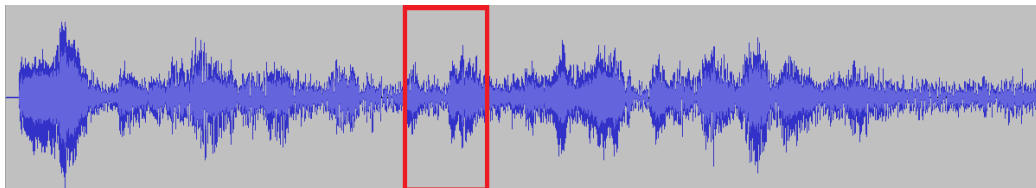
'It's just one year. Moreover, they are fun to hang out with.'

Results by the Parser:

S(reason:Cbaa: 因為 |time:Dd: 就 |Head:DM: 一年 |particle:Ta: 嘛)# 。
(PERIODCATEGORY) S(addition:Cbcb: 而且 |theme:NP(Head:Nhaa: 他
們)|evaluation:Dbb: 還 |Head:VG2: 算 |range:VP(head:VP(degree:Dfa: 挺
|Head:VH11:好玩)|Head:DE:的))# 。 (PERIODCATEGORY)

Timespan:

0.000-3.944 seconds



因為就一年嘛而且他們還算挺好玩的

In this example, the discourse role of the particle *Erqie* is also identified by the parser as addition, whose discourse function is to mark additional information or situations introduced to a given event. The additional information here refers to the landlord's children, who lived with the speaker for one year and brought quite a lot of fun to the speaker. Indeed, it may be tempting to think that the result by the parser suggests the use of *Erqie* as propositional and thus not a DM. Nonetheless, can there be a different story if we examine *Erqie* in this example using other criteria?

It is evident that *Erqie* fits into the canonical form of **S1 ◦ DM + S2** in which DMs tend to appear at the beginning of a discourse segment. Moreover, the removal of *Erqie* from the Chinese text does not undermine its gist, thus making it syntactically optional, which demonstrates one feature of DMs. Nonetheless, it can be argued that the connection between S1 and S2 in the Chinese text seems to be compromised after the removal of *Erqie*, although the idea remains intact. It can also be seen that *Erqie* brackets the talk into two units, the first unit being “the one year living together” and the second being “the kids are fun”, which also demonstrates one feature of DMs.

From the perspective of fluency and the temporal relationship, the particle *Erqie* lasting

for 306 milliseconds occurred at the time point of 1.521 seconds following a pause of 352 milliseconds marked as a period in the Chinese text. No pauses, hesitations or repetitions were observed after *Erqie*. The target particle was not elongated. This would lend support to the notion that with the use of *Erqie* in the Chinese text, fluency is not disrupted and that *Erqie* is highly unlikely to be regarded as filler in Example 9b.

4.4 Summary

In this chapter, I set out to compare and investigate whether conjunctions are the most frequently used category of discourse particle in both the pilot and the main study in Chinese SP. Based on the observation of my data, the findings in the main study are consistent with the results of the pilot study and confirm that conjunction is the most frequently used type of particle in Chinese SP, with *Ranhou* utilized most frequently.

In terms of identifying whether the surveyed particles are functioning as DMs or not in the above individual examples, a number of features have been exploited as criteria for assessment. Judging from all the 19 examples discussed from 4.3.2 to 4.3.10, it is clear that no single feature can determine whether the target particles are suggesting DM use or not. That is, different features tend to suggest different results regarding whether a given surveyed particle should be viewed as a DM or not. For example, Fraser's canonical forms for identifying DMs suggest that most of the surveyed particles should abide by the notion that DMs appear in sentence-initial or segment-initial position. This single parameter could be problematic as it is not always the case. Therefore, with the use of different features in this chapter to identify DMs from among the surveyed particles, no answers can be provided to individual examples as different features lead in different directions. They can only tell us which is more likely to be the case in a given example. In short, these discussions pave the way for listener surveys to contribute in terms of providing finalized answers to how the surveyed particles are used from the viewpoint of human users. The next chapter presents findings on the use of the surveyed particles based on the report by the parser, but in a different scenario: simultaneous interpreting.

Chapter 5. Analysis of Use of Discourse Particles in English-to-Chinese Simultaneous Interpreting

This chapter addresses the frequency of discourse particles in English-to-Chinese simultaneous interpreting (SI) in response to the first research question, *How different is the frequency of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?*, by locating particles based on frequency, and the discourse roles of the surveyed particles in English-to-Chinese SI in response to the second research question, *How different are the discourse functions of the discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech?* through identifying their discourse roles using the parser. This chapter presents findings relevant to the use of spoken particles in the scenario of English-Chinese SI. To assess whether the use of spoken particles in SI may be different from their use in Chinese SP, the interpreting output of the same group of stage two trainee interpreters who took part in the interviews was collected and analyzed. The first section of this chapter presents details of how candidate particles were screened in the current study. 5.2 reports the general trends in the use of discourse particles in SI by participants. 5.3 presents the qualitative analysis and results of the discourse roles the surveyed particles assume as reported by the parser. 5.4 is the summary of the findings of this chapter.

5.1 Screening Candidate Particles

The selection of the surveyed particles in SI for frequency analysis was based on the same criterion adopted in the previous chapter: that these surveyed particles should be lexical units with established discourse functions. The reason for doing this is because the current study attempts to investigate the discourse roles of the surveyed particles with the use of CKIP's semantic parser to identify their discourse functions in text-based examples. The use of the semantic parser to investigate the discourse functions of the surveyed particles in SI is innovative but may be at times restricted. In other words, the risk of using CKIP's semantic parser may be that there is only one discourse role

supplied for one discourse particle whatever the circumstances, which will lead to little room for discussion. Therefore, by surveying particles with more theoretically-grounded discourse functions, during listener surveys, listeners will be provided with more discourse functions to choose from or will be able to add in the discourse function they think the particle is assuming in the given context, to both validate the results reported by the semantic parser and enrich their potential discourse functions from the perspective of human language users.

Based on the above-mentioned criterion, the same group of particles mentioned in the previous chapter (totaling fourteen in number) was selected to be surveyed. Among them, four were conjunctions: *Ranhou*, *Jiushi*, *Suoyi*, and *Erqie*. Four were adverbs: *Qishi*, *Jushishuo*, *Fanzheng*, and *Haoxiang*. Four were determiners: *Nage*, *Zhege*, *Na*, and *Zhe*. Two were deixis, *Lai* and *Qu*. These particles have been studied by Mandarin scholars as having generally-acknowledged discourse functions which can be adopted at a later stage to examine the results as reported by the parser (Wang, 1998; Biq, 2001; Cui, 2008; Xu, 2008; Yao, 2009; Yao & Yao, 2012; Wu, 2012).

In calculating what types of discourse particles were used in SI by participants as shown in table 5-1, it should be noted that the results presented in the table included every single occurrence of the surveyed particles over the course of interpreting by participants. In other words, the results shown in the table encompassed all the occurrences of the surveyed particles even if they appeared as equivalents, substitutions, or interpreting errors over the course of analyzing the interpreting output. In the current study, equivalent refers to the product of direct translation between two working languages; for instance, the equivalent of the English word “car” in Chinese is *Chezi* (車子). Substitution in the current study refers to material which is substituted by the interpreter for something said by the speaker (Barik, 1994). Interpreting errors in the current study refers to situations when what is being interpreted by the interpreter considerably differs from what is being said by the speaker (Barik, 1994). Omission in the current study refers to materials present in the original speech which are left out of the rendered text by the interpreter (Barik, 1994). The reason for doing this is to see

whether the tendency found in using discourse particles when all occurrences of the surveyed particles are included differs from when only particles which maintain interpreting accuracy (i.e. the gist of the source text is preserved without distortion in meaning) are investigated. So, in the later part, by filtering out the afore-mentioned factors relevant to interpreting accuracy, the current study can therefore concentrate on how discourse particles can play a role in affecting the fluency in SI, for the use of discourse particles is directly associated with the flow of discourse (Schiffrin, 1987).

5.2 General Trend in SI Based on All Occurrences

In table 5-1, it is evident that among the fourteen surveyed particles, the most frequently utilized particle in SI by participants is *Zhege*, which is a determiner in terms of its grammatical category, registering an average of 7.6 occurrences per thousand words per person. It can be said that by including all occurrences of the surveyed particles over the course of analysis, the grammatical category of determiner is used most frequently by trainee interpreters in SI, a tendency very different from Chinese SP in which conjunctions are used most frequently. Apart from this, the particles of *Haoxiang*, *Fanzheng*, and *Jushishuo* were the least frequently utilized particles in SI, with almost no occurrences observed.

The results in table 5-1 report all the occurrences of the surveyed particles over the course of SI by participants. It is possible that the tendency would look different after excluding those utilized under the circumstances of direct translations, substitutions, omissions, or interpreting errors, which are all directly related to accuracy in interpreting. 5.2.1 therefore presents the findings by calculating only those added outright to the rendered text free of the above-mentioned circumstances.

Participants \ Particles	A	B	C	D	E	F	G	Total	Avg.
<i>Zhege</i> (this)	3.7	10.4	6.2	11.0	10.6	3.0	8.9	53.8	7.6
<i>Lai</i> (come)	3.7	6.4	5.6	9.5	8.3	6.0	3.3	42.8	6.1
<i>Na</i> (in that case)	5.6	2.9	7.9	12.4	10.6	1.0	1.1	41.5	5.9
<i>Jiushi</i> (precisely be)	0.9	6.4	7.9	2.9	6.8	2.0	2.8	29.7	4.2
<i>Suoyi</i> (so)	5.6	4.4	4.5	2.9	0	1.0	0.5	18.9	2.7
<i>Zhe</i> (in this case)	3.7	1.4	1.7	2.2	3.0	6.0	0.5	18.5	2.6
<i>Qishi</i> (actually)	5.6	0	1.7	0.7	0	2.0	0.5	10.5	1.5
<i>Nage</i> (that)	0.9	0.4	0.5	0.7	5.3	0	0	7.8	1.1
<i>Qu</i> (go)	0.9	0.4	1.1	0.7	0	1.0	2.2	6.3	0.9
<i>Ranhou</i> (then)	1.8	0.9	0.5	0	0.7	0	1.1	5	0.7
<i>Erqie</i> (moreover)	0.9	0	0	0	0.7	1.0	0.5	3.1	0.4
<i>Haoliang</i> (seem)	0	0	0.5	0	0	0	0	0.5	0.0
<i>Fanzheng</i> (anyway)	0	0	0	0	0	0	0	0	0
<i>Jiushishuo</i> (that is to say)	0	0	0	0	0	0	0	0	0

Table 5-1 Frequency of Chinese Discourse Particles in SI
(per 1,000 words)

5.2.1 Tendency: particles added to rendered texts

The reason for presenting the tendency of using particles free from direct translations, substitutions, and distortions in this section is because it is assumed that the addition of discourse particles may serve strategic purposes by participants to enhance fluency of their interpreting output. Hence in the current study, to examine solely the relationship between the addition of discourse particles and fluency of the interpreting output, any occurrences of the surveyed particles containing factors that may affect interpreting accuracy (i.e. equivalents, substitutions, distortions, interpreting errors) are

excluded to concentrate on how the use of discourse particles may affect fluency in SI. This is because in SI assessment, fluency and accuracy are two very different yet primary parameters, with each of them encompassing a variety of sub-parameters. The present study chose to focus on fluency. And, given that the use of discourse particles or discourse markers is in theory directly associated with the flow of the oral output by providing contextual coordinates (Schiffrin, 1987), it provides a stronger ground to investigate only the particles that were added to the rendered text with the premise that accuracy should remain intact.

Therefore, following this notion, the results after excluding the occurrences of the surveyed particles that may affect accuracy in SI indicate that nine particles, namely, *Na*, *Name* ('in that way'), *Jiushi*, *Lai*, *Qishi*, *Zhe*, *Suoyi*, *Nage*, and *Qu* remained as frequently added discourse particles in SI. Among the nine particles, the most frequently employed particle is *Na*, which is a determiner. *Na* had a total of 11.61 occurrences, averaging 1.65 occurrences per thousand words per person as shown in table 5-2.

Participants Particles	A	B	C	D	E	F	G	Total	Avg.
<i>Na</i> (in that case)	2.77	0.95	1.10	2.14	3.67	0.98	0	11.61	1.65
<i>Name</i> (in that way)	0	0	0	0	0	6.90	0.54	7.44	1.06
<i>Jiushi</i> (precisely be)	0	0.95	0.55	2.14	0.73	0	0	4.37	0.62
<i>Lai</i> (come)	0	0.47	0	0.71	0.73	0.98	0	2.89	0.41
<i>Qishi</i> (actually)	2.77	0	0	0	0	0	0	2.77	0.39
<i>Zhe</i> (in this case)	0	0	0	0	0	0.98	0	0.98	0.14
<i>Suoyi</i> (so)	0.92	0	0	0	0	0	0	0.92	0.13
<i>Nage</i> (that)	0.92	0	0	0	0	0	0	0.92	0.13
<i>Qu</i> (go)	0.92	0	0	0	0	0	0	0.92	0.13

Table 5-2 Frequency of Chinese Discourse Particles Added in SI (per 1,000 words)

By comparing the results presented in table 5-1 with table 5-2, the most frequently utilized type of discourse particle in English-to-Chinese SI is determiner regardless of the calculating criteria, a tendency very different from in Chinese SP where conjunctions are used most frequently. It is however interesting to note that when all occurrences of the surveyed particles are considered, the most frequently utilized particle in SI is *Zhege*; when including only those added to the rendered text on the premise that they do not affect accuracy of the output in SI, the particle of *Na* overtook *Zhege* in terms of frequency. This lays a critical ground in the field of interpreting research as it not only discovers that the tendency of using discourse particles is very different between Chinese SP and English-to-Chinese SI but also identifies the particular type of discourse particles used most frequently in SI. Having reported the frequency results in SI in 5.2, 5.3 reports the qualitative analysis and results of the surveyed particles by the parser.

5.3 Qualitative Analysis and Results Reported by the Semantic Parser

5.3.1 In search of discourse roles in simultaneous interpreting

The process of qualitative analysis of the surveyed particles in this chapter is identical to the one explained in Chapter 4, which is divided into semantic, syntactic and pragmatic features, and temporal relations, in each example for discussion. The selection and presentation of the text-based examples throughout this section includes only those with the added candidate particles (i.e. particles that are absent in the ST) for the purpose of delving further into why these particles have been added by understanding their discourse roles in the speech segment. Similarly, in each example, only one surveyed particle is analyzed and discussed regardless of the fact that other surveyed particles may occasionally co-occur with the target particle in the example. In the scenario of SI, fourteen particles were investigated based on frequency and nine of them underwent further analysis by the parser in terms of their discourse roles. The particles to be analyzed by the parser are *Na*, *Name*, *Jiushi*, *Lai*, *Qishi*, *Zhe*, *Suoyi*, *Nage*, and *Qu*. In the following examples, (...) is the symbol of omitted utterances in that turn by the speaker. The use of punctuation marks is the same as explained in 4.3.1. The following is the abbreviations of the Mandarin Chinese gloss when there is no lexical English equivalent (Li & Thompson, 1981).

ASSOC	Associative Meaning (de)
BA	Chinese ba Structure
CL	classifier
COMP	comparative
CRS	currently relevant state (le)
CSC	complex stative construction (de)
EXP	experiential aspect (-guo)
GEN	genitive (-de)
NOM	nominalizer (de)
PFV	perfective aspect (-le)
PL	plural
PRT	particle

To begin with, 5.3.2 reports findings relevant to the discourse roles of the particle *Na* in English-to-Chinese SI using the parser.

5.3.2 The discourse roles of *Na*

In my data, two positions were observed in the addition of *Na* to the TT in SI. Two discourse roles were observed using the parser, namely, evaluation and theme. The first position is S1 · *Na* + S2 as manifested in Example 1a.

Example 1a:

ST⁴ in English:

I've always worked in computing, I've always found it exciting.

TT⁵ in Chinese:

我一直在電腦科學領域工作，那我一直覺得這很激動人心。

Romanized and Word-for-word TT:

wo	yizhi	zai	diannao	kexue	lingyu	gongzuo
I	consistently	at	computer	science	field	work

<u>na</u>	wo	yizhi	zuede	zhe	hen	jidong
in that case	I	consistently	feel	in this case	very	inspire

ren	xin
human	heart

BT⁶:

'I have been working in the field of computer science, and I have always felt inspired.'

Results by the Parser:

S(possessor:NP(Head:Nhaa: 我)|time:Dd: 一直 |property:PP(Head:P21: 在 |DUMMY:NP(property:Nab: 電腦 |Head:Nad: 科學))|Head:NP(property:Nac: 領域 |Head:Nac: 工 作))# , (COMMACATEGORY) S(evaluation:Dk: 那 |experiencer:NP(Head:Nhaa: 我)|time:Dd: 一直 |Head:VK1: 覺 得 |goal:NP(quantifier:Nep: 這 |property:VP(degree:Dfa: 很 |Head:VH21: 激 動)|Head:Nad: 人心))# . (PERIODCATEGORY)

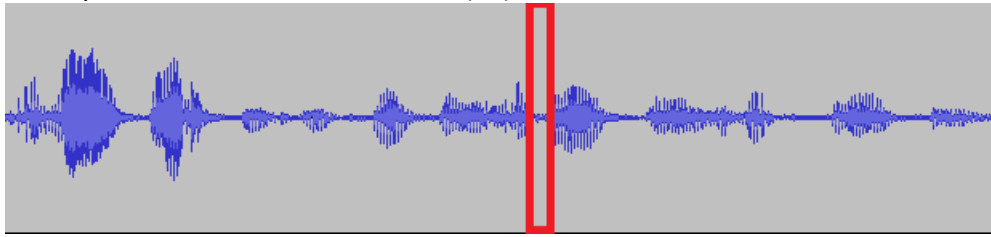
Temporal Relationship in Both the ST and the TT:

⁴ ST: Source Text

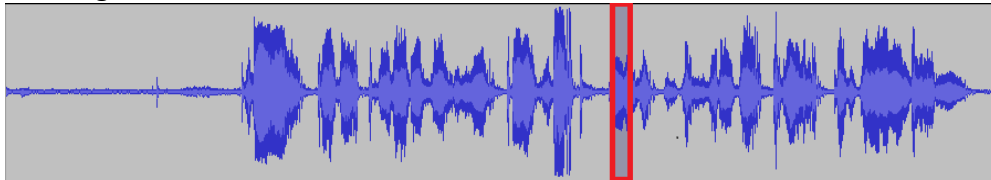
⁵ TT: Translated Text

⁶ BT: Back Translation

Timespan: 0:17.991 – 0:25.412 (ST)



I've always worked in computing I've always found it exciting recently I've been working in



我一直在電腦科學領域工作那我一直覺得這很激動人心

In Example 1a the parser reports that the discourse role of *Na* is evaluation, whose discourse function is to mark some extent of assessment by the speaker. Here, the speaker assesses how he feels to have been able to have worked in the field of computer science over the years. Originally, the propositional use of *Na* in Chinese is to indicate the object that the speaker is referring to or to modify the object in terms of quantity when it is used as a determiner, a demonstrative, or a quantifier. In this text, no apparent object can be found to be modified by *Na*. Semantically, it can be argued that the particle of *Na* may have undergone reduction in its propositional meaning to assume the function of evaluation as reported by the parser or of marking continuation between the first and the second discourse segment, suggesting DM use.

As far as syntactic features are concerned, the addition of *Na* in the TT complies with Fraser's canonical form of **S1** , **DM** + **S2** as it appears in the initial position in the second discourse segment, again suggesting DM use. In addition, the removal of *Na* from the text does not undermine our understanding of the text, thus making it syntactically optional, another feature of DMs. Also, based on Schiffrin's work, it can be seen that the particle of *Na* brackets the talk into two units, with each one of them encoding a complete message. So far, the particle of *Na* seems to have manifested a number of features of DMs.

In terms of temporal relationships, the particle of *Na* lasting for 118 milliseconds was added at the time point of 0:23.446 relative to the ST time by the trainee interpreter, 1.654 seconds after the speaker's utterance. Judging from the prosodic pattern in the TT, a relatively short pause of 84 milliseconds was observed before the particle of *Na*, but with no pause, repetitions, and hesitations observed following it. In addition, no elongation of the target particle was observed. This may suggest the addition of the particle *Na* to the TT was achieved without processing difficulties by the interpreter, which would also suggest fluency in the TT was highly unlikely to be disrupted with the use of the surveyed particle. This greatly reduces the possibility that *Na* can be regarded as a filler.

The second position observed in the use of *Na* is S1 ◦ *Na* + S2 as manifested in Example 1b.

Example 1b:

ST in English:

(...) interested in using them. (...) Would you use this in class?

TT in Chinese:

我上課經常看見學生呢都躲在手放在書桌底下然後在那兒用手機。那你們你們會在上課的時候用手機嗎?

Romanized and Word-for-word TT:

wo	shangke	jingchang	kanjian	xuesheng	ne	dou
I	lecture	often	see	students	PRT	all

duo	zai	shou	fang
hide	at	hand	put

zai	naer	yong	shouji	<u>na</u>	nimen	nimen
at	there	use	cell phone	in that case	you	you

hui	zai	shangke	de	shihou	yong	shouji
can	at	in class	ASSOC	period	use	cell phone

ma
PRT

BT:

'In class, I quite often see my students using the phones under the desk. In that

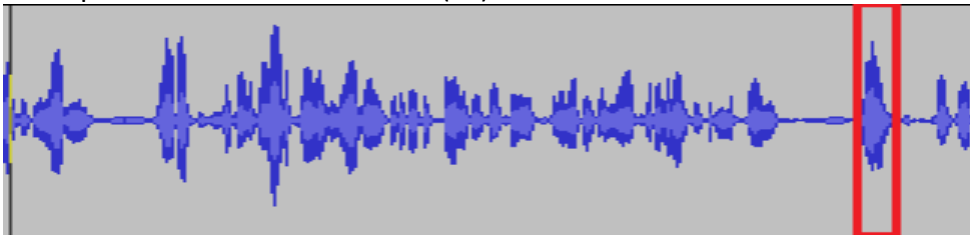
case, do you use cell phones in class?'

Results by the Parser:

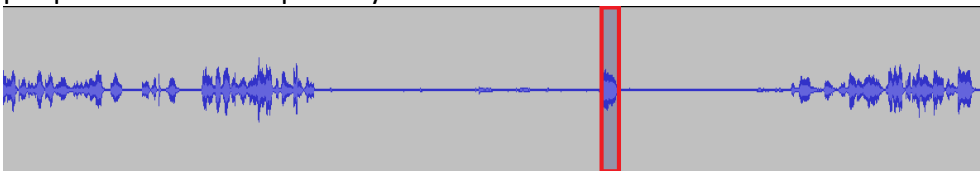
S(agent:NP(Head:Nhaa: 我)|Head:VA4: 上課 |complement:VP(time:Dd: 經常
|Head:VE2: 看見 |goal:NP(Head:Nab: 學生))|particle:Tc: 呢
|complement:VP(quantity:Dab: 都 |Head:VC2:
|complement:VP(location:PP(Head:P21: 在 |DUMMY:NP(Head:Nab:
手))|Head:VC33: 放 |complement:VP(location:PP(Head:P21: 在
|DUMMY:NP(property:Nab: 書桌 |Head:Ncdb: 底下))|time:Dd: 然後
|location:PP(Head:P21: 在 |DUMMY:NP(Head:Ncdb: 那兒))|Head:VC2: 用
|goal:NP(Head:Nab: 手機))))# 。 (PERIODCATEGORY) S(evaluation:Dk: 那
|agent:NP(Head:Nhaa: 你們 |Head:Nhaa: 你們)|epistemics:Dbaa: 會
|condition:PP(Head:P21:在 |DUMMY:NP(property:V • 的(head:VA4:上課|Head:DE:
的)|Head:Nad: 時候))|Head:VC2: 用 |goal:NP(Head:Nab: 手機)|particle:Td:
嗎)#?(QUESTIONCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 3:22.308-3:42.225 (ST)



(...) interested in using them however it's not entirely obvious to me whether they are using them because they're just bored with my teaching and they want to do something else or they're really interested in using the phone so question for people who haven't spoken yet



我上課經常看見學生呢都躲在手放在書桌底下然後在那兒用手機那你們你們會在上課的時候用手機嗎

The discourse role of *Na* here as reported by the parser is also evaluation, whose discourse function is to mark some extent of assessment by the speaker. In this example, the speaker is assessing how many people in the audience might have had the experience of using smart phones in class. Similar to Example 1a, no apparent object can be found to be modified by the particle of *Na*. Therefore, semantically, it can be argued that *Na* may have undergone reductions in its propositional meaning to suggest

DM use such as marking evaluation as reported by the parser or other pragmatic function such as indicating a shift in the discourse topic between the two discourse segments.

As far as syntactic features are concerned, the addition of the particle *Na* in the TT fits into Fraser's canonical form of **S1 ◦ DM + S2** to appear in the initial position in the second discourse segment. Moreover, the removal of the target particle from the TT does not prevent us from understanding it, although the connection between the two discourse segments might be weakened. This makes the target particle syntactically optional in the text, which demonstrates another feature of DMs. Using Schiffrin's notion, it can be said that the particle of *Na* brackets the talk into two units, with each unit conveying a complete message. In short, the criteria adopted so far seem to have pointed to *Na* being highly likely to serve as a DM in this example, what about from the point of temporal relationship?

In terms of temporal relationship, the particle of *Na* lasting for 366 milliseconds was added at the time point of 3:33.194 relative to the ST time 2.558 seconds, lagging behind the speaker's utterance when the speaker was pronouncing the English word "so", and seemed to be added by the trainee interpreter for the purpose of not interpreting the source segment, namely the (...) part whilst opening up a new question following the particle. The untranslated part in the ST is shown below.

I know they are interested in using them. However, it's not entirely obvious to me whether they are using them because they're just bored with my teaching and they want to do something else or they're really interested in using the phone. So, question for people who haven't spoken yet.

Having examined the video clip of the trainee interpreter, during the period when she was not interpreting the untranslated part of the speech, she was doing nothing except for breathing and looking at the speaker. This probably signals that she was either having hard time processing the information or that she thought interpreting the segments was not necessary because the speaker was making fun of himself to justify

why some students would use smartphones in his class. Without interpreting the (...) part, which appeared between 3:58.5 and 4:10.3 in the ST, the gist remained unaffected. The addition of the particle *Na* in the TT seems to have provided contextual cues to the listeners by signaling that the speaker was about to open up a new question following the end of the previous sentence. This property serves to suggest that the particle *Na* in Example 1b can be considered as a DM to indicate topic shift in addition to the parser's result of marking assessment. However, from the perspective of fluency, a pause of 5261 milliseconds was observed before *Na* and a pause of 3155 milliseconds was observed after *Na* in the TT, suggesting that the trainee interpreter might have been experiencing processing difficulty in retrieving and interpreting the human subject, which is "you", from English into Chinese, which can be evidenced by the repetition of "nimen" in the TT. In this case, although no elongation of the target particle was observed, the fluency of the TT is likely to have been disrupted with the addition of *Na*, which may increase its likelihood of being a filler rather than DM.

Example 1c demonstrates the use of *Na* in the position of S1 , *Na* + S2, identical to Example 1a, but with a different discourse role.

Example 1c:

ST in English:

You strike keys don't you? Yes, then, what happens?

TT in Chinese:

你要擊打鍵盤，那接下來又會是怎樣呢？

Romanized and Word-for -word TT:

ni	yao	jida	jianpan	na	jiexialai	you
you	want	hit	keyboard	in that case	next	again

hui	shi	zhenyang	ne
can	is	how	PRT

BT:

'You have to hit the keyboard, in that case, what will happen next?'

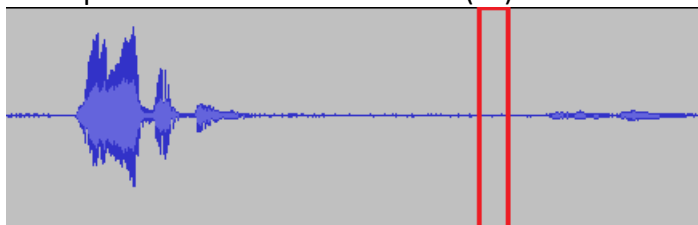
Results by the Parser:

S(agent:NP(Head:Nhaa:你)|deontics:Dbab:要|Head:VC2:擊打|goal:NP(Head:Nab:鍵盤))# , (COMMACATEGORY) VP(theme:Nep:那|time:Dd:接下來|time:Dd:又

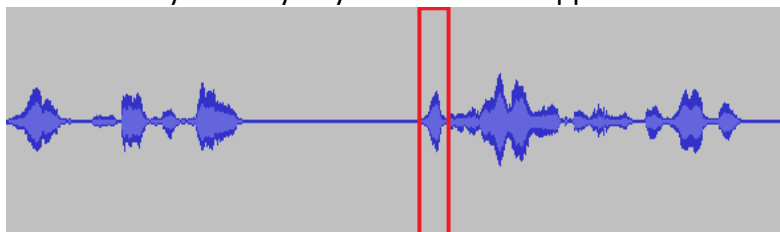
|time:Dbaa: 會 |Head:V_12: 是 |range:VP(Head:VH11: 怎樣)|particle:Tc: 呢)#?(QUESTIONCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 2:18.602 – 2:22.062 (ST)



You strike keys don't you yes then what happens



你要擊打鍵盤那接下來又會是怎樣呢

The parser reported the discourse role of *Na* here as theme, whose discourse function is to mark the subject matter of an event following the particle. The subject matter of the event following *Na* in the second discourse segment in this example is “what will happen next”. Nonetheless, it should be noted that in addition to marking the subject matter of the event with the use of *Na*, pragmatically, it also connects S2 with S1 by introducing the second discourse segment into the whole sentence on the premise that the topic in S2 (i.e. what will happen next) is highly relevant to the topic in S1 (i.e. hit the keyboard). Provided that the particle of *Na* was not used to modify or specify any following objects to suggest propositional meaning, it can be argued that the particle of *Na* in Example 1c may have undergone reduction in its semantic meaning and is thus more likely to demonstrate DM use.

From the perspective of syntactic features, the addition of *Na* in the TT fits into the canonical form of **S1** , **DM + S2** to appear in the initial position of the second discourse segment. Moreover, it can be said that the removal of *Na* from the TT does not undermine the gist of the text so the addition of the particle *Na* can be viewed as syntactically optional. Using Schiffrin’s notion, it can also be said that the addition of

the target particle in the TT brackets the talk into two units, with each unit encoding a complete message, manifesting another feature of DMs. The adopted criteria so far seem to have indicated that the target particle in Example 1c is highly likely to be employed as a DM. In this regard, does it necessarily suggest that fluency is not disrupted by the use of the target particle?

In terms of the temporal relationship, the particle *Na* lasting for 75 milliseconds was added at the time point of 2:20.394 relative to the ST time 1.561 seconds behind the speaker's utterance. The target particle was added at the point when the speaker was saying nothing in the ST. The addition of the particle in the TT followed a pause of 762 milliseconds after the end of the first discourse segment, followed closely by "*jiexialai*" ('next') in the second discourse segment. The particle of *Na* seems to have bracketed the two discourse segments in the TT, but they are highly relevant to each other in terms of topic. In other words, the addition of the particle *Na* may have been used by the trainee interpreter to suggest either topic shift or opening up a new discourse segment in the form of a question from striking the keyboard to what will happen after striking the keyboard. In this case, the particle of *Na* serves to provide contextual cues to listeners and increases its likelihood of being regarded as a DM apart from its discourse role of suggesting theme as identified by the parser. And, given that no pause, repetitions, or hesitation phenomena were observed after the particle of *Na*, nor was elongation of the target particle observed, it seems that fluency in the TT was not compromised and that the trainee interpreter was not faced with processing difficulties.

5.3.3 The discourse roles of *Suoyi*

Only one position, namely, S1 ◦ *Suoyi* + S2 ◦ was observed in the addition of *Suoyi* to the TT. Equally, only one discourse role - result - was observed as shown in Example 2.

Example 2:

ST in English:

There's a lot of talk about changing this (...) make a change in my country.

TT in Chinese:

電腦科學這門課並沒有教得很好。所以現在需要在這個行業進行一些改變。

Romanized and Word-for-word TT:

diannao	kexue	zhe	men	ke	bing	meiyou
computer	science	in this case	measure word	lesson	and	not have

jiao	de	hen	hao	<u>suoyi</u>	xianzai	xuyao
teach	CSC	very	good	so	now	need

zai	zhege	hangye	jinxing	yi	xie	gaibian
at	this	industry	progress	one	CL	change

BT:

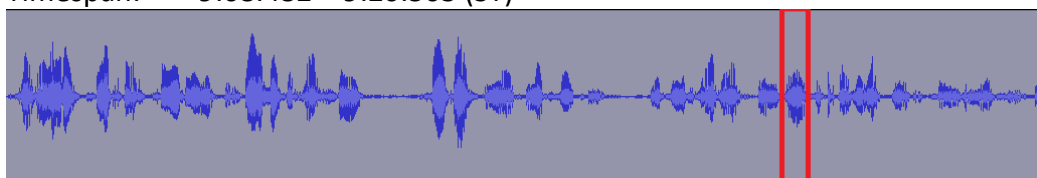
'Computer science is not taught well. So some changes are needed in this industry.'

Results by the Parser:

S(agent:NP(property:Nab: 電腦 | Head:Nad: 科學) | agent:NP(quantifier:DM: 這門 | Head:Nac: 課) | evaluation:Dbb: 並 | negation:Dc: 沒有 | Head:VC2: 教 | complement: 得 • VP(Head:DE: 得 | head:VP(degree:Dfa: 很 | Head:VH11: 好)))#。(PERIODCATEGORY)
 S(result:Cbca: 所以 | time:Nddc: 現在 | Head:VK2: 需要 | goal:VP(condition:PP(Head:P21: 在 | DUMMY:NP(quantifier:DM: 這個 | Head:Nac: 行業)) | Head:VC2: 進行 | goal:VP(quantity:Neqa: 一些 | Head:VC2: 改變)))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 9:08.482 – 9:20.503 (ST)



there's a lot of talk about changing this but very little actual progress in making it happen I'd like to be involved and I'd like to make a change in my country traditional



電腦科學這門課並沒有教得很好所以現在需要在這個行業進行一些改變

In Example 2 as reported by the parser, the discourse role of *Suoyi* is result, whose discourse function is to mark the consequence of an event. The consequence of an

event in this example refers to the changes needed in the industry of computer science. By marking the consequence of an event, the particle of *Suoyi* appears to show the propositional use of the particle as a conjunction to indicate the fact that because computer science as a subject is not taught well, as a consequence, some changes need to be made in the teaching of computer science. In other words, the particle of *Suoyi* does not seem to have undergone reduction in its semantic meaning. Nonetheless, using different criteria such as the syntactic features of DMs, is it possible that *Suoyi* may function differently?

As far as syntactic features are concerned, the addition of the particle *Suoyi* in the TT abides by the canonical form of **S1** ◦ **DM** + **S2** to appear in the initial position of the second discourse segment. However, it appears that the removal of *Suoyi* from the TT compromises the causal relations between the two discourse segments to a great extent, making the two discourse segments two parallel and independent events, though understanding the texts is not difficult. Put differently, the occurrence of *Suoyi* in the canonical form stated above does not guarantee its role as a DM, but rather how it serves to interact with the discourse segments involved is more important in examining its pragmatic functions. Using Schiffirin's notion, *Suoyi* appears to have bracketed the talk into two units in the TT, with each of them conveying a complete message. In short, the syntactic features adopted here seem to indicate two different directions on identifying the discourse role of *Suoyi*, so clues from the temporal relationships may help shed some light.

In terms of the temporal relationship, the particle of *Suoyi* lasting for 673 milliseconds was added at the time point of 9:16.059 relative to the ST time 2.046 seconds behind the speaker's utterance. The target particle was added when the speaker was saying the English word "involved" in the ST. The addition of the target particle in the TT followed a pause of 4835 milliseconds, and came before a pause of 386 milliseconds. However, the long pause observed before the target particle in the TT may result from the pause of 2200 milliseconds observed in the ST by the speaker as no incoming information was available to be processed by the interpreter.

It is interesting to note that in the ST, no conjunction particles were used to suggest causal relationship between the first and the second discourse segment though what the speaker was referring to in the second discourse segment was the possible consequence of the situations mentioned in the first discourse segment. The addition of *Suoyi*, as a conjunction particle, seemed to enhance the connection between the first and the second discourse segment in the TT, hence providing more contextual cues to the listeners. Though no elongation on the part of the target particle was observed, the long pause of 4835 milliseconds which occurred before the target particle in the TT may increase the likelihood of *Suoyi* being perceived as a filler to signal processing difficulties on the part of the trainee interpreter.

5.3.4 The discourse roles of *Jiushi*

In the addition of the particle *Jiushi* to the TT, three positions were observed. Three discourse roles, uncondition, addition, and reason, were observed using the parser. The first position observed in the use of *Jiushi* is S1 · *Jiushi* + S2 as shown in Example 3a.

Example 3a:

ST in English:

Yes, clavichord.

TT in Chinese:

對，就是擊絃鋼琴。

Romanized and Word-for-word TT:

dui	<u>jiushi</u>	ji	xian	gangqin
yes	precisely be	hit	string	piano

BT:

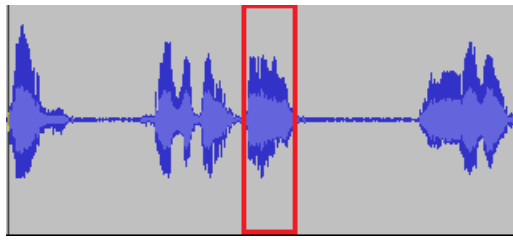
'Yes, it is clavichord.'

Results by the Parser:

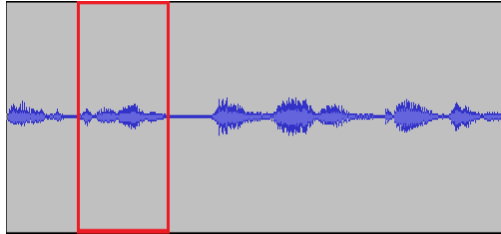
VP(Head:VH11: 對)#,(COMMACATEGORY) VP(addition:Cbba: 就是 | Head:VC2: 擊 | goal:NP(property:Nab:絃 | Head:Nab:鋼琴))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 7:03.253 – 7:04.527 (ST)



yes clavichord go on any others



對就是擊絃鋼琴

In Example 3a as reported by the parser, the discourse role of *Jiushi* is addition, whose discourse function is to mark additional information or situations introduced to a given context. The additional information in this example refers to the type of piano, a clavichord, used by composers centuries ago. As a conjunction particle, pragmatically, it may seem logical that it serves to add information to the context to connect the two discourse segments and therefore may not have undergone weakening in its semantic meaning. Nonetheless, is it possible that using different features of DMs in examining the target particle may suggest otherwise?

From the perspective of syntactic features, the addition of *Jiushi* fits into the canonical form of **S1** · **DM** + **S2**, which increases its probability of being perceived as a DM. But, the removal of *Jiushi* from the TT appears to undermine the intensity of connection between the first and the second discourse segment as the emphasis on the object is gone, and therefore the understanding of the text is compromised. In other words, *Jiushi* in Example 3a should not be considered as syntactically optional. In addition, using Schiffrin's notion, it would be stretching to say that *Jiushi* brackets the talk into two units as "yes" in the first discourse segment is more reflecting the emphasis on confirming the answer rather than delivering an independent and complete message. So far, syntactic features indicate that the use of *Jiushi* in Example 3a is not syntactically optional but rather necessary. How about from the point of view of temporal

relationship?

In terms of the temporal relationship, the particle of *Jiushi* lasting for 252 milliseconds was added at the time point of 7:03.410 relative to the ST time 578 milliseconds behind the speaker's utterance. The target particle was added when the speaker was saying "go on" in the ST. The addition of the target particle followed a pause of 83 milliseconds, before "jixian gangqin" ('clavichord') in the TT. No elongation of the target particle, repetitions, or hesitations were observed in this example to indicate processing difficulties on the part of the trainee interpreter. This reduces the likelihood that the target particle could be functioning as a filler that disrupts fluency in the TT.

The second position observed in the use of *Jiushi* is when the particle is placed in the middle of a discourse segment as shown in Examples 3b and 3c.

Example 3b:

ST in English:

And similarly, if you have a wind instrument, you blow harder.

TT in Chinese:

那同樣，如果有一個管樂呢就是要更用力的吹氣。

Romanized and Word-for-word TT:

na	tongyang	ruguo	you	yi	ge	guanyue
in that case	similarly	if	have	one	CL	wind music

ne	<u>jiushi</u>	yao	geng	yonglide	chui	qi
PRT	precisely be	want	more	use strength	blow	air

BT:

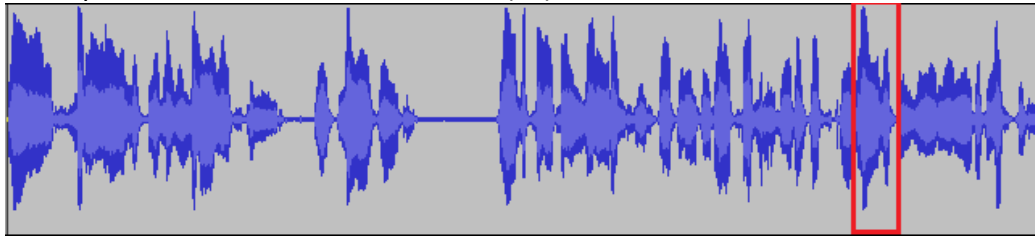
'In that case, similarly, if you have a wind instrument, you blow harder.'

Results by the Parser:

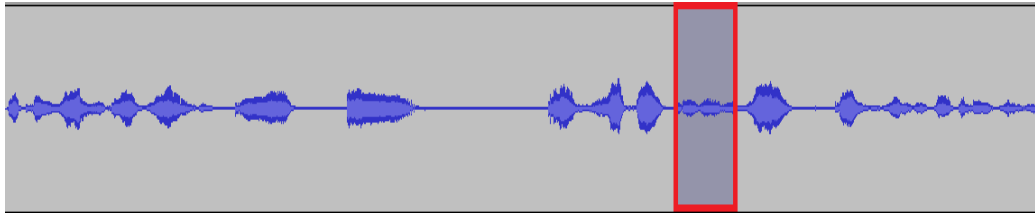
S(theme:NP(Head:Nep: 那)|Head:VH11: 同 樣)#,(COMMACATEGORY)
VP(hypothesis:Cbaa:如果|Head:V_2:有|range:NP(quantifier:DM:一個|Head:Nad:
管 樂)|particle:Tc: 呢 |complement:VP(addition:Cbba: 就是 |deontics:Dbab: 要
|manner:Dh:更|manner:V•地(head:VH11:用力|Head:DE:的)|Head:VA4:吹氣))#。
(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 15:57.242 – 16:09.251(ST)



and similarly if you have a wind instrument you blow harder there is a point in wind instruments if you blow too hard you get what was called overblowing and then you get lots of sound



那同樣如果有一個呃管樂呢就是要更用力吹氣

In Example 3b, the discourse role of *Jiushi* according to the parser is addition, whose discourse function is to mark additional information or situations introduced to a given context. The additional information in this example refers to the action needed when one has to increase the volume of a wind instrument, which is to blow the instrument harder. Similar to Example 3a, it seems that the addition of *Jiushi* in the TT as a conjunction particle provides more information as its pragmatic function and is unlikely to have undergone reduction in its semantic meaning. However, will there be a different story if different features are employed for investigation?

As far as syntactic features are concerned, the addition of *Jiushi* in the TT fits into neither $S1 \cdot DM + S2$ nor $S1 \circ DM + S2$. This, however, does not necessarily suggest the exclusion of *Jiushi* from being considered a potential DM since DMs can also appear in the medial position as has been mentioned repeatedly. But, the removal of *Jiushi* from the TT appears to reduce the intensity of connection between the first and the second discourse segment, as the emphasis on how to increase the volume of the wind instrument is gone, thus making the text a little difficult to follow. In other words, it can be argued that either the addition or the removal of the target particle *Jiushi* from the TT is syntactically optional. Based on Schiffirins' notion, it can be said that the target particle *Jiushi* brackets the talk into two units, each encoding a complete message, the

first being “if you have a wind instrument” and the second being “you blow harder”, demonstrating one feature of DMs. Admittedly, using the adopted features for investigation so far, one may be inclined to think that *Jiushi* in this example is more likely to show non-DM use. Are there any other possibilities for the use of *Jiushi* in this example, perhaps from the point of view of temporal relationship?

The particle of *Jiushi* lasting for 354 milliseconds was added at the time point of 16:07.041 relative to the ST time 456 milliseconds behind the speaker’s utterance. The target particle was added when the speaker was saying “called over-” in the ST. The addition of the target particle followed the particle of “*ne*”, before the Chinese verb of “*yao*” (‘want’) in the TT. It is interesting to note that although no elongation of the target particle was observed, the elongation of the Chinese verb “*yao*” was observed to suggest hesitation that indicates possible processing difficulties on the part of the interpreter. This is due perhaps to the fact that while interpreting this speech segment, the speaker sped up the speech rate for the purpose of feeding more information to the audience and therefore required more attention on the part of the trainee interpreter. Given that the addition of the target particle *Jiushi* is closely followed by the elongated “*yao*” in the TT, this may increase its possibility of being perceived as a filler that disrupts fluency.

In Example 3c, the particle of *Jiushi* is also placed in the middle of the discourse segment as shown below.

Example 3c:

ST in English:

We’ve got to go back to the two Italian words piano and forte.

TT in Chinese:

我們需要看兩個義大利語單詞。也就是 piano 這個詞和 forte 這個詞。

Romanized and Word-for -word TT:

women	xuyao	kan	liang	ge	yidaliyu	danci
we	need	look	two	CL	Italian	word

ye	<u>jiushi</u>	piano	zhege	ci	han	forte
----	---------------	-------	-------	----	-----	-------

also precisely be piano this word and forte

zhege ci
this word

BT:

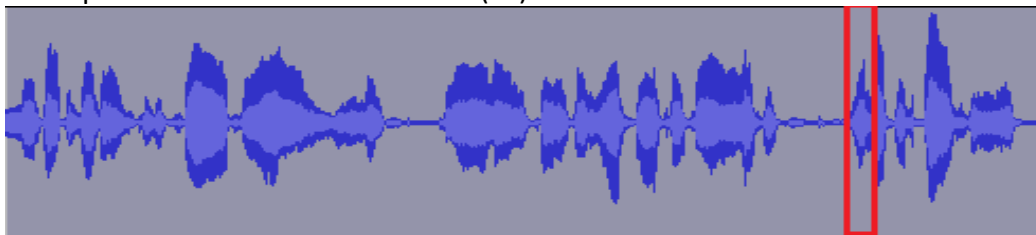
'We need to look at two Italian words - piano and forte.'

Results by the Parser:

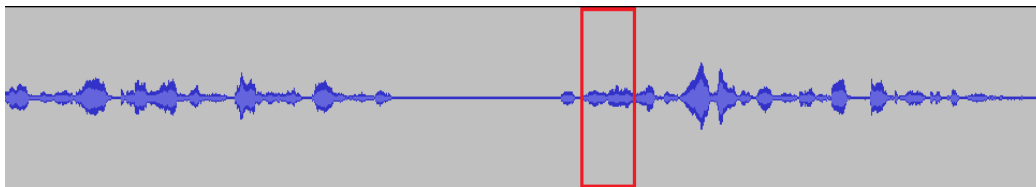
S(theme:NP(Head:Nhaa: 我們)|Head:VK2: 需要|goal:VP(Head:VC2: 看
|goal:NP(quantifier:DM: 兩個|Head:N(DUMMY1:Nca: 義大利|Head:Caa: 與
|DUMMY2:Nac:單詞))))#。(PERIODCATEGORY) NP(evaluation:Dbb:也|reason:Cbba:
就是|DUMMY1:NP(apposition:Nb:piano|quantifier:DM: 這個|Head:Nac:
詞)|Head:Caa: 和|DUMMY2:NP(apposition:Nb:forte|quantifier:DM: 這個
|Head:Nac:詞))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 3:56.395 – 4:01.479 (ST)



we got to go back to the two Italian words piano and forte or forte piano as it was first known



我們需要看兩個義大利語單詞也就是 Piano 這個詞和 Forte 這個詞

Here, the discourse role of *Jiushi* identified by the parser is reason, whose discourse function is to mark the cause of an event. Judging from the parser in this example, the cause refers to the two Italian words piano and forte, leading to the action to look at them. Clearly the result as reported by the parser is not self-evident, given that the use of *Jiushi* is more confirming and emphasizing the two Italian words than stating the cause. Hence, it may be possible that *Jiushi* has undergone reduction in the propositional meaning as reported by the parser and has assumed other pragmatic functions such as stressing the tone or emphasizing the importance of the subject

matter.

According to the syntactic features, the addition of *Jiushi* in Example 3c, similar to the case in Example 3b, fits into neither **S1** › **DM** + **S2** nor **S1** ◦ **DM** + **S2**. Nevertheless, this does not necessarily prevent *Jiushi* from being viewed as a potential DM. Judging whether the removal of *Jiushi* from the TT is syntactically optional or not, it can be argued that the removal of *Jiushi* from the TT reduces the intensity of connection between the two segments, particularly, an equal relationship between “the two Italian words” and “piano and forte” in the TT is less evident, leaving the text out of context, even with the preservation of the Chinese word “*ye*” (‘also’) in the TT. In other words, *Jiushi* should not be regarded as syntactically optional in Example 3c. Using Schiffrin’s criterion, it can be argued that, the use of *Jiushi* should be viewed together with the Chinese particle of “*ye*” so that the bracketed units of talk are more clear. Using the features described above, one may be inclined to think that the addition of *Jiushi* in Example 3c is a non-DM use. What can the temporal relationships add?

In terms of the temporal relationship, the particle of *Jiushi* lasting for 358 milliseconds was added at the time point of 3:59.317 relative to the ST time 2.209 seconds behind the speaker’s utterance. The target particle was added when the speaker was saying “as it” in the ST. The addition of the target particle followed “*ye*”, before the English word “piano” in the TT. The pause of 856 milliseconds observed before “*ye*” in the TT was due to the fact that the interpreter was waiting for the speaker to utter the word “piano” in English to proceed with interpreting, not as a result of processing problems. No elongation of the target particle was present, nor were repetitions or hesitations observed to indicate possible processing difficulties on the part of the trainee interpreter. This reduces the likelihood of the target particle being viewed as filler.

The third position observed in the use of *Jiushi* is **S1** ◦ *Jiushi* + **S2** ◦ as indicated in Example 3d.

Example 3d:

ST in English:

When you're playing a string instrument, if you're to increase the volume, tell me if I am wrong, you bow harder.

TT in Chinese:

你演奏弦樂的時候怎樣怎樣加大音量呢？就是拉弓的時候更用力。

Romanized and Word-for-word TT:

ni	yanzou	xianyue	de	shihou
you	play	string music	ASSOC	time

zhenyang	zhenyang	jia	da	yinliang	ne
how	how	add	big	volume	PRT

<u>jiushi</u>	la	gong	de	shihou	geng	yongli
precisely be	pull	bow	ASSOC	time	more	hard

BT:

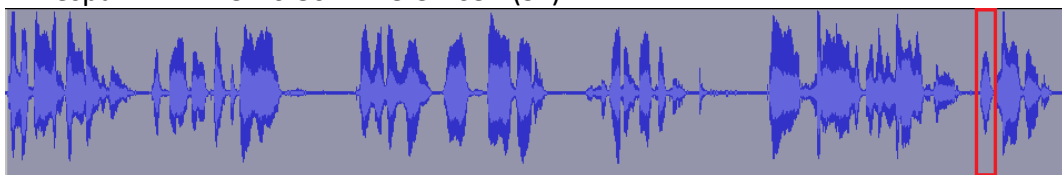
'When you play the string instruments, how do you increase the volume? You pull the string harder.'

Results by the Parser:

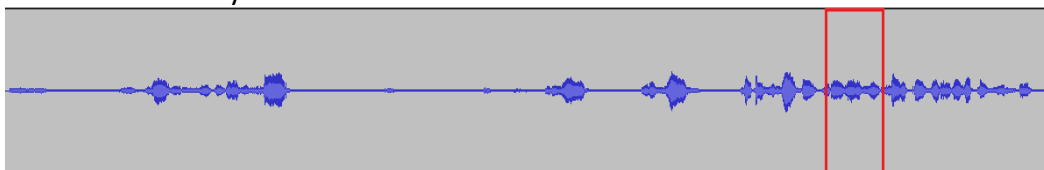
S(agent:NP(predication:S • 的 (head:S(agent:NP(Head:Nhaa: 你)|Head:VC2: 演奏 |goal:NP(Head:Nad: 弦樂))|Head:DE: 的)|Head:Nad: 時候)|manner:Dh: 怎樣 |manner:Dh: 怎樣 |Head:VC2: 加大 |goal:NP(Head:Nad: 音量)|particle:Tc: 呢)#?(QUESTIONCATEGORY) S(uncondition:Cbba:就是|theme:NP(property:V • 的 (head:VA4:拉弓|Head:DE:的)|Head:Nad:時候)|manner:Dh:更|Head:VH11:用力)#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 15:46.861 – 15:57.651 (ST)



when you're playing a string instrument if you're to increase the volume tell me if I am wrong you bow harder she's not answering that's ok and similarly if you have a wind instrument you blow harder



你演奏弦樂的時候怎樣怎樣加大音量呢就是拉弓的時候更用力

In Example 3d as reported by the parser, the discourse role of *Jiushi* is uncondition, whose discourse function is to mark an assumption made by the speaker. In this example, the assumption refers to the action to bow the string harder if one is to increase the volume of the string instrument. In this case, it would seem logical that the discourse role reported by the parser fits into the condition under which *Jiushi* is indicating propositional use to mark an assumption. However, pragmatically, it can be argued that as well as marking assumption, *Jiushi* appears to help refer the listeners to the earlier topic in the first discourse segment, which is “if you are to increase the volume of a string instrument while playing it”. And, according to Liu (2009), when the particle of *Jiushi* is used as a DM, it does help to refer to an earlier topic. Under the circumstances, there is a possibility that *Jiushi* could be suggesting DM use and hence reduced in its propositional meaning. Investigating the target particle based on syntactic features may yield more clues.

As far as syntactic features are concerned, the addition of *Jiushi* in the TT complies with the form of **S1 ◦ DM + S2**, although the first discourse segment in this example ends with a question mark. Nonetheless, it can be seen that the removal of the target particle from the TT greatly undermines the connection between the two discourse segments, leaving the two discourse segments much less relevant as the emphasis on the action disappears. Therefore, the removal of the target particle from the TT tends to make the two relevant discourse segments two independent events and also out-of-context to follow. In other words, the preservation of the target particle should be regarded as necessary, not syntactically optional. Using Schiffrin’s notion, it can be said that the target particle *Jiushi* brackets the talk into two units, with each of them encoding a complete message to demonstrate one feature of DMs. Based on the adopted features so far, one may feel that *Jiushi* in this example sees equal chances of being used as a DM or as a conjunction. So, examining the particle’s temporal relationships may be helpful to gain insight into the use of *Jiushi* in Example 3d.

In terms of the temporal relationship, the particle of *Jiushi* lasting for 590 milliseconds was added at the time point of 15:55.459 relative to the ST time 1038 milliseconds

behind the speaker’s utterance. The target particle was added when the speaker was saying “you” in the ST. The addition of *Jiushi* in the TT followed a pause of 107 milliseconds, before the Chinese verb phrase “*lagong*” (‘to bow’). The elongation of the target particle was observed, in particular, “*shi*” was elongated out of “*Jiushi*”, to last for 346 milliseconds out of 590 milliseconds, indicating possible processing difficulties or that the interpreter was waiting for the speaker to feed in more information. The expression “Tell me if I am wrong” in the ST was left untranslated by the trainee interpreter in the TT presumably because, without interpreting it, the gist remained unaffected. Meanwhile, the speaker was being humorous using such an expression. However, the elongation of the target particle observed in the TT, regardless of the reasons, may increase its likelihood of being perceived as a filler that would disrupt fluency.

5.3.5 The discourse roles of *Lai*

All added particles of *Lai* in the TT in my data are sentence-medially located. Only one discourse role was observed in the use of *Lai*, which is deixis as shown in Example 4a.

Example 4a:

ST in English:

Sound produced can be greater or less at the pleasure of the player.

TT in Chinese:

所以說音符的音量就完全由可以由演奏者來控制。

Romanized and Word-for -word TT:

suoyi	shuo	yinfu	de	yinliang	jiu	wanquan
so	say	note	ASSOC	volume	next	completely

you	keyi	you	yanzouzhe	<u>lai</u>	kongzhi
by	can	by	performer	come	control

BT:

‘So, the volume of the note can be completely controlled by the performer.’

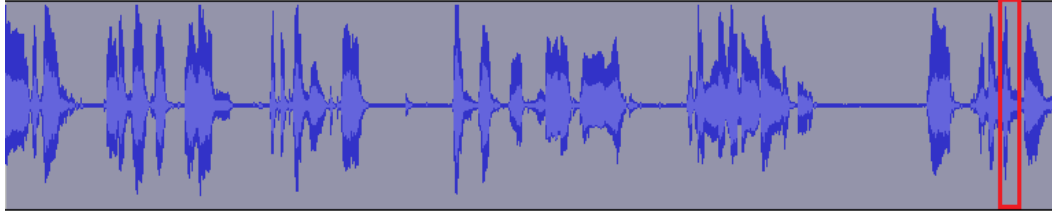
Results by the Parser:

VP(result:Cbca:所以|Head:VE2:說|goal:S(agent:NP(property:N•的(head:Nac:音符|Head:DE:的)|Head:Nad:音量)|time:Dd:就|quantity:Dab:完全

|agent:PP(Head:P06: 由)|deontics:Dbab: 可 以 |reason:PP(Head:P06: 由 |DUMMY:VP(Head:VC2:演奏 |goal:NP(Head:Nab:者)))|deixis:Dbab:來 |Head:VC2: 控制))# ◦ (PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 19:22.658 – 19:30.167 (ST)



sound produced can be greater or less at the pleasure of the player this was absolutely unique it has never been done before and as I've just said



所以說呢音符的音量就完全由可以由演奏者來控制

In Example 4a, the discourse role of *Lai* as reported by the parser is deixis, whose discourse function is to mark the tendency of a movement. The tendency of a movement in this example refers to the action to be taken by the performer while performing, namely, to control the volume of the musical note. Under the circumstance, it is tempting for one to think that the discourse role of *Lai* reported by the parser in this example is indeed deixis as it is followed by a Chinese verb “*kongzhi*” (‘control’) to suggest propositional use. However, are there other possibilities for the use of *Lai* if different criteria are adopted?

Syntactically speaking, the addition of *Lai* in the TT fits into neither **S1** ◦ **DM** + **S2** nor **S1** ◦ **DM** + **S2**. Yet, this does not necessarily suggest that *Lai* is excluded from being considered as a potential DM. In particular, removing the target particle from the TT does not affect the understanding of the text, meaning that either the addition or the removal of the target particle from the text is syntactically optional, hence demonstrating one feature of DMs. From the perspective of Schiffrin’s notion, on the other hand, it can be said that *Lai* can hardly bracket the talk into two units as neither the unit preceding nor following the particle *Lai* encodes a complete message but

rather this would be separating the message into bits and pieces. So, it appears that using the adopted criteria over the course of examining the target particle in this example, no consensus can be reached and would therefore require listener survey for identification at a later stage. However, before resorting to listener survey, the temporal relationship may help offer more clues on the discourse role of the target particle.

In terms of the temporal relationship, the particle of *Lai* lasting for 158 milliseconds was added at the time point of 19:29.189 relative to the ST time 393 milliseconds behind the speaker's utterance. The target particle was added when the speaker was saying "just" in the ST. The addition of *Lai* followed "*yanzouzhe*" ('performer'), before the Chinese verb "*kongzhi*" in the TT. No pause, repetitions or hesitation phenomena were observed surrounding the target particle in the TT, nor was elongation of the target particle observed. It is, however, interesting to note that a filled pause "uh" of 244 milliseconds was observed before "*yinfu*" ('musical note') at an earlier stage in the TT, indicating possible processing difficulty facing the trainee interpreter presumably due to her own idea to provide more explanation for the English word "sound" when interpreting it into Chinese. Given that this filled pause is distant from the target particle in the TT, it should have limited effect on the perception of the target particle as filler, though such a possibility cannot be totally ruled out.

Similar to Example 4a, Example 4b also demonstrates the use of *Lai* in the medial position of a discourse segment.

Example 4b:

ST in English:

You put your finger on it, you could give it a slight wavering sound because it touches the string. And also, to a very very small amount, you could you could change the volume.

TT in Chinese:

我們也可以通過將手指放在琴絃上來控制它的聲音。

Romanized and Word-for-word TT:

women	ye	keyi	tongguo	jiang	shouzhi
we	also	can	through	will	fingers

fang zai qinxian shang lai kongzhi
 put at string on come control

ta de shengyin
 it GEN sound

BT:

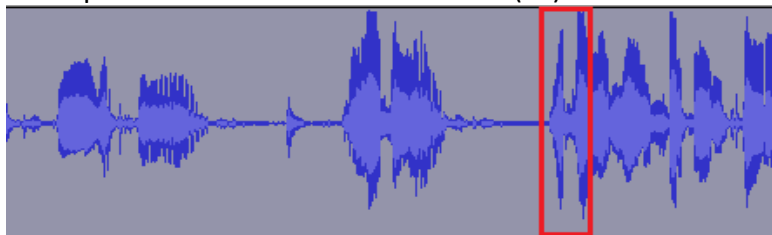
'We can also put the finger on the string to control its sound.'

Results by the Parser:

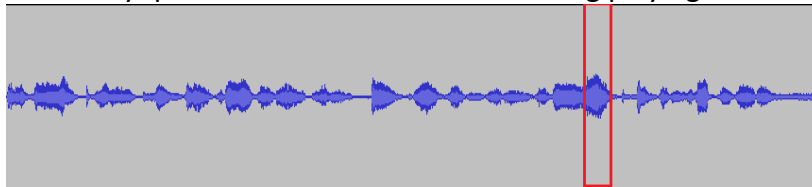
S(agent:NP(Head:Nhaa:我們)|evaluation:Dbb:也|deontics:Dbab:可以|Head:VC2:通 過 |location:PP(Head:P07: 將 |DUMMY:NP(Head:Nab: 手 指))|complement:VP(Head:VC33: 放 |theme:NP(property:VP • 的 (head:VP(condition:PP(Head:P21:在|DUMMY:NP(Head:Nab:琴絃))|Head:VA11:上 來 |complement:VP(Head:VC2: 控 制 |goal:NP(Head:Nhaa: 它)))|Head:DE: 的)|Head:Nad:聲音)))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 10:35.030 – 10:38.536 (ST)



extremely quiet in other words if I'd be sitting playing



我們也可以通過將手指放在琴弦上來控制它的聲音

In Example 4b, when the particle of *Lai* appears in the form of Verb + *Lai* (i.e. Shang + *Lai*, meaning go up in English), the parser categorizes *Shanglai* as a fixed collocation in Chinese. Therefore, it is assessed by the parser that *Shanglai* is a verb phrase whose discourse role is head, to form the center of a piece of information. But in fact, the particle of *Shang* ('up') in the context is used to modify where the performer should place his/ her fingers, namely, on the string. The particle of *Lai* is used to suggest the future action to be taken by the performer as its pragmatic usage, namely, to control the volume of the string instrument. It can be argued that the particle of *Lai* should be

separated from *Shanglai* to be treated as a deictic for investigation, not together with the particle *Shang*. In this example, based on the results by the parser, it is difficult to investigate whether the propositional meaning of the particle of *Lai* has undergone reduction or not. However, investigating the target particle syntactically may help to shed more light on its discourse role.

As far as syntactic features are concerned, the addition of *Lai* in the TT fits into neither **S1 › DM + S2** nor **S1 ◦ DM + S2**, which reduces its likelihood of indicating DM use. However, the removal of the target particle from the TT does not undermine understanding of the text, which suggests that *Lai* is syntactically optional, hence demonstrating one feature of DMs. It can also be said that the particle of *Lai* brackets the talk into two units, with each unit encoding a complete message in the TT, demonstrating another feature of DMs. So, syntactically, based on the features adopted for investigation, one may be inclined to think that the addition of *Lai* should indicate DM use. However, an interesting phenomenon was observed, namely the elongation of *Shang* before *Lai*, which would influence how the use of *Lai* is perceived, to be discussed in detail in the following paragraph.

In terms of the temporal relationship, the particle of *Lai* lasting for 147 milliseconds was added at the time point of 10:37.494 relative to the ST time 5.394 seconds behind the speaker's utterance. The long ear-voice-span, which is 5.394 seconds in this example, may result from the fact that the speaker was feeding more information to the audience so the trainee interpreter was waiting for more information to digest for interpretation, in other words, information density was high. The target particle was added when the speaker was saying "if I" in the ST. The addition of the target particle followed the particle of "*shang*", before "*kongzhi*" in the TT. Although no elongation of the target particle, pauses, or repetitions surrounding the target particle were observed, the elongated *shang* before *Lai* was observed. As the elongated *shang* co-occurred with the target particle of *Lai*, this may signal to the audience that the trainee interpreter may be experiencing processing difficulties and hence hesitation phenomena together with the use of *Lai*. This would increase the possibility of *Lai* being perceived as filler.

5.3.6 The discourse roles of *Zhe*

In the addition of the particle *Zhe* in the TT, only one discourse role with one position was observed: S1 , *Zhe* + S2 as shown in Example 5.

Example 5:

ST in English:

A very phone-like thing to do, yes.

TT in Chinese:

對，這是手機要做的功能。

Romanized and Word-for-word TT:

dui	<u>zhe</u>	shi	shouji	yao	zuo	de
yes	in this case	is	cell phone	want	do	NOM

gongneng
function

BT:

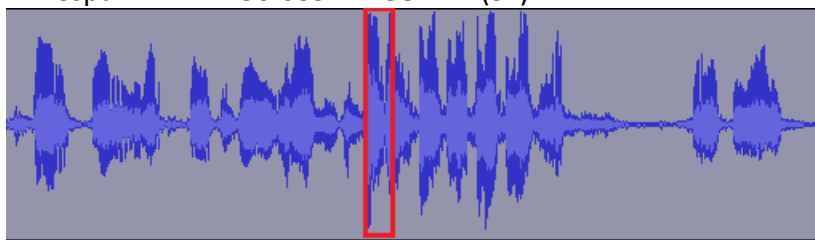
'Yes, this is a function a phone would do.'

Results by the Parser:

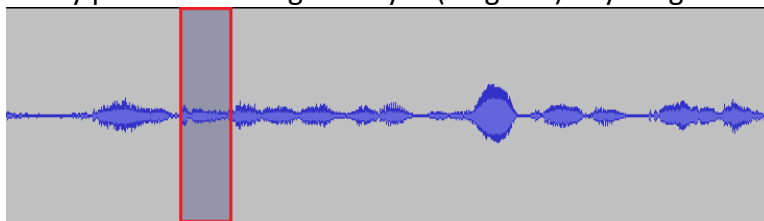
VP(Head:VH11:對)#,(COMMACATEGORY) S(theme:NP(Head:Nep:這)|Head:V_12:是|range:NP(predication:S • 的(head:S(agent:NP(Head:Nab:手機)|deontics:Dbab:要|Head:VC31:做)|Head:DE:的)|Head:Nac:功能))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 1:36.039 – 1:38.277 (ST)



a very phone-like thing to do yes (laughter) anything else



對這是手機要做的功能

In Example 5 as reported by the parser, the discourse role of the particle *Zhe* is head,

whose discourse function is to mark the center of a piece of information. It is categorized as a determiner or a demonstrative by the parser to specify the object or the subject matter that is being referred to. In this example, the subject matter being referred to is “a function a phone would do” that forms the information center of the second discourse segment, which is linked to a wide range of things one can do using a phone. Following such a notion, it is tempting for one to think that *Zhe* may be suggesting propositional use as reported by the parser and may not have undergone reduction in its meaning. What if different criteria are used for investigation? Is it going to be a different story?

Syntactically, the addition of *Zhe* fits into the canonical form of **S1** · **DM** + **S2**. It can also be said that the removal of *Zhe* from the TT barely influences our understanding of the text, making the target particle syntactically optional and hence manifesting another feature of DMs. Nevertheless, it is stretching to say that the target particle brackets the talk into two units in the TT based on Schiffrin’s notion. How so? The first discourse segment, which is “*dui*” in the TT hardly encodes any complete message; rather, it is more confirming or stressing that the answer is correct and is also a result of direct translation from the ST. It appears that in Example 5, the target particle sees equal opportunities to indicate both DM and non-DM use, which requires listener survey for clarification at a later stage. Nonetheless, is it also possible that the target particle may function differently, in addition to either DM or non-DM use?

As far as the temporal relationship is concerned, the particle of *Zhe* lasting for 152 milliseconds was added at the time point of 1:36.410 relative to the ST time 803 milliseconds behind the speaker’s utterance. The target particle was added when the speaker was laughing after he said “yes” in the ST. The addition of the target particle followed a pause of 48 milliseconds, before *shi* in the TT. No repetitions or hesitation phenomena surrounding the target particle were observed, nor was the target particle elongated to indicate processing difficulties on the part of the trainee interpreter, reducing the likelihood of fluency having been disrupted with the use of the target particle.

5.3.7 The discourse roles of Name

In the addition of the particle *Name* in the TT using the parser, only one discourse role and one position was observed: S1 ◦ *Name* + S2, as shown below in Example 6a and 6b.

Example 6a:

ST in English:

Keyboard, right. How would the sound be produced?

TT in Chinese:

沒錯，是鍵盤。那麼聲音是怎麼發出的？

Romanized and Word-for-word TT:

meicuo	shi	jianpan	<u>name</u>	shengyin	shi
not wrong	is	keyboard	in that way	sound	is

zhenme	fachu	de
how	produce	NOM

BT:

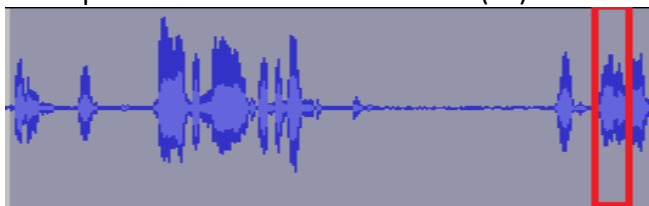
'How is the sound produced?'

Results by the Parser:

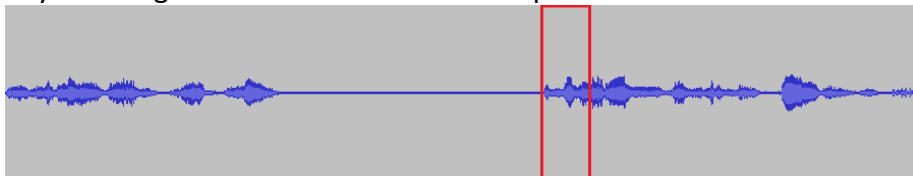
VP(negation:Dc: 沒 |Head:VH12: 錯)#,(COMMACATEGORY) VP(Head:V_12: 是 |range:NP(Head:Nab: 鍵盤))# ◦ (PERIODCATEGORY) S(evaluation:Dk: 那麼 |time:NP(Head:Nad: 聲音)|Head:V_12: 是 |range:VP(head:VP(reason:Dj: 怎麼 |Head:VC31:發出)|Head:DE:的))#?(QUESTIONCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 1:14.509 – 1:18.312 (ST)



Keyboard right how would the sound be produced what in other words is it



沒錯是鍵盤那麼聲音是怎麼發出的

In Example 6a, the discourse role of the particle *Name* as reported by the parser is

evaluation, whose discourse function is to mark some extent of assessment by the speaker. In this example, the speaker is assessing the ways in which the sound is produced when performing with the musical instrument. The report by the parser would seem logical in this context and one may be inclined to think the target particle is indicating propositional use as suggested by the parser, without reduction in its propositional meaning. Nonetheless, pragmatically, it can be argued that, apart from marking assessment by the speaker, the target particle also appears to have indicated topic shift from confirming the correct answer is keyboard to asking the question about the production of the sound, in order to relate the two segments. If this is the case, it is possible that the target particle may have undergone reduction in the meaning of marking assessment and hence show DM use. Under the circumstance, syntactic features may help distinguish its role.

As far as syntactic features are concerned, the addition of the target particle in the TT fits into the canonical form of **S1 ◦ DM + S2**, which may increase its possibility of being perceived as a DM. It can also be said that the removal of the target particle from the TT does not undermine our understanding of the text, hence making the target particle syntactically optional, demonstrating another feature of DMs, though the intensity of connection between the two discourse segments is weakened to a small extent. The target particle brackets the talk into two units, with each unit encoding a complete message, manifesting another feature of DMs. Judging from the adopted features so far, it seems that the target particle in Example 6a is likely to have been used as a DM. In addition, is it likely that *Name* could function differently from the perspective of temporal relationship?

In terms of its temporal relationship, the particle of *Name* lasting for 124 milliseconds was added at the time point of 1:16.834 relative to the ST time 1397 milliseconds behind the speaker's utterance. The target particle was added when the speaker was saying "in other" in the ST. The addition of the target particle in the TT followed a pause of 1022 milliseconds, before "*shengyin*" ('sound'). The pause observed before the target particle in the TT appears to have resulted from the pause of 2337 milliseconds

observed in the ST after the speaker finished saying “produced”, not from difficulties in tackling the incoming information. No repetitions or hesitations observed surrounding the target particle were observed, nor was elongation of the target particle observed to indicate possible processing difficulties.

Another example in the use of *Name* is as follows, in the form of S1 ◦ *Name* + S2 in Example 6b.

Example 6b:

ST in English:

Did you find that interesting? (...) Did anyone else around the table here study computer science when they were at school?

TT in Chinese:

你認為電腦科技有趣嗎？那麼在座的還有哪位學過電腦科技嗎？

Romanized and Word-for-word TT:

ni	renwei	diannao	keji	youqu	ma
you	think	computer	technology	intersteing	PRT

<u>name</u>	zaizuo	de	hai	you	nawei
in that way	audience	NOM	still	have	who

xue	guo	diannao	keji	ma
learn	EXP	computer	technology	PRT

BT:

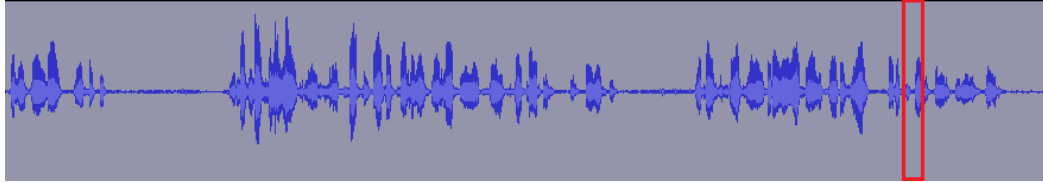
‘Do you think computer technology is interesting? Did anyone else in the audience learn computer technology?’

Results by the Parser:

S(agent:NP(Head:Nhaa:你)|Head:VE2:認為|goal:S(theme:NP(property:Nab:電腦|Head:Nac: 科 技)|Head:VH11: 有 趣 |particle:Td:嗎))#?(QUESTIONCATEGORY)S(evaluation:Dk:那麼|reason:VP(manner:V • 地(head:VA13:在座|Head:DE:的)|evaluation:Dbb:還|Head:V_2:有|range:DM:哪 位)|Head:VC2:學|aspect:Di:過|goal:NP(property:Nab:電腦|Head:Nac:科 技)|particle:Td:嗎)#?(QUESTIONCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 6:24.842 – 6:37.375 (ST)



did you find that interesting I...I...that's a very good point I want to make later in my talk so thank you that's very useful Ok sure hands did anyone else around the table here study computer science when they were at school



你認為電腦科技有趣嗎那麼在座的還有哪位學過電腦科技嗎

In Example 6b, the discourse role of *Name* as reported by the parser is evaluation, whose discourse function is to mark certain degrees of assessment by the speaker. By evaluation in this example, the speaker is assessing how many people may have learnt computer technology in the audience. Similar to the case in Example 6a, the discourse role identified by the parser may seem logical in this context to suggest propositional meaning, without reduction. Nonetheless, pragmatically, it can be argued that the particle of *Name* signals a shift in the topic from how many people think computer technology is interesting in the first discourse segment to who else in the audience may have learnt it at school. On such a premise, it is likely that the propositional meaning of marking assessment reported by the parser may have experienced reduction and hence possible DM use. Against this backdrop, will the target particle show all the possible syntactic features of DMs?

From the perspective of syntactic features, the addition of the target particle fits into the canonical form of **S1** ◦ **DM** + **S2** to appear in the initial position in a discourse segment, which increases its possibility of being viewed as a DM. In addition, it can be said that the removal of the target particle from the TT barely affects our understanding of the text, hence making the target particle syntactically optional (though the preservation of the target particle to signal topic shift is much preferred). Apart from this, are there other possibilities with the use of the target particle?

From the perspective of the temporal relationship, the particle of *Name* lasting for 287 milliseconds was added at the time point of 6:33.075 relative to the ST time 1966 milliseconds behind the speaker's utterance. The particle was added when the speaker was pronouncing "compu-" out of "computer". The addition of the target particle followed a pause of 5830 milliseconds, before the elongated "*zaizuode*" ('people in the audience') in the TT. It should, however, be pointed out that the (...) part in the ST was left untranslated by the trainee interpreter presumably because the speaker was making a joke irrelevant to the speech topic before he started asking "Did anyone else here study computer science" in the ST. The untranslated part is shown as follows.

I...I...That's a very good point I want to make later in my talk, so thank you. That's very useful. Ok, sure hands.

This may be able to explain why a pause of 5830 milliseconds was observed before the particle *Name*, perhaps as a result of avoiding interpreting the joke, without which the gist remained intact. Therefore, it can be argued that the pause before *Name* also gave rise to the addition of the particle *Name* in the TT by the trainee interpreter to signal to the listeners that what followed the target particle of *Name* was highly relevant to the speech topic. Although no repetitions surrounding the target particle were observed, nor was elongation of the target particle observed, the co-occurrence of the elongated "*zaizuode*" together with the target particle in the TT may play a role in increasing its possibility of being perceived as a filler that disrupts fluency, aside from indicating possible DM use.

5.3.8 The discourse roles of *Qishi*

Previous studies have suggested that using the expression of "actually" as a DM in English serves to indicate that the utterance that contains it is a response to, or a continuation of, some portion of the prior discourse (Levinson, 1983). However, as pointed out by Liu (2009), no previous Chinese studies have investigated "actually" as a Chinese DM, therefore its discourse role awaits further investigation. Using the parser, only one discourse role of the particle *Qishi* was observed, namely evaluation. Two

positions were observed. The first position observed is when the particle of *Qishi* is placed in the middle of a discourse segment as shown in Example 7a.

Example 7a:

ST in English:

(...) activity. I find they work hard, which I am a teacher I like that. But I- I need to know how to engage with them properly.

TT in Chinese:

那如果我教一些這些很創新的東西呢，我發現他們其實學得挺認真的。

Romanized and Word-for-word TT:

na	ruguo	wo	jiao	yixie	zhexie	hen
in that case	if	I	teach	some	these	very

chuangxin	de	dongxi	ne	faxian	tamen	<u>qishi</u>
innovative	ASSOC	things	PRT	discover	they	actually

xue	de	ting	renzhen	de
learn	CSC	tend to	work hard	NOM

BT:

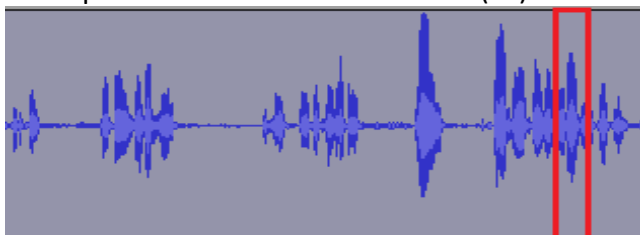
'In that case, if I teach them these innovative things, I discover that they actually tend to work hard'

Results by the Parser:

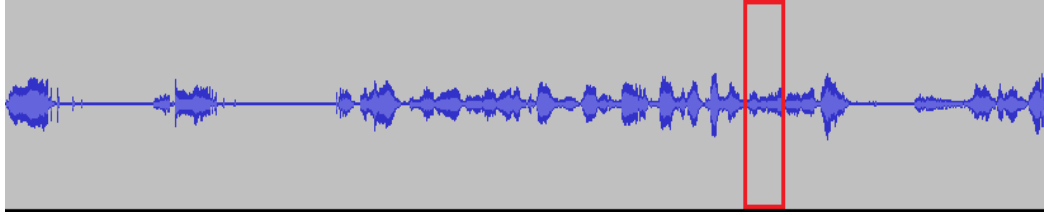
S(evaluation:Dk:那|hypothesis:Cbaa:如果|agent:NP(Head:Nhaa:我)|Head:VC2:教|goal:NP(quantifier:Neqa:一些|predication:VP•的(head:VP(quantity:Neqa:這些|Head:VC2:創新)|Head:DE:的)|Head:Nab:東西)|particle:Tc:呢)#,(COMMACATEGORY) S(agent:NP(Head:Nhaa:我)|Head:VE2:發現|goal:S(agent:NP(Head:Nhaa:他們)|evaluation:Dbb:其實|Head:VC2:學得|complement:VP(head:VP(degree:Dfa:挺|Head:VH11:認真)|Head:DE:的)))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 8:21.070 – 8:32.260 (ST)



activity I find they work hard which I am a teacher I like that but I- I need to know how to engage with them properly



那如果我教一些這些很創新的東西呢我發現他們其實學得挺認真的

In Example 7a, the discourse role of *Qishi* as reported by the parser is evaluation, whose discourse function is to mark a degree of assessment by the speaker. The speaker in this example is assessing how much effort the students have devoted to learning computer technology in class. It would seem logical for one to think that the result reported by the parser is the only possibility with the use of *Qishi* in this example, with no reduction in propositional meaning. However, pragmatically, it can be argued that, with the use of *Qishi*, the speaker appears to have made his opinion less assertive, therefore making the utterance less subjective on his part. In other words, it may be possible that, rather than indicating the propositional use of marking assessment, *Qishi* may be indicating DM use. If this is the case, does it reflect the syntactic features of DMs?

As far as syntactic features are concerned, the addition of the particle fits into neither **S1** ◦ **DM** + **S2** nor **S1** ◦ **DM** + **S2**. However, it can be seen that the removal of the target particle from the TT does not affect understanding of the text, hence making the target particle syntactically optional and manifesting one syntactic feature of DMs. Using Schiffrin's notion, it would be stretching to say that the target particle brackets the talk into two units as the unit before *Qishi*, which is "I find them-", cannot be regarded as encoding a complete message. Based on these features, it may be tempting to think that *Qishi* is more likely to indicate non-DM use than DM use.

In terms of the temporal relationship, the particle of *Qishi* lasting for 226 milliseconds was added at the time point of 8:30.204 relative to the ST time 2286 milliseconds behind the speaker's utterance. The target particle was added when the speaker was saying "to en-" in the ST. The addition of the target particle followed "*tamen*" ('them'), before "*xuede*" ('learn') in the TT. It is noteworthy to point out that "*xuede*" was elongated by the trainee interpreter presumably as a result of processing difficulty in

interpreting the English word “hard” properly into Mandarin. Although no repetitions or pauses were observed surrounding the target particle in the TT, the co-occurrence of the elongated “*xuede*” and the target particle *Qishi* in the TT may deliver a signal to listeners that fluency may have been disrupted, increasing the possibility of *Qishi* being perceived as filler.

Example 7b also demonstrates the use of *Qishi* in the medial position as shown below.

Example 7b:

ST in English:

Computer science is the science of knowing how the computer hardware and software and modeling work.

TT in Chinese:

現在所學的呢根本不是電腦科學，它其實是電腦的硬件軟件這些模型怎麼工作。

Romanized and Word-for-word TT:

xianzai	suoxue	de	ne	genben	
now	learn	NOM	PRT	entirely	
bu	shi	diannao	kexue		
not	is	computer	science		
ta	<u>qishi</u>	shi	diannao	de	yingjian
it	actually	is	computer	NOM	hardware
ruanjian	zhexie	moxing	zhenme	gongzuo	
software	these	model	how	work	

BT:

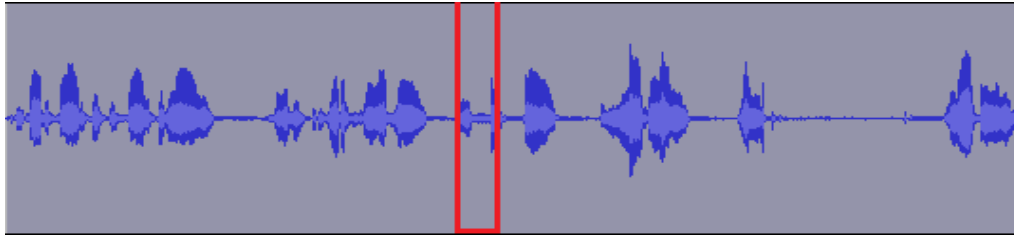
‘What you learn now is not computer science at all. It is actually about how hardware and software works.’

Results by the Parser:

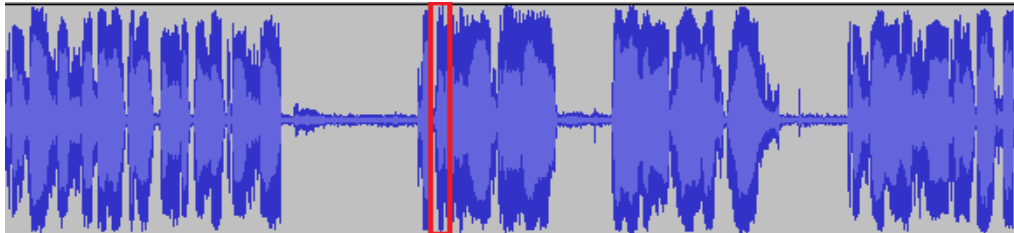
S(theme:VP(time:Nddc: 現在 |quantity:Dab: 所 |Head:VC2: 學 |particle:Ta: 的 |particle:Tc: 呢)|evaluation:Dbb: 根本 |negation:Dc: 不 |Head:V_11: 是 |range:NP(property:Nab: 電 腦 |Head:Nad: 科 學))#,(COMMATEGORY) S(theme:NP(Head:Nhaa: 它)|evaluation:Dbb: 其實 |Head:V_11: 是 |range:NP(property:N • 的 (head:Nab: 電 腦 |Head:DE: 的))|property:Na:硬件 |Head:Nab:軟件)|range:VP(agent:NP(quantifier:Neqa:這些 |Head:Nab:模型)|reason:Dj:怎麼 |Head:VA4:工作))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 9:24.340 – 9:33.803 (ST)



computer science is the science of knowing how the computer hardware and software and modeling work and using them



現在所學的呢根本不是電腦科學它其實是電腦的硬件軟件這些模型怎麼工作

The discourse role of the particle *Qishi* as reported by the parser is once again evaluation, whose discourse function is to mark assessment by the speaker. In this example, assessment by the speaker refers to speaker's own perception and clarifications on the teaching of computer science. Following this logic, it makes sense to regard the results by the parser as suggesting propositional use, without reduction in propositional meaning. Nonetheless, pragmatically, it can be argued that, with the use of *Qishi*, the speaker's statement appears to have become less direct and assertive. If this is the case, it may be possible that the target particle may have experienced weakening in its propositional meaning of marking assessment, hence indicating DM use. If so, does *Qishi* manifest certain syntactic features of DMs?

Syntactically, the addition of *Qishi* in the TT fits neither into **S1** , **DM** + **S2** nor **S1** ◦ **DM** + **S2**. It can be seen that the removal of *Qishi* does not affect the understanding of the TT, making it syntactically optional and reflecting one feature of DMs, although the statement by the speaker appears to be more direct and subjective after the removal of the target particle. As far as bracketing is concerned, it would be stretching to say that *Qishi* brackets the talk into two units as “*ta*” (‘it’) before *Qishi* hardly encodes any message as a single pronoun. Therefore, based on the adopted syntactic features, DM

use and non-DM use of the particle see equal evidence. Temporal relationship may give more insights into other possibilities for this use of *Qishi*.

In terms of the temporal relationship, the particle of *Qishi* lasting for 285 milliseconds was added at the time point of 9:28.432 relative to the ST time 623 milliseconds behind the speaker's utterance. The target particle was added when the speaker was saying "and soft-" in the ST. The addition of the particle followed the Chinese pronoun of "ta", before an elongated "shi". The elongated "shi" that lasted for 837 milliseconds, possibly as a result of waiting for more information input from the speaker, which would probably signal to listeners that information processing on this speech segment is less smooth and hence possible processing difficulties. In other words, the co-occurrence of the target particle together with the elongated "shi" may increase the possibility of the target particle being viewed as disrupting fluency, although no repetitions surrounding the target particle or elongation of the target particle were observed.

Another position observed in the use of *Qishi* is when the particle is placed at the beginning of a sentence in the form of S1 ◦ *Qishi* + S2 as shown in Example 7c.

Example 7c:

ST in English:

I could teach them very boring course, they would do the course, they will pass the exam, they will get the grades but it wouldn't have been a great experience for them.

TT in Chinese:

(...)挺認真的。其實我可以幫他們加這些很無聊的課就讓他們取得個分數過個考試，但是這些沒有意思。

Romanized and Word-for-word TT:

(...) ting renzhen-de

(...) quite diligently

<u>qishi</u>	wo	keyi	bang	tamen	jia	zhexie
actually	I	can	help	them	add	these

hen	wuliao	de	ke	jiu	rang	tamen
very	boring	NOM	lesson	next	let	them

qude ge fenshu guo ge kaoshi
 acquire CL score pass CL exam

danshi zhexie meiyou yisi
 but these not interesting

BT:

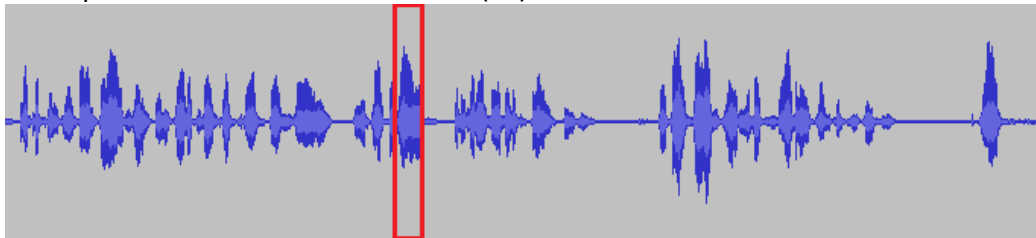
'Actually, I can add these boring lessons to let them get a score and pass the exam, but it's not interesting.'

Results by the Parser:

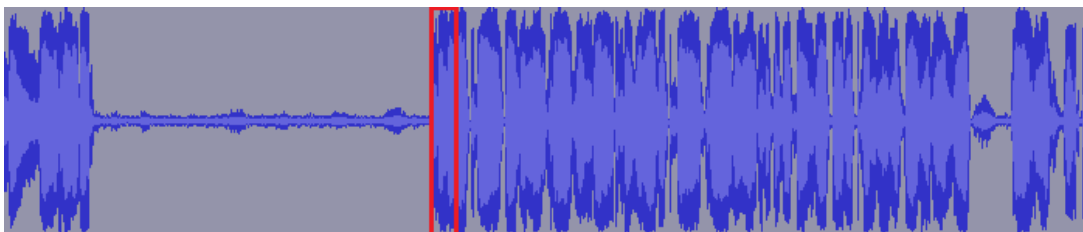
S(evaluation:Dbb: 其實 |agent:NP(Head:Nhaa: 我))|deontics:Dbab: 可以
 |benefactor:PP(Head:P37: 幫 |DUMMY:NP(Head:Nhaa: 他們))|Head:VC33: 加
 |theme:NP(quantifier:Neqa: 這些 |property:VP • 的 (head:VP(degree:Dfa: 很
 |Head:VH11: 無聊))|Head:DE: 的))|Head:Nac: 課)|complement:VP(time:Dd: 就
 |Head:VL4: 讓 |goal:NP(Head:Nhaa: 他們))|theme:VP(Head:VC31: 取得
 |theme:NP(quantifier:Nfa: 個 |property:Nac: 分 數
 |quantifier:NP(degree:VP(Head:VC1: 過))|Head:Nfa: 個))|Head:Nad: 考
 試)))#,(COMMATEGORY) S(contrast:Cbca:但是 |quantity:Neqa:這些 |Head:VJ3:
 沒有 |range:NP(Head:Nac:意思)))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 8:31.347 – 8:42.488 (ST)



I could teach them very boring course they would do the course they will pass the exam they will get the grades but it wouldn't have been a great experience for them they go forward they will have a terrible impression of computing now



(...)挺認真的**其實**我可以幫他們加這些很無聊的課就讓他們取得個分數過個考試但是這些沒有意思

In Example 7c, the discourse role of *Qishi* as reported by the parser is once more evaluation. . In this context, the speaker is assessing how boring it may be if he teaches

students tedious computer lessons only for them to pass the exam, suggesting propositional use without reduction in propositional meaning. Nevertheless, pragmatically, similar to the cases in Example 7a and 7b, it can be argued that with the use of *Qishi* in the TT, the speaker's assessment appears to have become more indirect and less subjective. If this is the case, *Qishi* may have experienced reduction in the propositional meaning of marking assessment, indicating possible DM use. Following that notion, how is this reflected in terms of syntactic features of DMs?

Syntactically, the addition of *Qishi* in the TT fits into Fraser's canonical form of **S1** ◦ **DM** + **S2** to occur in the initial position in a discourse segment. It can also be seen that the removal of the target particle from the TT does not affect understanding of the text, making the target particle syntactically optional, hence demonstrating another feature of DMs. Using Schiffrin's notion, it can be said that the target particle brackets the talk into two units, with each unit encoding a complete message. The segment preceding the particle of *Qishi* is the speech segment of "I find they work hard" as discussed previously in Example 7a. This therefore manifests another syntactic feature of DMs. Based on the adopted syntactic features, it is tempting to think that *Qishi* is more indicating DM use than non-DM use in Example 7c. Could there be another discourse role of *Qishi*?

In terms of the temporal relationship, the particle *Qishi* lasting for 319 milliseconds was added at the time point of 8:35.727 relative to the ST time 3485 milliseconds behind the speaker's utterance. The relatively long pause (i.e. Ear-Voice-Span) of 3485 milliseconds observed was due to waiting for more information input from the speaker to be interpreted by the trainee interpreter, not really from processing problems. Information density could be high in this part of the speech. The addition of the target particle was added when the speaker was saying "grades" in the ST. The addition of the target particle in the TT followed the pause of 3485 milliseconds before "*wo*" ('I'). No repetitions surrounding the target particle were observed, nor was elongation of the target particle observed. However, it could still be possible that listeners would associate the pause of 3485 milliseconds before *Qishi* with hesitation phenomena that

may cause disruptions to fluency in the TT, since they co-occurred. This will therefore require the results from listener surveys to offer more clues.

5.3.9 The discourse roles of *Nage*

In the addition of the particle *Nage* in the TT, only one position - in the middle of a discourse segment - and one discourse role - quantifier - were observed, as shown in Example 8.

Example 8:

ST in English:

But the programs people taught using school in Britain are essentially Microsoft office.

TT in Chinese:

但是現在教的這些學生主要用的呢是 MAC 微軟的那個 OFFICE 軟件。

Romanized and Word-for -word TT:

danshi	xianzai	jiao	de	zhexie	xuesheng	zhuyao
but	now	teach	NOM	these	students	mainly

yong	de	ne	shi	MAC	weiruan	de	<u>nage</u>
use	NOM	PRT	is	MAC	Microsoft	NOM	that

OFFICE	ruanjian
OFFICE	software

BT:

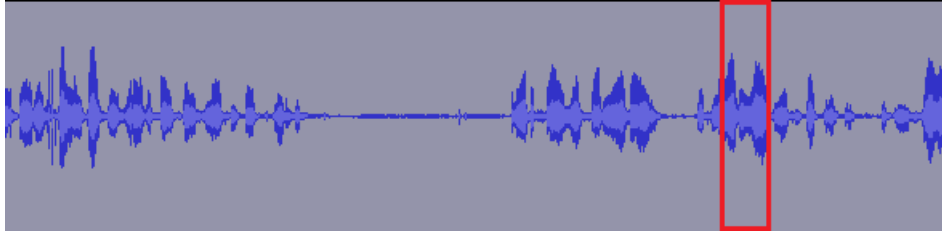
'But the students I teach now mainly use that MAC Microsoft OFFICE.'

Results by the Parser:

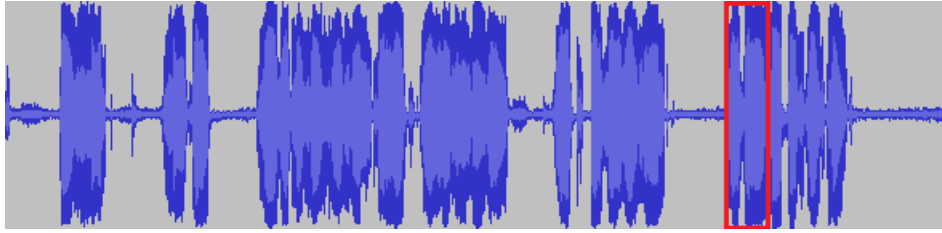
S(theme:S(contrast:Cbca:但是|agent:NP(predication:VP • 的(head:VP(time:Nddc:現在|Head:VC2:教)|Head:DE:的)|quantifier:Neqa:這些|Head:Nab:學生)|quantity:Dab:主要|Head:VC2:用|particle:Ta:的|particle:Tc:呢)|Head:V_12:是|range:NP(property:Nb:Mac|Head:Nba: 微 軟)|particle:Ta: 的 |range:NP(quantifier:DM: 那 個 |property:Nb:office|Head:Nab: 軟 件))#。(PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 9:51.322 – 10:00.754 (ST)



but the programs people taught using school in Britain are essentially Microsoft office I have a son who is 7 years old he can already use Microsoft office he can use word



但是現在教的這些學生主要用的呢是 Mac @微軟的那個 Office 軟件

The discourse role of *Nage* reported by the parser is quantifier, whose discourse function is to modify nouns in terms of quantity or frequency. In this example, the particle of *Nage* is used to modify or to specify the software produced by Microsoft termed Microsoft Office. So it may seem logical for one to think that *Nage* is used to suggest propositional use, without reduction in the meaning. In this sense, does it necessarily suggest that *Nage* is not syntactically optional?

As far as syntactic features are concerned, the addition of the particle *Nage* fits into neither **S1 · DM + S2** nor **S1 ◦ DM + S2**. However, the removal of the target particle from the TT does not affect the understanding of the text, making it syntactically optional whilst demonstrating one feature of DMs. It is a stretch to say that *Nage* brackets the talk into two units as neither unit, preceding or following the particle of *Nage*, encodes a complete message, although one may be able to piece together the idea of the text. Therefore, based on the adopted features, one would probably tend to think that *Nage* is more likely to suggest propositional use in Example 8. Nonetheless, elongation of the target particle was observed, which could lead to other possibilities for the use of *Nage*, to be detailed below.

In terms of the temporal relationship, the particle of *Nage* lasting for 415 milliseconds

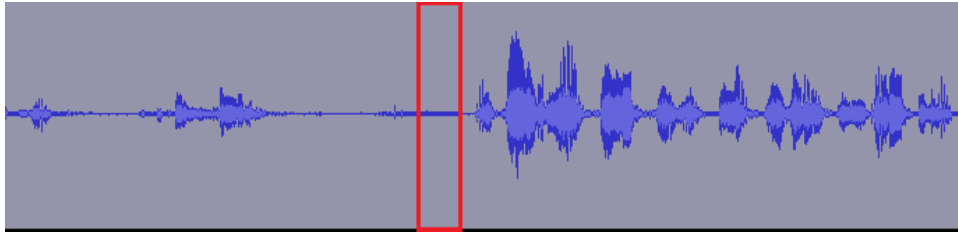
own'

Results by the Parser:

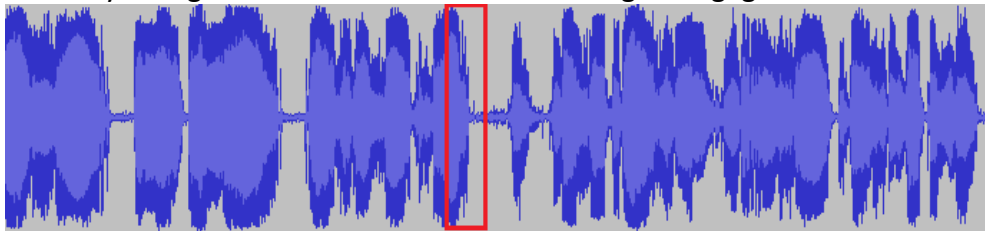
S(contrast:Cbca: 但是 |causer:NP(Head:Nhaa: 我們)|evaluation:Dbb: 並
|negation:Dc:沒有|Head:VL4:讓|goal:NP(Head:Nab:學生)|theme:VP(deixis:Dbab:
去 |manner:VH11: 自主 |Head:VC2: 創新 |complement:VP(Head:VC33: 寫
|theme:NP(quantifier:Neqa: 一些 |property:V · 的 (head:VH11: 全新 |Head:DE:
的)|Head:Nab:東西)))# ° (PERIODCATEGORY)

Temporal Relationship in Both the ST and the TT:

Timespan: 8:15.731 – 8:21.262 (ST)



We did not encourage creativity. We did not encourage initiative which is a shame
I find my foreign students are much more willing to engage in



但是我們並沒有讓學生去自主創新寫一些全新的東西

In Example 9, the discourse role of *Qu* reported by the parser is *deixis*, whose discourse function is to mark the tendency of a movement or actions to be taken in the future. In this context, the future action to be taken refers to the action of writing new computer programs. In this sense, it looks like *Qu* is functioning as a deictic, without reduction in propositional meaning. Does this therefore mean that *Qu* is not syntactically optional?

While the addition of *Qu* in the TT fits into neither **S1** ◦ **DM + S2** nor **S1** ◦ **DM + S2**, the removal of the target particle from the TT does not affect understanding of the text, hence making the target particle syntactically optional and demonstrating one feature of DMs. Based on Schiffrin's notion, *Qu* cannot be said to bracket the talk into two complete units as the unit before *Qu* in the TT, which is "we did not let students" in English, is not a complete message. So far, based on the adopted features, one may be

inclined to think *Qu* is more likely to suggest propositional use. However, it is noteworthy to point out that elongation of the target particle was observed, which would lead to a different use of the target particle, to be detailed below.

From the perspective of the temporal relationship, the particle of *Qu* lasting for 432 milliseconds was added at the time point of 8:18.033 relative to the ST time 1615 milliseconds behind the speaker's utterance. The particle *Qu* was added after the speaker finished saying "creativity", before the starting of a new speech segment in the ST. The addition of *Qu* in the TT followed "*xuesheng*" ('students'), before a pause of 284 milliseconds. The elongation of the target particle together with the pause of 284 milliseconds observed after the target particle may signal both hesitation and processing difficulties on the part of the interpreter, and hence increase the likelihood of the discourse role of *Qu* in Example 9 being perceived as filler .

5.4 Summary

In this chapter, it has been identified that the tendency in using discourse particles in English-to-Chinese SI is different from Chinese SP regardless of the screening criteria. By looking at the general trend including all the occurrences of the surveyed particles, the most frequently utilized particle is *Zhege*, a determiner/quantifier. By looking at the occurrences of only those particles added to the TT without affecting accuracy, the most frequently utilized particle shifted from *Zhege* to *Na*, which is still a determiner/quantifier. What can be concluded is that in English-to-Chinese SI, the most frequently utilized type of discourse particle is determiner/quantifier instead of conjunction as in Chinese SP. The tendency is therefore very different between English-to-Chinese SI and Chinese SP, thus answering the first research question.

This chapter does not give a direct answer to the second research question of how different the discourse functions of the discourse particles can be in SI from SP, but the findings of surveyed particles' discourse functions identified by the parser in SI will serve as an important basis for further comparison and discussion to be integrated into the findings of the listener surveys. In other words, the answer to the second research

question will be presented in detail in the discussion chapter, Chapter 7. And, in identifying the discourse roles of the surveyed particles, a number of criteria have been adopted for the purpose of investigating the possible use of the target particles as DMs. Nonetheless, based on all the examples discussed in detail throughout this chapter, it can be seen that no single criterion can be said to determine the discourse role of the surveyed particles. This provides a valuable platform on which the surveyed particles could be researched further with the use of listener surveys in the next chapter in order to gain insight into how human language users perceive particles in relation to managing and organizing discourse structure.

The contextualization of the temporal relationship for cross-referencing between the ST and the TT throughout the chapter did help to provide a platform on which one can consider how the addition of the surveyed particles may play a role in affecting interpreting fluency and in tackling potential processing difficulties by trainee interpreters, although the extent to which the surveyed particles may affect fluency remains unknown. Building on this, the next step was measuring the use of the surveyed particles quantitatively, from human listeners' point of view. Therefore, Chapter 6 will report findings from the use of listener surveys in addressing the ambiguity faced throughout Chapter 4 and 5 and investigating to what extent the use of the surveyed particles can enhance fluency with the pragmatic functions they offer in a given text.

Chapter 6. Analysis and Results of Listener Surveys

This chapter aims at providing answers to the third research question, *To what extent does the use of discourse particles impact fluency in English-to-Chinese simultaneous interpreting and Chinese spontaneous speech?* through listener surveys. This chapter presents the findings of listener surveys in terms of fluency rating and qualitative judgements of surveyed particles' discourse functions. By comparing fluency ratings across the two scenarios as perceived by human listeners, the current study is able to understand to what extent the use of discourse particles can affect fluency in the scenarios of Chinese SP and English-to-Chinese SI. With the qualitative results, the current study aims to identify the discourse functions of the surveyed particles from the perspective of human listeners. The discourse functions of the surveyed particles identified by listeners can also be associated with what exact contextual coordinates they have provided to the listeners in order to help them comprehend the speech segment.

The reason for employing listener surveys in that, unlike the approach of utilizing a semantic parser in the previous two chapters, human listeners may be able to detect prosodic features absent in the parser over the course of identifying the discourse functions of the surveyed particles, which may contribute different results from those reported by the parser. The results by the parser should be regarded as the basis for investigating whether the surveyed particles may assume other discourse functions when they are perceived by human listeners. In short, the results by the parser and listener surveys are not only interdependent but also complementary.

A total of 19 native Chinese speakers aged between 23 and 27 from Mainland China took part in the surveys. Among them, 11 were from an interpreting background and 8 were from a non-interpreting background. Section 6.1 presents the analysis of the listener surveys. Section 6.2 presents the results of the listener surveys on assessing to what extent the use of the surveyed particles can affect fluency. Section 6.3 presents

the results of listener surveys on identifying the discourse functions of the surveyed particles. Section 6.4 is the summary for this chapter.

6.1 Analysis of Listener Surveys

Over the course of listener surveys, 37 questions were asked to understand how human listeners perceived the use of the surveyed particles in both Chinese SP and English-to-Chinese SI, in terms of fluency based on Likert scale and in terms of discourse functions. Listeners were asked to listen to one speech segment at a time and answer each survey question right after they had listened to each excerpted speech segment where the target particle appeared. 37 speech segment-question pairs were generated and semi-randomized with the aim of reducing the likelihood that listeners would tick the same option for the same particle without considering the context in which it appeared. The use of Likert scale for fluency rating will be able to shed light on the extent to which use of the surveyed particles can influence fluency in the scenario of Chinese SP and SI. Apart from fluency, identifying the discourse functions of the surveyed particles by human listeners will provide insight into the possible prosodic features (e.g. pauses, repetitions, or elongations) absent in the analysis by the parser that could play a role in driving human listeners' decisions on what functions a given particle assumes.

During the survey, participants were divided into two groups, namely, one with prior training as interpreters and one without prior training or knowledge of interpreting. The reason for doing so is because, in addition to investigating fluency and discourse functions, the current study also aims to find out if interpreter training leads to different perceptions of the use of the discourse particles. If so, this would, in terms of interpreter training, imply that trainee interpreters have gradually formed a different approach to using or perceiving discourse particles over the course of interpreter training. In other words, this can lend support to the fact that in interpreter training, a "condensed and clean" rendition is usually preferred, using discourse particles only if it is necessary out of strategic concerns such as making the rendition sound more natural or to fit into the ways in which the target language is expressed (Zhang, 2007).

Over the course of listener surveys, 12 particles were investigated in both Chinese SP and English-Chinese SI. These particles are *Na*, *Suoyi*, *Jiushi*, *Lai*, *Zhe*, *Name*, *Qishi*, *Nage*, *Qu*, *Ranhou*, *Haoxiang*, and *Erqie*. The results of the listener surveys in terms of fluency are presented in section 6.2. These particles were rated on a range from 1 to 5 in terms of whether they enhanced fluency (1 = the surveyed particle is not helpful at all in enhancing fluency, 2 = the surveyed particle is not helpful in enhancing fluency, 3 = no comment, 4 = the surveyed particle is helpful in enhancing fluency, 5 = the surveyed particle is very helpful in enhancing fluency). For each surveyed particle, corresponding discourse functions were provided for the listeners to tick from (i.e. some discourse functions suggest DM use, some do not) as an approach to identify the use of the target particle as DM, non-DM, or fillers instead of asking them to distinguish DMs directly.

6.2 Results of Listener Surveys on Assessing Fluency

6.2.1 Assessment of fluency by non-interpreting listeners

In the group of listeners from non-interpreting background, the results show that scenario (SP vs. SI) is irrelevant to how listeners rate the usefulness of the surveyed particles. As shown in table 6-1, the mean rating of all the surveyed particles utilized in SI is 4.09, slightly higher than 3.72 in SP. However, the difference is not significant ($p = .462$).

Scenario	Fluency Rating
SI	4.09
SP	3.72

Table 6-1 Mean Usefulness Rating by Scenario in Non-T&I⁷ Group

Apart from the mean rating by scenario, the current study also examines if the positions where the surveyed particles appeared in the excerpted speech segment (i.e. following shorter or longer pauses or in the middle of a sentence) could play a role in affecting assessment. The result suggests that position is also irrelevant to how listeners rate the use of the surveyed particles, as the correlation between position and mean usefulness

⁷ T&I: Abbreviation for Translation and Interpretng.

rating of the surveyed particles is not significant ($p = .979$).

Looking at the mean rating of particles in the group of listeners from non-interpreting background, the results show that the particle of *Erqie* outweighed the others to be rated as the most useful particle in enhancing fluency in both the scenario of SP and SI, with a mean rating of 4.31. Other particles such as *Suoyi*, *Qu*, *Name*, *Qishi*, and *Zhe* were also rated as useful, with a mean rating of 4 or slightly over 4 as shown in table 6-2. The particles *Lai*, *Haoxiang*, *Jiushi*, *Ranhou*, *Na*, and *Nage* were rated as somewhere between no comment and useful, with a mean rating of 3 to 4 individually. This suggests that it is at the will of the user to either preserve or remove these surveyed particles depending on the circumstance, and the fluency of the excerpted speech is not affected. To be more specific, for particles with a mean rating of over 3.5, the listeners would prefer to preserve them and tend to consider them useful. For those scoring over 3 but less than 3.5, the listeners consider them slightly useful but they can still be removed from the excerpted speech segment at the will of the user.

Particle	Fluency Rating
Erqie	4.31
Suoyi	4.25
Qu	4.13
Name	4.06
Qishi	4.05
Zhe	4.00
Lai	3.96
Haoxiang	3.81
Jiushi	3.63
Ranhou	3.54
Na	3.17
Nage	3.09

Table 6-2 Mean Rating by Particle in Both Scenarios in Non-T&I Group

6.2.2 Assessment of fluency by trainee interpreters

In the group of trainee interpreters, the results also show that scenario (SP vs. SI) is irrelevant to how trainee interpreters rate the usefulness of the surveyed particles. As shown in table 6-3, the mean rating of all the surveyed particles utilized in SI is slightly

higher than in SP, 3.57 as opposed to 3.30. However, the difference is not significant ($p = .204$).

Scenario	Fluency Rating
SI	3.57
SP	3.30

Table 6-3 Mean Usefulness Rating by Scenario by Trainee Interpreters

Similar to section 6.2.1, apart from scenario, the current study also examines if positions where the surveyed particles appeared in the excerpted speech segment could play a role in affecting assessment by trainee interpreters. The results indicate that position is irrelevant to how trainee interpreters rate the surveyed particles. In particular, the difference between position and the mean usefulness rating of the surveyed particles is not significant ($p = .391$) in the group of trainee interpreters.

Looking at the mean rating by particles in the group of trainee interpreters, the results show that the particle of Erqie outweighed the others to be rated as the most useful particle in enhancing fluency by trainee interpreters, with a mean rating of 3.95. Other particles such as *Suoyi*, *Zhe*, *Qishi*, *Lai*, and *Qu* scored an average of over 3.5 but less than 3.95, as shown in Table 6-4. For particles in this range, listeners would prefer to preserve them and tend to consider them useful in enhancing fluency. *Haoxiang*, *Ranhou*, *Name*, *Jiushi*, *Na*, and *Nage* scored an average of over 3 but less than 3.5. For particles in this range, listeners would tend to consider them slightly useful in enhancing fluency but they can be removed at the will of the user. It is interesting to note that the particle of *Nage* scored an average of 2.43. For particles in this range, listeners would prefer to remove them and tend to consider them not useful in enhancing fluency in the excerpted segments.

Particle	Fluency Rating
Erqie	3.95
Suoyi	3.82
Zhe	3.82
Qishi	3.76
Lai	3.70
Qu	3.68
Haoxiang	3.45
Ranhou	3.45
Name	3.41
Jiushi	3.30
Na	3.21
Nage	2.43

Table 6-4 Mean Usefulness Rating by Particles in Both Scenarios by Trainee Interpreters

6.2.3 Fluency as perceived by the two listener groups

Across the two listener groups, it can be seen that scenario and position have nothing to do with how they rated the use of the surveyed particles in terms of effect on fluency. It is however interesting to point out some observations across the two groups on assessing fluency. For example, in the group of listeners from non-interpreting background, the overall mean rating of all the surveyed particles utilized in SI is 4.09 and 3.72 in SP as showcased in table 6-1. In the group of trainee interpreters, the overall mean rating of all the surveyed particles utilized in SI is 3.57 and 3.30 in SP as showcased in table 6-3. It can be said that across the two groups, the overall mean ratings in both scenarios rated by the group of non-interpreting listeners are higher than the group of trainee interpreters. This implies that in assessing the use of the surveyed particles, trainee interpreters tend to be stricter than their counterparts from non-interpreting background.

Moreover, on the mean rating by particles in the group of non-interpreting listeners, 6 out of 12 (50%) surveyed particles scored 4 or above to be viewed as useful as showcased in table 6-2. In contrast, in the group of trainee interpreters, none of the surveyed particles scored 4 or above. Only 6 out 12 surveyed particles scored between 3.5 and 3.95, and the particle of *Nage* even scored less than 3, meaning it was viewed as not useful by trainee interpreters. The difference in assessing fluency with the use of

the surveyed particles across the two groups is significant ($p = .000$), suggesting that compared to listeners from non-interpreting background, trainee interpreters tend to have formed a different perspective in terms of how discourse particles are used, which has been embodied in their ratings. This perhaps has to do with the ways in which they have been trained, namely, always keep the rendition condensed. Consequently, the use of discourse particles or the addition of discourse particles may be considered somewhat extraneous if trainee interpreters have other strategies in their tool box to choose from to enhance the fluency of their renditions. One similarity is however observed across the two groups. The particles *Erqie* and *Suoyi* ranked top two in enhancing fluency, although the scores in the group of trainee interpreters are lower compared to the non-interpreting group. Having reported the results of listener surveys on how individual particles may affect fluency in 6.2, 6.3 reports the findings of listener surveys on identifying the discourse functions of the surveyed particles by the non-interpreting group of listeners.

6.3. Identifying Discourse Functions by the Non-Interpreting Listener Group

Starting from section 6.3.1, the findings on the discourse functions of the surveyed particles will be reported case by case, since the discourse roles of the surveyed particles are case-dependent. Over the course of identifying the discourse functions of the surveyed particles, the discourse functions of the surveyed particles are divided into three categories, namely, propositional meanings, DM use, and fillers. The category of propositional meaning is based on the results of the parser as reported in the previous two chapters. The category of DM use is based on existing literature establishing the use of the surveyed particles as discourse markers. And, given that the use of the surveyed particles does not necessarily suggest either propositional meaning or DM use, a third category, fillers⁸, was therefore created to indicate that the use of the particles may be extraneous and not necessary in the given text as perceived by listeners.

⁸ To distinguish between fillers and verbal fillers in the present study, the former refers to part of hesitation disfluencies phenomena (Corely, 2008) that disrupt fluency of discourse, whereas the latter refers to the DM use of serving as a thinking buffer relevant to discourse management (Liu, 2009) that does not necessarily disrupt fluency.

In Chapter 4 and 5, based on frequency count, it was identified that the particles *Suoyi*, *Jiushi*, *Lai*, *Qishi*, *Nage*, and *Qu* had an average of at least one occurrence per thousand words in the scenario of SP and SI. These particles will therefore be compared to investigate whether their discourse functions differ in the two scenarios. In Chapter 4 and 5, a number of criteria were utilized to assess the discourse roles of individual particles. But, with different criteria pointing in different directions, it has been admittedly challenging to determine their usage. The results of listener surveys are therefore able to help address the issue from human listeners' perspectives. The usage of each particle mentioned in the previous two chapters will be presented according to the results of listener surveys throughout this chapter. 6.3.1 starts with identifying the discourse functions of *Na* by the non-interpreting group of listeners.

6.3.1 The discourse functions of *Na*

According to listener surveys, *Na* was observed to have four discourse functions as manifested in figure 6-1. Among them, the propositional use to mark assessment by the speaker accounts for 9.8% of its usage as perceived by non-interpreting listeners. The DM use of the particle accounts for 63.9% of its perceived usage, with indicating topic shift at 45.1% and adding new information at 18.8%. Using *Na* as filler accounts for 26.3% of its perceived usage. In general, it can be said that *Na* is highly likely to be viewed as a DM.

Liu's (2009) work suggested that when used as a DM, *Na* has two discourse functions. It should serve to indicate topic shift within a turn and initiate a new topic. Xu's (2008) work held the same view that when used as a DM, *Na* functions to initiate discourse topic and indicate topic shift. Judging from the results of listener surveys, the discourse function of *Na* to indicate topic shift is frequently observed, consistent with both Liu's and Xu's findings on this particular discourse function. The function of initiating a new topic is however not found in my data. Instead, the discourse functions of *Na* to add information in discourse is observed.

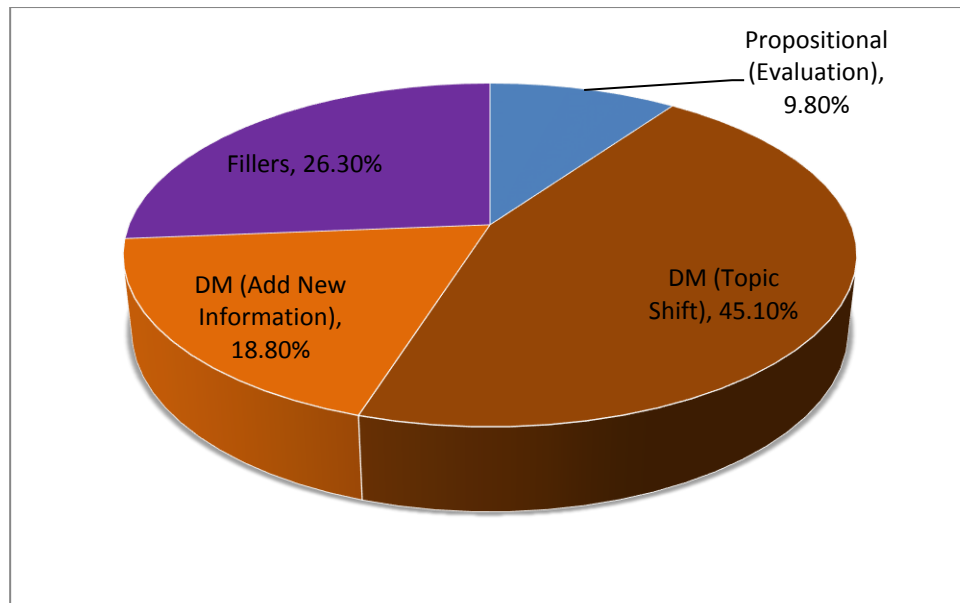


Figure 6-1 Uses of *Na* as Perceived by Non-Interpreting Group

The particle of *Na* was discussed previously in Examples 1a, 1b, and 1c in Chapter 5 on determining its discourse roles and discourse functions based on the adopted criteria. As shown in table 6-5, when *Na* co-occurs with a pause of 84 milliseconds before it and “*wo*” after it in Example 1a, without elongating the target particle, it is more likely to be regarded as a DM (41.7%) than as filler (35.4%) or as suggesting propositional meaning (22.9%). When *Na* co-occurs with a pause of more than 5 seconds before it and a pause of more than 3 seconds followed by the repetitions of “*nimen*” after it in Example 1b, without elongating the target particle, there is a 56.3% chance that it is viewed as a DM. When *Na* co-occurs with a pause of 762 milliseconds before it and “*jiexialai*” after it in Example 1c, it is seen as being utilized as a DM (93.8%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Filler
Percent of Responses (%)			
following a pause of 84 milliseconds before the subject “wo” no elongation of the target particle (1a)	22.9	41.7	35.4
following a pause of 5261 milliseconds before a pause of 3155 milliseconds repetitions of “nimen” no elongation of the target particle (1b)	0	56.3	43.7
following a pause of 762 milliseconds before “jixialai” no elongation of the target particle (1c)	6.2	93.8	0

Table 6-5 Uses of *Na* by Example as Perceived by Non-Interpreting Group

6.3.2 The discourse functions of *Suoyi*

It was observed that the particle of *Suoyi* has six discourse functions in my data as demonstrated in figure 6-2. Among them, the propositional use to mark the result of an event accounts for 71.9% of its usage as perceived by non-interpreter listeners. The DM use of the particle accounts for 25.7% of its perceived usage, among which explaining further accounts for 10.1%, continuing discourse topic 7.6%, initiating new topic 4.5%, thinking buffer 3.5%. Using the particle as filler accounts for only 2.4% of its perceived usage. In general, *Suoyi* in most cases is seen to suggest propositional meaning.

As stated earlier, *Suoyi* is one of the six particles to be compared in terms of the scenario in which it has been utilized based on frequency count. Therefore, if we take into consideration scenario (i.e. SP or SI) in which the particle has been utilized, the discourse function of serving as a buffer to think is observed in SI whereas it is absent in SP. The rest of the discourse functions are identical across the two scenarios.

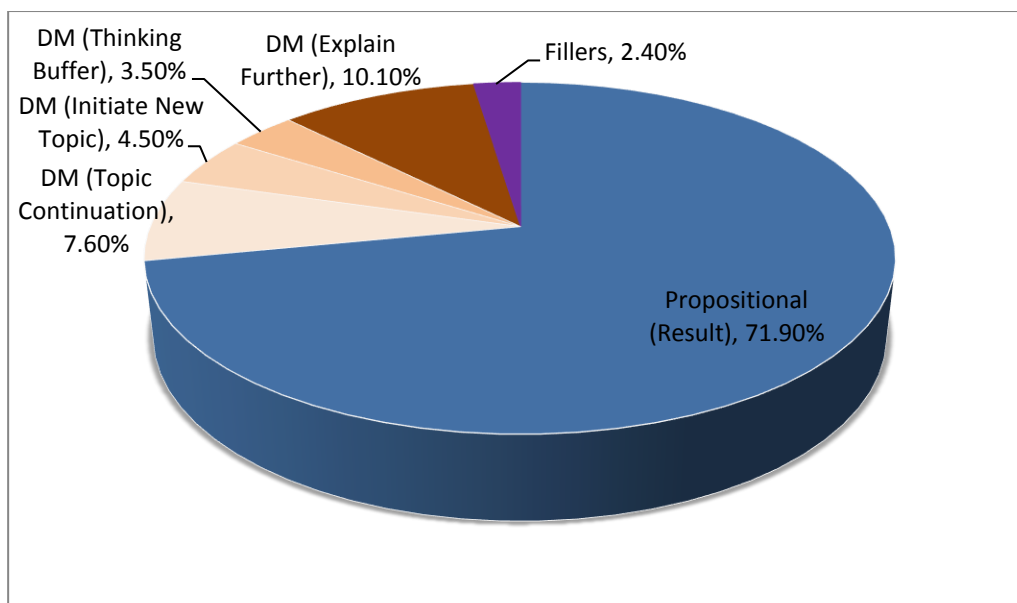


Figure 6-2 Uses of *Suoyi* as Perceived by Non-Interpreting Group

Fang (2000) suggested that the DM use of *Suoyi* serves the function of going back to the previous topic. Liu (2009), in comparison, argued that in addition to going back to the previous topic, the DM use of *Suoyi* could also serve to close the current topic. The results in my data showed some perception of continuing topic, similar to Fang's notion, but Liu's notion of closing the current topic was not observed. Yao (2009) proposed that as a DM, *Suoyi* should serve to initiate a turn in discourse, explain further with an aim to continue discourse topic, retrieve discourse topic, serve as a buffer with an aim to hold the floor, or indicate topic shift. Using Yao's work as a basis for comparison, it can be said that the discourse functions of explaining further, serving as a buffer to think, initiating new topic, and continuing discourse topic were observed by the group of listeners from non-interpreting background.

The particle *Suoyi* was discussed earlier in Example 3a and 3b in Chapter 4 as well as in Example 2 in Chapter 5. As shown in table 6-6, the results show that in Example 3a, when *Suoyi* co-occurs with a pause of 114 milliseconds before it and "*jiujuede*" ('that makes me feel') after it, without elongating the target particle, it was seen to suggest propositional meaning (77%). When *Suoyi* co-occurs with a pause of 1016 milliseconds before it and "*bijiao*" ('comparatively') after it in Example 3b, without elongating the target particle, it was said to suggest propositional meaning (84.4%). In the case of

Example 2, when *Suoyi* co-occurs with a pause of nearly 5 seconds before it and a pause of 386 milliseconds followed by “*xianzai*” (‘now’) after it, without elongating the target particle, it is more likely to be viewed as suggesting propositional meaning (54.1%) than as a DM (45.9%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 114 milliseconds before “ <i>jiujuede</i> ” no elongation of the target particle (3a)	77	18.8	4.2
following a pause of 1016 milliseconds before “ <i>bijiao</i> ” no elongation of the target particle (3b)	84.4	12.5	3.1
following a pause of 4835 milliseconds before a pause of 386 milliseconds followed by “ <i>xianzai</i> ” no elongation of the target particle (2)	54.1	45.9	0

Table 6-6 Uses of *Suoyi* by Example as Perceived by Non-Interpreting Group

6.3.3 The discourse functions of *Jiushi*

It is observed in my data that the particle of *Jiushi* has six discourse functions as shown in figure 6-3. Among them, the propositional use of the particle accounts for 48.3% of its usage as perceived by non-interpreters, with marking the cause of an event at 21.4% and adding information at 26.9% respectively. The DM use of the particle accounts for 40.5% of its perceived usage, with stressing the tone at 28.4%, serving as a buffer to think at 7.3%, and initiating new topic at 4.8%. Using the particle as filler only accounts for 11.2% of its overall perceived usage. In other words, it is more likely that *Jiushi* is used to suggest propositional meaning than as a DM or filler.

The particle of *Jiushi* is also one of the six particles to be compared based on frequency count in terms of the scenario in which it has been utilized. Therefore, if we take into consideration scenario (i.e. SP or SI) in which the particle has been utilized, the

discourse functions the particle assumes in both scenarios (i.e. SP and SI) are exactly the same. In both scenarios, it functions to add information, mark the cause of an event, stress the tone, initiate a new topic, serve as a buffer to think or as a filler.

When used as a DM, Liu (2009) suggested that *Jiushi* serves two textual functions: pause filler/ floor holder, and helping refer to an earlier topic. In my data, it can be said that the discourse function of serving as a buffer to think is conceptually similar to pause filler/ floor holder in Liu’s work. Tsai (2012) proposed that as a DM, *Jiushi* can serve as an emphasis marker and a conversational management marker. The discourse function of stressing the tone is observed in my data, which complies with the notion of emphasis marker in Tsai’s work. The discourse function of initiating new topic in discourse is also observed in my data, which is consistent with the notion of conversational management marker in which topic-initiation is a part put forward by Tsai.

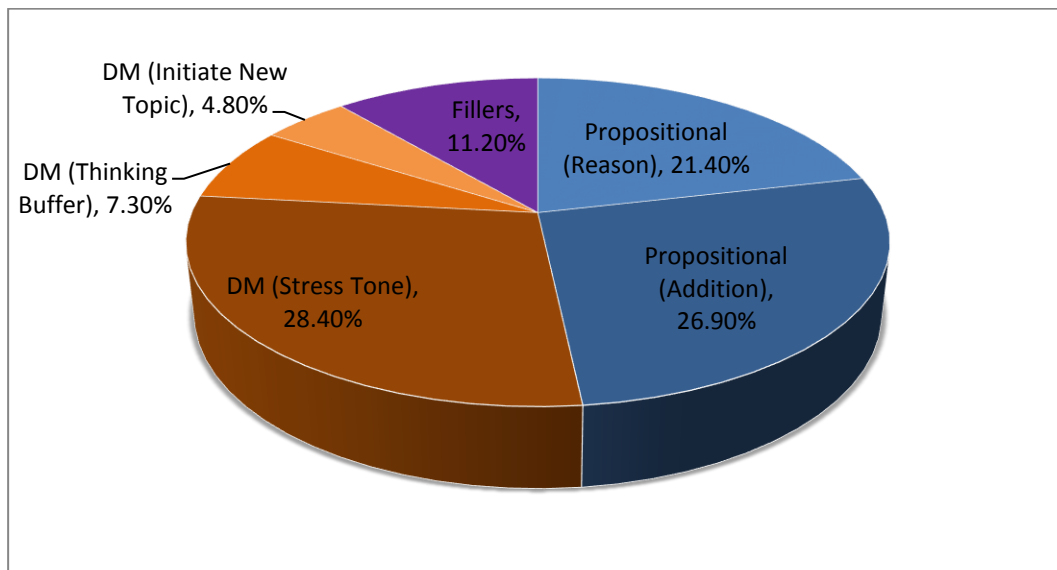


Figure 6-3 Uses of *Jiushi* as Perceived by Non-Interpreting Group

The particle of *Jiushi* was discussed earlier in Examples 2a, 2b, and 2c in Chapter 4 and in Examples 3a, 3b, 3c, and 3d in Chapter 5. As presented in table 6-7, when *shi* is elongated in *Jiushi* and co-occurs with “*shijian*” before it and “*keyi*” (‘can’) after it in Example 2a, it is more likely to be viewed as a DM (58.3%) than as suggesting propositional meaning (41.7%). When *Jiushi* co-occurs with a pause of 194 milliseconds

before it and “*yodian*” (‘a little’) after it in Example 2b, without elongating the target particle, it was seen to suggest propositional meaning (66.7%). When *Jiushi* co-occurs with a pause of 430 milliseconds before it and “*jianzhu*” (‘building’) after it in Example 2c, without elongating the target particle, it is more likely to be regarded as a DM (45.9%) than as suggesting propositional meaning (31.2%) or as filler (22.9%). In the case of Example 3a, when *Jiushi* co-occurs with a pause of 83 milliseconds before it and “*jixian gangqing*” after it, without elongating the target particle, it is more likely to be viewed as a DM (50%) than as suggesting propositional meaning (45.8%) or as filler (4.2%). When *Jiushi* co-occurs with “*ne*” before it and the elongated “*yao*” after it in Example 3b, without elongating the target particle, it is more likely to be considered filler (43.8%) than suggesting propositional meaning (29.2%) or DM use (27%). When *Jiushi* co-occurs with “*ye*” before it and the English word “piano” after it in Example 3c, without elongating the target particle, it is more likely to be regarded as a DM (54.2%) than as suggesting propositional meaning (45.8%). As for the use of *Jiushi* in Example 3d, when the elongated *Jiushi* co-occurs with a pause of 107 milliseconds before it and “*lagong*” (‘pull the string’) after it, it was seen mainly to suggest propositional meaning (78%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “shijian” before “keyi” elongation of “shi” out of “jiushi” (2a)	41.7	58.3	0
following a pause of 194 milliseconds before “yodian” no elongation of the target particle (2b)	66.7	29.1	4.2
following a pause of 430 milliseconds before “jianzhu” no elongation of the target particle (2c)	31.2	45.9	22.9
following a pause of 83 milliseconds before “jixian gangqing” no elongation of the target particle (3a)	45.8	50	4.2
following the particle “ne” before the elongated “yao” no elongation of the target particle (3b)	29.2	27	43.8
following “ye” before “piano” no elongation of the target particle (3c)	45.8	54.2	0
following a pause of 107 milliseconds before “lagong” elongation of the target particle (3d)	78	18.8	3.2

Table 6-7 Uses of *Jiushi* by Example as Perceived by Non-Interpreting Group

6.3.4 The discourse functions of *Lai*

The results show that *Lai* has four discourse functions as manifested in figure 6-4. Among them, the deictic propositional use of the particle accounts for 72.9% of its usage as perceived by non-interpreter listeners. The discourse function of serving as a buffer to think accounts for 4.15% of its perceived usage. Delivering new information also accounts for 4.15%. Together, DM use of the particle accounts for 8.3%. Using the

particle as filler accounts for 18.8%. Overall, *Lai* is seen to be utilized as a deictic in most cases.

Based on frequency count earlier, *Lai* is one of the six particles to be compared between the scenario of SP and SI. In both scenarios, the discourse functions of deixis and filler are observed. Nonetheless, the discourse function of buffer is observed only in SP whereas it is absent in SI. The discourse function of delivering new information is observed only in SI whereas it is absent in SP. When the particle of *Lai* functions as a DM, Wu (2009) proposed that it should function to deliver new pieces of information. This function is observed in my data. Wu (2009) also argued that *Lai* as a DM should serve to initiate a new turn or to signal the party involved in discourse. These two functions are, however, not observed in my data.

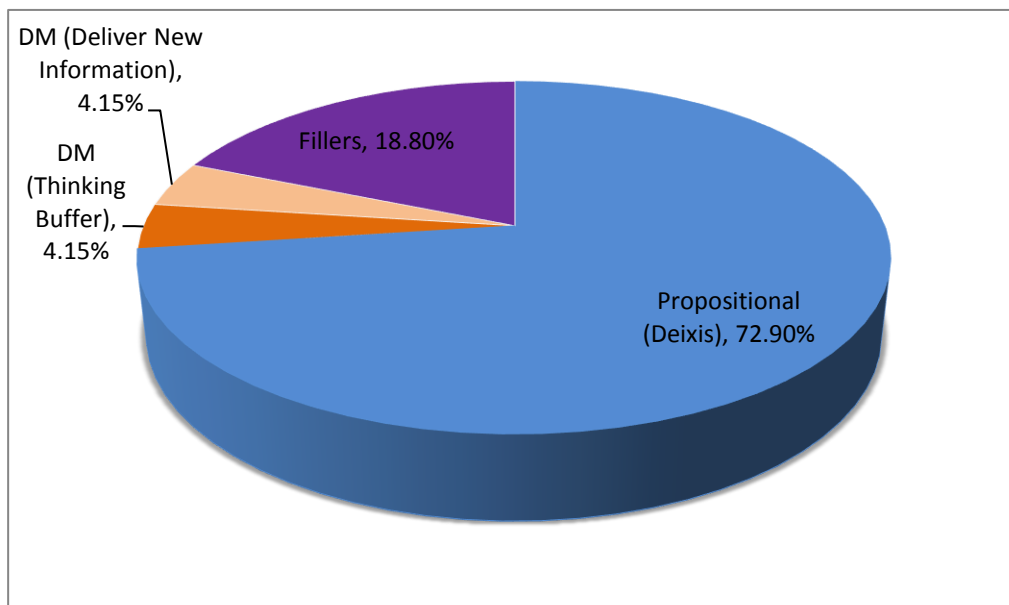


Figure 6-4 Uses of *Lai* as Perceived by Non-Interpreting Group

The particle of *Lai* was discussed previously in Example 4 in Chapter 4 as well as in Examples 4a and 4b in Chapter 5. The results in table 6-8 reveal that when *Lai* co-occurs with “*ziji*” (‘oneself’) before it and “*anpai*” (‘arrangement’) in Example 4, without elongating the target particle, it was seen to suggest propositional meaning (68.8%). In the case of Example 4a, when *Lai* co-occurs with “*yanzouzhe*” before it and “*kongzhi*” after it, without elongating the target particle, it was seen to suggest propositional

meaning (75%). When *Lai* co-occurs with the elongated “*shang*” before it and “*kongzhi*” after it in Example 4b, without elongating the target particle, it was seen mainly to suggest propositional meaning (75%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>ziji</i> ” before “ <i>anpai</i> ” no elongation of the target particle (4)	68.8	12.5	18.7
following “ <i>yanzouzhe</i> ” before “ <i>kongzhi</i> ” no elongation of the target particle (4a)	75	6.3	18.7
following the elongated “ <i>shang</i> ” before “ <i>kongzhi</i> ” no elongation of the target particle (4b)	75	6.2	18.8

Table 6-8 Uses of *Lai* by Example as Perceived by Non-Interpreting Group

6.3.5 The discourse functions of *Zhe*

The particle *Zhe* has three discourse functions as demonstrated in figure 6-5. Among them, propositional use of the particle accounts for 87% of its usage as perceived by non-interpreters, with marking the information center of a sentence at 37% and functioning as a quantifier to modify objects following it at 50%. The DM use of the particle to serve as a buffer to think accounts for only 13% of its perceived usage. None of the listeners regarded the use of *Zhe* as filler in my data, with the particle mostly seen to suggest propositional meaning.

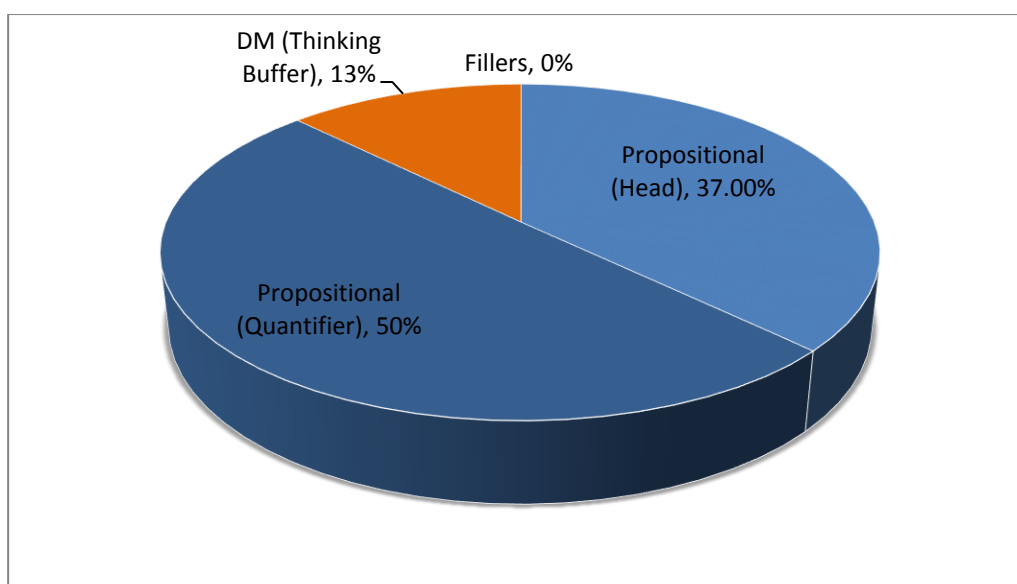


Figure 6-5 Uses of *Zhe* as Perceived by Non-interpreting Group

Previous studies have mainly researched *Zhe* as a proximal demonstrative to refer to the subject matter close to the speaker, but little attention has been paid to its role as a DM (Xu, 2008). Against this backdrop, Liu's work on *Zhege* in grammaticalizing the DM use of the proximal demonstrative may serve as a basis for comparison. Since it has been pointed out that "*ge*" is a quantifier which assumes very little meaning (Biq, 2007), the discourse function of *Zhege* and *Zhe* should be similar to the case of *Nage* and *Na* (Xu, 2008).

According to Liu (2009), when *Zhege* is reduced in its semantic meaning and functions as a DM, its textual function is to work as a pause filler. Although *Zhe* and *Zhege* are two different particles, the DM use of the particle *Zhe* to serve as a buffer to think is also observed in my data. This may be evidence of what was mentioned earlier that, as proximal demonstratives, the two particles are conceptually similar when used as DMs, for "*ge*" assumes very little meaning.

The particle *Zhe* was discussed earlier in Example 5 in Chapter 5 in terms of determining its discourse roles and discourse functions. The results in table 6-9 show that when *Zhe* co-occurs in Example 5 with a pause of 48 milliseconds before it and "*shi*" after it, without elongating the target particle, it was said to suggest propositional

meaning (87.5%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 48 milliseconds before “ <i>shi</i> ” no elongation of the target particle (5)	87.5	12.5	0

Table 6-9 Uses of *Zhe* by Example as Perceived by Non-Interpreting Group

6.3.6 The discourse functions of *Name*

In the use of *Name*, five discourse functions are observed in my data as shown in figure 6-6. Among them, the propositional use of the particle to mark assessment by the speaker accounts for 5.2% of its perceived usage. The DM use of the particle accounts for 90.6% of its perceived usage, with indicating topic shift at 41.6%, turning the tone at 32.3%, and adding new information at 16.7% respectively. Using the particle as filler only accounts for 4.2% of its perceived usage. On average, it can be seen that *Name* is definitely viewed as a DM.

Wang (2007) proposed that as a DM, the particle of *Name* has six discourse functions. These functions are topic shift, topic continuation, indicating the proceeding of an event, serving as a reminder, marking a discourse topic, and elaboration. In my data, two of these are observed, namely, the discourse functions of indicating topic shift and elaboration by adding in new information. In addition, the discourse function of marking the turn of the tone identified by the Chinese Word Net (CWN, an online dictionary developed by the Academia Sinica) is also observed in my data.

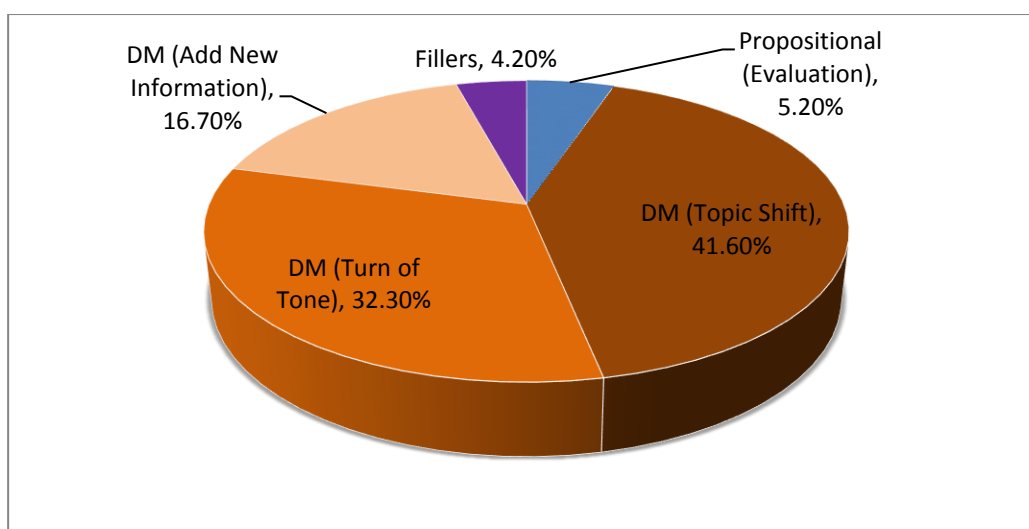


Figure 6-6 Uses of *Name* as Perceived by Non-Interpreting Group

The particle *Name* was discussed previously in Example 6a and 6b in Chapter 5. The results in table 6-10 indicate that when *Name* co-occurs with a pause of 1022 milliseconds before it and “*shengyin*” after it in Example 6a, without elongating the target particle, it was seen to suggest DM use (95.8%). In the case of Example 6b, when *Name* co-occurs with a pause of nearly 6 seconds before it and the elongated “*zaizuode*” after it, without elongating the target particle, it can be said to suggest DM use (85.5%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 1022 milliseconds before “ <i>shengyin</i> ” no elongation of the target particle (6a)	0	95.8	4.2
following a pause of 5830 milliseconds before the elongated “ <i>zaizuode</i> ” no elongation of the target particle (6b)	10.4	85.5	4.1

Table 6-10 Uses of *Name* by Example as Perceived by Non-Interpreting Group

6.3.7 The discourse functions of *Qishi*

It is observed in my data that the particle of *Qishi* has five discourse functions as presented in figure 6-7. Among them, the propositional use of the particle to mark assessment by the speaker accounts for 63.1% of its perceived usage. The DM use of

the particle accounts for 27.9% of its perceived usage, with making the utterance by the speaker less subjective at 14.3%, holding the floor at 12.1%, and indicating topic shift at 1.5% respectively. The filler use of *Qishi* only accounts for 9% of its usage.

According to Liu (2009), as a DM, *Qishi* should function to make the speaker's utterance less subjective in order to make the utterance more indirect and to hold the floor. These two functions are observed in my data. The discourse function of indicating topic shift observed in my data is consistent with the notion put forward by Cui (2008), who proposed that as a DM, *Qishi* functions to shift the topic in discourse.

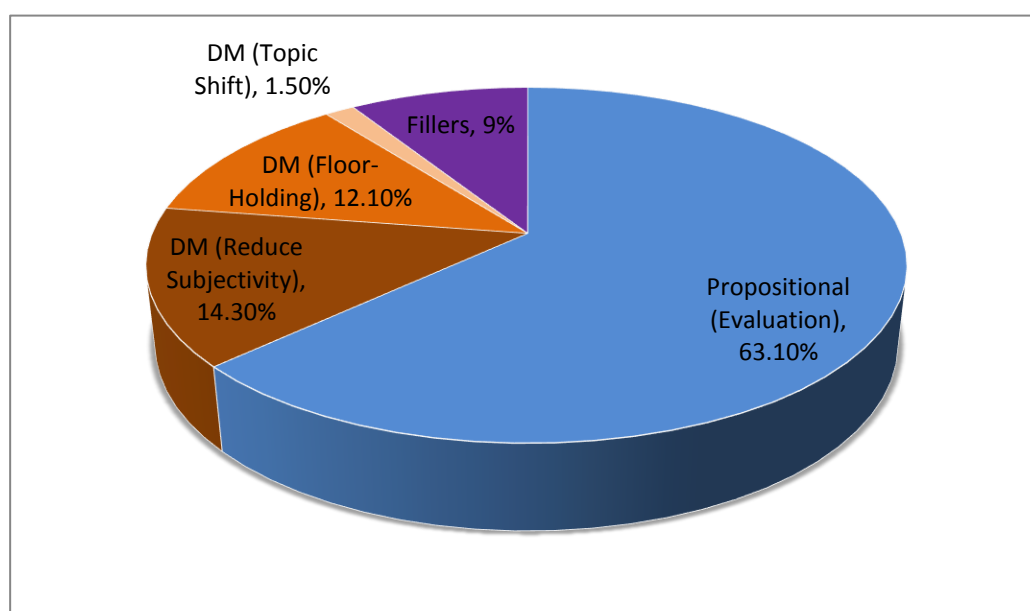


Figure 6-7 Uses of *Qishi* as Perceived by Non-Interpreting Group

The particle of *Qishi* is one of the six particles to be compared in terms of the two scenarios in which it has been utilized. In the use of *Qishi*, the results show that in both scenarios, SP and SI, the discourse functions the particle assumes are identical. In both scenarios, it serves to mark assessment by the speaker, make the statement by the speaker less subjective, hold the floor, indicate topic shift, and functions as a filler.

The particle of *Qishi* was discussed previously in Examples 8a and 8b in Chapter 4 and Examples 7a, 7b, and 7c in Chapter 5. According to the results in table 6-11, when *Qishi* co-occurs with a filled pause “uh” of 326 milliseconds before it and “wo” after it,

without elongating the target particle, it is more likely to be said to suggest propositional meaning (66.6%) than to be a DM (33.4%) in Example 8a. When *Qishi* co-occurs with “*shijian*” before it and “*shi*” after it in Example 8b, without elongating the target particle, it is viewed to suggest propositional meaning (68.8%). In the case of Example 7a, when *Qishi* co-occurs with “*tamen*” before it and the elongated “*xuede*” after it, without elongating the target particle, it is more likely to be viewed to suggest propositional meaning (52.1%) than to serve as a DM (31.3%) or filler (16.6%). When *Qishi* co-occurs with “*ta*” before it and the elongated “*shi*” after it in Example 7b, without elongating the target particle, it is more likely to be regarded as suggesting propositional meaning (56.3%) than as DM (25%) or filler (18.7%). In Example 7c, when *Qishi* co-occurs with a pause of nearly 3.5 seconds before it and “*wo*” after it, without elongating the target particle, it was seen to suggest propositional meaning (71.9%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a filled pause of 326 milliseconds before “wo” no elongation of the target particle (8a)	66.6	33.4	0
following “shijian” before “shi” no elongation of the target particle (8b)	68.8	25	6.2
following “tamen” before elongated “xuede” no elongation of the target particle (7a)	52.1	31.3	16.6
following “ta” before the elongated “shi” no elongation of the target particle (7b)	56.3	25	18.7
following a pause of 3485 milliseconds before “wo” no elongation of the target particle (7c)	71.9	25	3.1

Table 6-11 Uses of *Qishi* by Example as Perceived by Non-Interpreting Group

6.3.8 The discourse functions of *Nage*

It is observed in my data that the particle of *Nage* has six discourse functions as demonstrated in figure 6-8. Among them, the propositional use of the particle accounts for 35.4% of its perceived usage, with serving as a quantifier at 14% and referring to the subject matter of an event at 21.4%. The DM use of the particle accounts for 29.2% of its usage as perceived by non-interpreters, with serving as a buffer to think at 20.3%, holding the floor at 5.8%, and initiating topic at 3.1%. Functioning as a filler accounts for 35.4% of its perceived usage.

Liu⁹ (2009) holds the view that the particle of *Nage* should serve one textual function:

⁹ Binmei Liu.

that of verbal filler. This function is conceptually similar to the discourse function of serving as a buffer to think observed in my data. Regardless of the term, this function mainly serves to provide the speaker with leeway to think or to “make a lexical choice or to formulate a syntactic frame or to gather their thoughts” (Huang, 1999, p.88). The discourse function of floor-holding observed in my data is also consistent with the previous work done by Liu¹⁰ (2009).

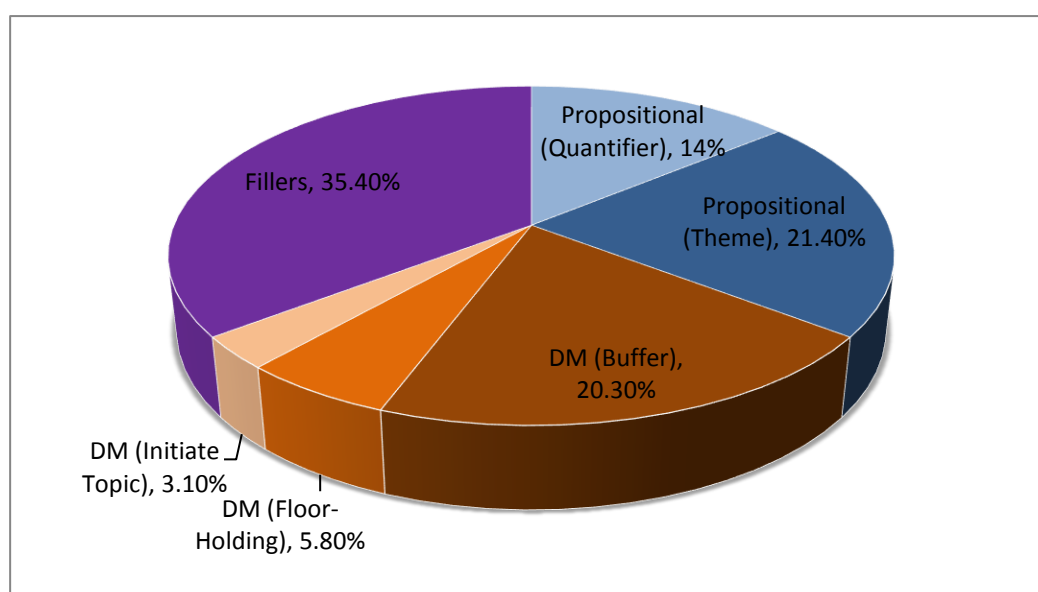


Figure 6-8 Uses of *Nage* as Perceived by Non-Interpreting Group

Given that the particle of *Nage* is one of the six particles to be compared in terms of the two scenarios in which it has been utilized, the results reveal that the discourse function of initiating topic in discourse is observed in SP whereas it is absent in SI. The rest of the discourse functions are the same in both scenarios.

The particle of *Nage* was discussed previously in Examples 6a, 6b and 6c in Chapter 4 and in Example 8 in Chapter 5. The results in table 6-12 show that in Example 6a when *Nage* co-occurs with a pause of 446 milliseconds before it and “*nuzi*” (‘woman’) after it, without elongating the target particle, it was seen to suggest propositional meaning (68.8%). When *Nage* co-occurs with a pause of 453 milliseconds before it and a pause of 464 milliseconds followed by “*ni*” (‘you’) after it, without elongating the target

¹⁰ Liyan Liu.

particle, it is more likely to be viewed as filler (40.7%) than as a DM (36.4%) or as suggesting propositional use (22.9%) in Example 6b. When in Example 6c the elongated *Nage* co-occurs with “*you*” before it and “*yang*” (‘sheep’) after it, it is more likely to be considered filler (50%) than DM (22.9%) or as suggesting propositional meaning (27.1%). In the case of Example 8, when the elongated *Nage* co-occurs with a pause of 650 milliseconds before it and a pause of 62 milliseconds after it, it is more likely to be viewed as DM (54.2%) than as filler (22.9%) or as suggesting propositional meaning (22.9%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 446 milliseconds before “ <i>nuzi</i> ” no elongation of the target particle (6a)	68.8	3.1	28.1
following a pause of 453 milliseconds before a pause of 464 milliseconds followed by “ <i>ni</i> ” no elongation of the target particle (6b)	22.9	36.4	40.7
following “ <i>you</i> ” before “ <i>yang</i> ” elongation of the target particle (6c)	27.1	22.9	50
following a pause of 650 milliseconds before a pause of 62 milliseconds elongation of the target particle (8)	22.9	54.2	22.9

Table 6-12 Uses of *Nage* by Example as Perceived by Non-Interpreting Group

6.3.9 The discourse functions of *Qu*

In my data, it is observed that the particle of *Qu* has five discourse functions as demonstrated in figure 6-9. Among them, the deictic propositional use of the particle accounts for 78.1% of its usage as perceived by non-interpreters. The DM use of the particle accounts for 12.5% of its perceived usage, with delivering new information at

6.3%, initiating new topic at 3.1%, and serving as a buffer to think at 3.1% respectively. Employing the particle as a filler accounts for 9.4% of its perceived usage. On the whole, *Qu* is viewed as a deictic.

However, to the best of my knowledge, very little work has been devoted to studying *Qu* directly as a DM other than researching its deictic functions to indicate the tendency of movement or of the direction of an action (Wang, 2011). Therefore, Wu's (2009) work on identifying the deictic *Lai* as a DM (i.e. by providing the same discourse functions of *Lai* for the listeners to choose from) has been utilized as a basis for identifying the DM use of *Qu*. As a result, three discourse functions, namely, delivering new information, initiating new topic, and serving as a buffer to think, are the DM uses of the particle *Qu* identified in the current study.

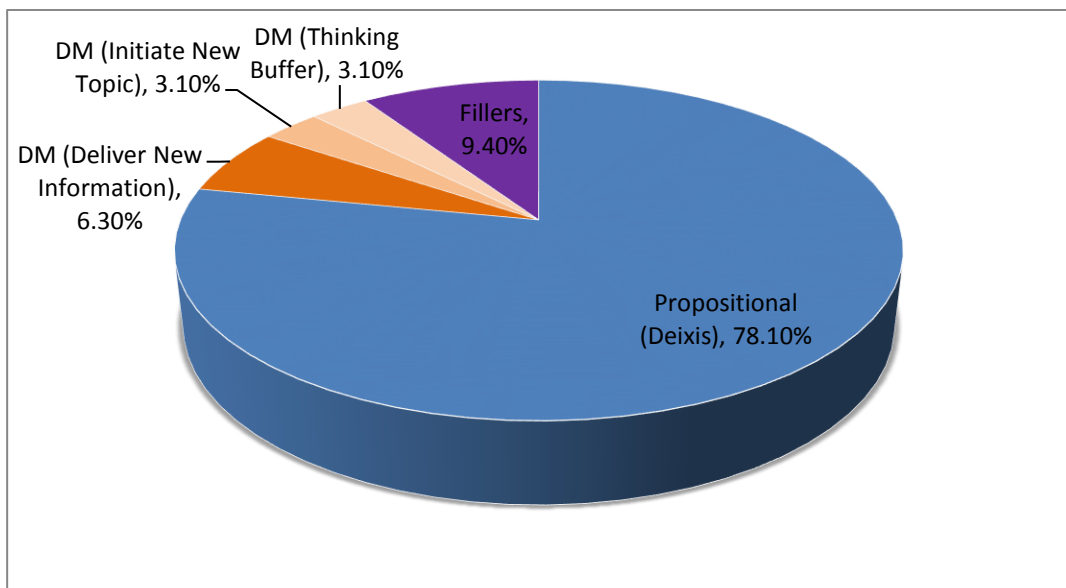


Figure 6-9 Uses of *Qu* as Perceived by Non-Interpreting Group

The particle of *Qu* is the last of the six particles to be compared in terms of the scenarios in which it has been utilized. According to listener surveys, the results show that in SP, in addition to functioning as deixis and filler, the particle has only one discourse function as a DM, which is to deliver new information. In contrast, in SI, apart from functioning as deixis and filler, the particle has two discourse functions as a DM, which are initiating new topic and serving as a buffer to think.

The particle of *Qu* was discussed earlier in Example 5 in Chapter 4 and Example 9 in Chapter 5 over the course of determining its discourse roles and corresponding discourse functions based on a number of adopted criteria. The results in table 6-13 reveal that in Example 5 when *Qu* co-occurs with “*neng*” (‘can’) before it and “*zuo*” (‘make’) after it, without elongating the target particle, it was seen to suggest deictic propositional meaning (75%). When the elongated *Qu* co-occurs with “*xuesheng*” before it and a pause of 284 milliseconds followed by “*zizhu*” (‘by oneself’) after it in Example 9, it was regarded as deixis (81.1%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>neng</i> ” before “ <i>zuo</i> ” no elongation of the target particle (5)	75	12.5	12.5
following “ <i>xuesheng</i> ” before a pause of 284 milliseconds followed by “ <i>zizhu</i> ” elongation of the target particle (9)	81.1	12.6	6.3

Table 6-13 Uses of *Qu* by Example as Perceived by Non-Interpreting Group

6.3.10 The discourse functions of *Ranhou*

It is observed that the particle of *Ranhou* has eight discourse functions as demonstrated in figure 6-10. Among them, the propositional use of the particle accounts for 32.9% of its perceived usage, with marking chronological order at 31.6% and marking causal relationship at 1.3% respectively. The DM use of the particle accounts for 54.9% of its perceived usage, with continuing topic at 21.2%, indicating topic shift at 6.3%, adding information at 8.3%, serving as a buffer to think at 5.9%, and explaining further at 13.2%. Using the particle as a filler accounts for 12.2% of its perceived usage. Overall, more than half of the usage of *Ranhou* is considered to be DM use.

Liu (2009) holds the view that as a DM, *Ranhou* serves two textual functions: topic-succession and verbal filler. These two functions are very similar to the two

discourse functions of continuing the topic and serving as a buffer to think observed in my data. Wang (1998) suggests that as a DM, *Ranhou* serves to mark continuation, which is identical to the discourse function of continuing the topic observed in my data. The discourse functions of further explanation and adding information observed in my data are absent in the work by Wang (1998) and Liu (2009). Nonetheless, it can be argued that the discourse functions of further explanation and adding information can be categorized as a subcategory of topic continuation with an aim for topic succession.

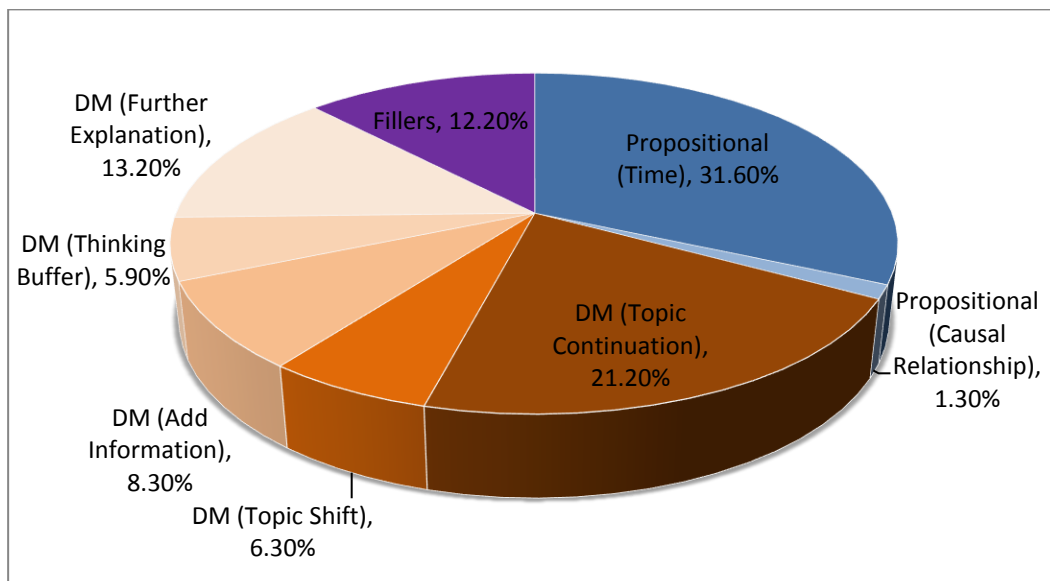


Figure 6-10 Uses of *Ranhou* as Perceived by Non-Interpreting Group

The particle of *Ranhou* was discussed previously in Examples 1a, 1b, and 1c in Chapter 4 in terms of determining its discourse roles and discourse functions. The results in table 6-14 indicate that in Example 1a when *Ranhou* co-occurs with a pause of 138 milliseconds before it and “*shuohua*” (‘speak’) after it, without elongating the target particle, it was seen to function as a DM (62.6%) rather than as a filler (28.1%) or with propositional meaning (9.3%). When *Ranhou* co-occurs with “*chuang*” before it and a pause of 292 milliseconds after it in Example 1b, without elongating the target particle, it is more likely to be viewed as suggesting propositional meaning (56.3%). In Example 1c, when *Ranhou* co-occurs with a pause of 508 milliseconds before it and “*jibenshang*” after it, without elongating the target particle, it can be viewed as suggesting DM use (62.6%) rather than suggesting propositional meaning (33.4%) or filler use (4%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 138 milliseconds before “ <i>shuohua</i> ” no elongation of the target particle (1a)	9.3	62.6	28.1
following “ <i>chuang</i> ” before a pause of 292 milliseconds no elongation of the target particle (1b)	56.3	39.7	4
following a pause of 508 milliseconds before “ <i>jibenshang</i> ” no elongation of the target particle (1c)	33.4	62.6	4

Table 6-14 Uses of *Ranhou* by Example as Perceived by Non-Interpreting Group

6.3.11 The discourse functions of *Haoxiang*

It is observed that the particle of *Haoxiang* has three discourse functions as presented in figure 6-11. Among them, the propositional use of the particle to mark a guess by the speaker accounts for 30.2% of its perceived usage. The DM use of the particle to make the utterance by the speaker less subjective accounts for 55.2%. Using the particle as filler accounts for 14.6% of its perceived usage. On average, more than half of the usage of *Haoxiang* is viewed as DM use.

According to Liu (2009), the particle *Haoxiang* had not been studied as a DM before. Therefore, in her own work to identify the discourse function of the particle *Haoxiang* as a DM, she discovered that it serves to make the utterance more indirect and polite in discourse. This DM use of the particle *Haoxiang* is observed in my data, namely, making the speaker’s utterance less subjective.

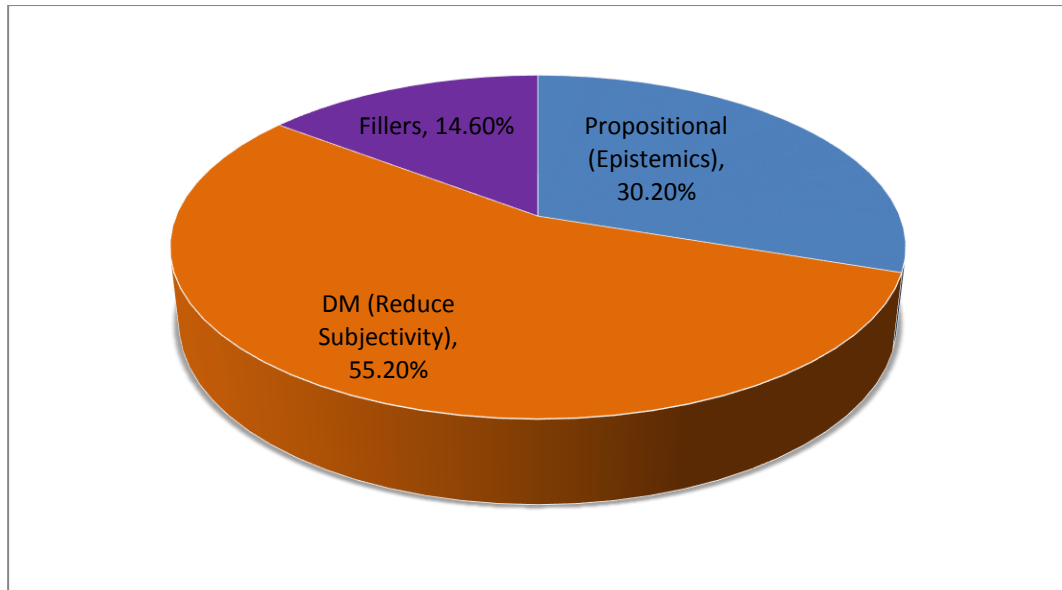


Figure 6-11 Uses of *Haoxiang* as Perceived by Non-Interpreting Group

The particle of *Haoxiang* was discussed previously in Examples 7a and 7b in Chapter 4 in terms of determining its discourse roles and discourse functions. The results in table 6-15 indicate that in Example 7a when *Haoxiang* co-occurs with “*guonei*” before it and a pause of 430 milliseconds after it, without elongating the target particle, it can be viewed as a DM (60.4%). In the case of Example 7b, when *Haoxiang* co-occurs with a pause of 218 milliseconds before it and “*kan*” (‘watch’) after it, without elongating the target particle, it has an equal chance of being viewed as a DM (50%) or as suggesting propositional meaning (50%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>guonei</i> ” before a pause of 430 milliseconds no elongating of the target particle (7a)	10.4	60.4	29.2
following a pause of 218 milliseconds before “ <i>kan</i> ” no elongation of the target particle (7b)	50	50	0

Table 6-15 Uses of *Haoxiang* by Example as Perceived by Non-Interpreting Group

6.3.12 The discourse functions of *Erqie*

It is observed in my data that *Erqie* has three discourse functions as shown in figure 6-12. Among them, the propositional use of the particle to add information accounts for 81.2% of its perceived usage. The DM use of the particle to indicate topic shift accounts for 9.4% of its perceived usage. Using the particle as filler accounts for another 9.4%. In general, *Erqie* is viewed to suggest propositional meaning. When used as a DM, Liu (2009) proposed that it should serve to indicate topic shift. Fang (2000) also held the view that as a DM, *Erqie* is used for topic shift. This function is observed in my data on the use of *Erqie* when it is regarded as a DM.

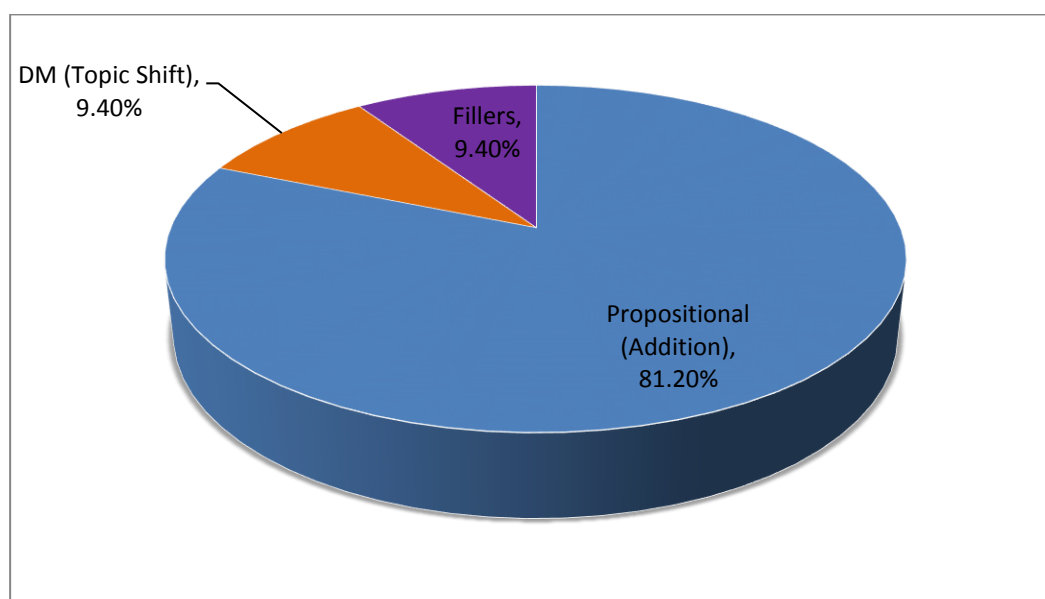


Figure 6-12 Uses of *Erqie* as Perceived by Non-Interpreting Group

The particle of *Erqie* was discussed earlier in Examples 9a and 9b in Chapter 4 in terms of determining its discourse roles and discourse functions. According to table 6-16, the results show that in Example 9a when *Erqie* co-occurs with a pause of 53 milliseconds before it and “*weidao*” (‘taste’) after it, without elongating the target particle, it was seen to suggest propositional use of addition (87.4%). In the case of Example 9b, when *Erqie* co-occurs with a pause of 352 milliseconds before it and “*tamen*” after it, without elongating the target particle, it can be said to suggest propositional use of addition (75%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 53 milliseconds before “ <i>weidao</i> ” no elongation of the target particle (9a)	87.4	6.3	6.3
following a pause of 352 milliseconds before “ <i>tamen</i> ” no elongation of the target particle (9b)	75	12.5	12.5

Table 6-16 Uses of *Erqie* by Example as Perceived by Non-Interpreting Group

6.4 Identifying Discourse Functions by Trainee Interpreters

The approach of identifying discourse functions by trainee interpreters is identical to that described in 6.3.

6.4.1 The discourse functions of *Na*

In the group of trainee interpreters, it is observed that the particle of *Na* has five discourse functions as demonstrated in figure 6-13. Among them, the propositional use of the particle to mark assessment by the speaker accounts for 12.4% of its usage as perceived by this group of listeners. The DM uses of the particle accounts for 55.1% of its perceived usage, with indicating topic shift at 42.7%, adding new information at 7.8%, and serving as a buffer to think at 4.6% respectively. Using the particle as filler accounts for 32.5% of its perceived usage. Therefore, it can be said that the use of *Na* as a DM accounts for more than half of its perceived usage.

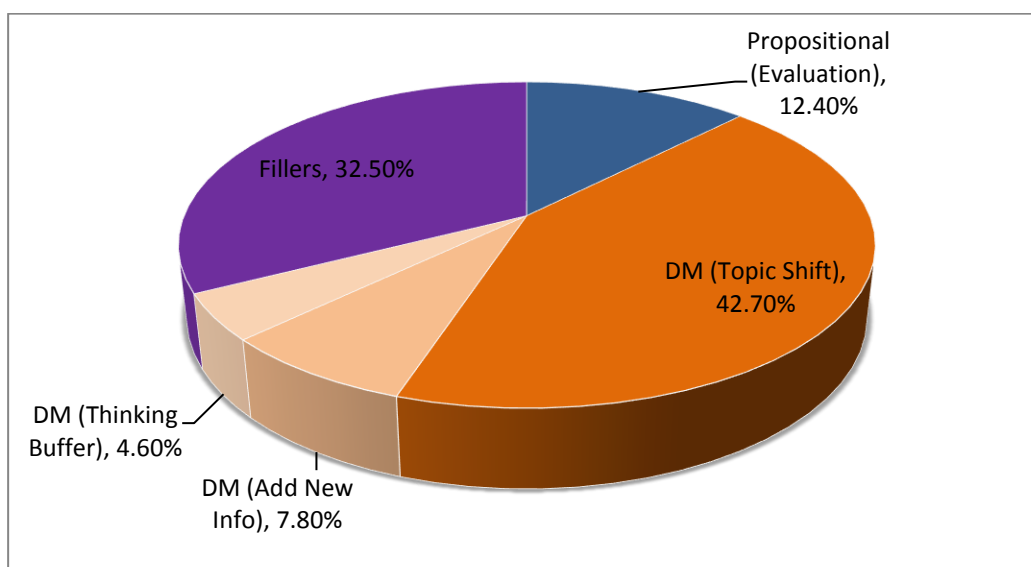


Figure 6-13 Uses of *Na* as Perceived by Trainee Interpreters

Liu's (2009) work suggested that when used as a DM, *Na* has two discourse functions. It should serve to indicate topic shift within a turn and initiate a new topic. Xu's (2008) work also held the same view that when used as a DM, *Na* functions to initiate discourse topic and indicate topic shift. Using their work as a basis for comparison, the discourse function of *Na* to indicate topic shift is observed in my data; however, the function of initiating a new topic is not observed in the group of trainee interpreters. Rather, the discourse functions of *Na* to add new information in discourse and to serve as a buffer to think are observed.

The particle of *Na* was discussed earlier in Examples 1a, 1b, and 1c in Chapter 5 in terms of determining its discourse roles and discourse functions. As presented in table 6-17, for the use of *Na* in 1a, when it co-occurs with a short pause before it and the subject "*wo*" after it, without elongating the target particle, it is more likely that *Na* is seen to be used as a filler (50%) than as a DM (18.2%) or propositional meaning (31.8%). In the case of Example 1b, when *Na* co-occurs with long pauses both before and after it as well as with the repetitions of "*nimen*" after it, without elongating the target particle, it is more likely that *Na* is viewed as being used as a DM (68.1%) than as filler (31.9%). When in Example 1c *Na* co-occurs with a pause of less than 1 second before it and

“*jiexialai*” after it, without elongating the target particle, there is a 78.7% chance that it is seen to be used as a DM rather than as filler (16%) or as suggesting propositional meaning (5.3%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 84 milliseconds before the subject “ <i>wo</i> ” no elongation of the target particle (1a)	31.8	18.2	50
following a pause of 5261 milliseconds before a pause of 3155 milliseconds repetitions of “ <i>nimen</i> ” no elongation of the target particle (1b)	0	68.1	31.9
following a pause of 762 milliseconds before “ <i>jiexialai</i> ” no elongation of the target particle (1c)	5.3	78.7	16

Table 6-17 Uses of *Na* by Example as Perceived by Trainee Interpreters

6.4.2 The discourse functions of *Suoyi*

It is observed that the particle of *Suoyi* has seven discourse functions perceived by trainee interpreters as presented in figure 6-14. Among them, the propositional use of the particle to mark the consequence of an event accounts for 39.6% of its usage as perceived by these listeners. The DM uses of the particle account for 57.4% of its perceived usage, with explaining further at 23.8%, continuing topic at 22.2%, serving as a buffer to think at 4.6%, indicating topic shift at 3%, and initiating new topic at 3.8% separately. Using the particle as a filler accounts for only 3% of its perceived usage. In general, the use of *Suoyi* as a DM comprises more than half of its perceived usage.

As stated earlier, *Suoyi* is one of the six particles to be compared based on frequency count in terms of the scenario in which it has been utilized. Therefore, if we take into consideration the scenario (i.e. SP or SI) in which the particle has been utilized to compare what discourse functions it assumes, the discourse functions of indicating topic shift and initiating new topic are observed in SI whereas they are absent in SP as

perceived by trainee interpreters. The discourse functions of topic continuation, serving as a buffer to think, and explaining further are observed in both scenarios.

Liu (2009) held the view that in addition to going back to the previous topic (Fang, 2000), the DM use of *Suoyi* also serves to close the current topic. The results of listener surveys in the group of trainee interpreters suggest that continuing topic is similar to Fang’s notion of going back to the previous topic but that Liu’s notion of closing the current topic is not found. Yao (2009) proposed that as a DM, *Suoyi* should serve to initiate a turn in discourse, explain further with an aim to continue discourse topic, retrieve discourse topic, serve as a buffer with an aim to hold the floor, or indicate topic shift. Using Yao’s work as a basis for comparison, it can be said that in the group of trainee interpreters, the discourse functions of explaining further, serving as a buffer to think, indicating topic shift, and initiating new topic were observed.

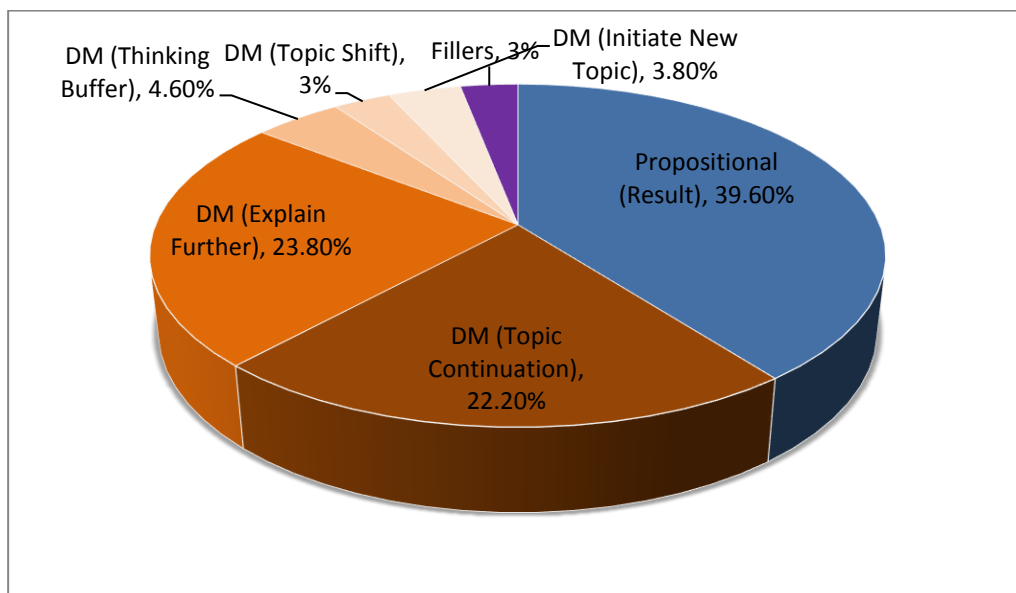


Figure 6-14 Uses of *Suoyi* as Perceived by Trainee Interpreters

The particle of *Suoyi* was discussed previously in Examples 3a and 3b in Chapter 4 and in Example 2 in Chapter 5. As presented in table 6-18, the results in the group of trainee interpreters reveal that in Example 3a, when *Suoyi* co-occurs with a pause of slightly more than 1 second before it and closely followed by “*jiujuede*”, without elongating the target particle, it has a greater chance of being perceived as a DM (56%) than as filler

(4.5%) or propositional meaning (39.5%). When *Suoyi* co-occurs with a pause of slightly more than 1 second before it and closely followed by “*bijiao*” as in the case of Example 3b, without elongating the target particle, it has as equal chance of being seen as a DM (50%) or suggesting propositional meaning (50%). When *Suoyi* co-occurs with a long pause before it and a pause of less than 1 second followed by “*xianzai*” after it, without elongating the target particle, it is more likely to be seen as a DM (66%) than as a filler (4.5%) or as suggesting propositional meaning (29.5%), as in the case of Example 2.

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 114 milliseconds before “ <i>jiujuede</i> ” no elongation of the target particle (3a)	39.5	56	4.5
following a pause of 1016 milliseconds before “ <i>bijiao</i> ”, no elongation of the target particle (3b)	50	50	0
following a pause of 4835 milliseconds before a pause of 386 milliseconds followed by “ <i>xianzai</i> ” no elongation of the target particle (2)	29.5	66	4.5

Table 6-18 Uses of *Suoyi* by Example as Perceived by Trainee Interpreters

6.4.3 The discourse functions of *Jiushi*

It is observed in the group of trainee interpreters that *Jiushi* has six discourse functions as demonstrated in figure 6-15. Among them, propositional uses account for 34.5% of its perceived usage, with adding information at 27% and marking the cause of an event at 7.5% respectively. DM uses account for 43.5% of its perceived usage, with stressing the tone at 23.4%, initiating new topic at 4.5%, serving as a buffer to think at 14.9%, and indicating turn-taking at 0.7% separately. Filler use of the particle accounts for 22%. In general, it is more likely that it functions as a DM than as a filler or with propositional meaning. Similarly, based on frequency count, if we compare the discourse functions of *Jiushi* in terms of scenarios in which it has been utilized, the discourse function of

turn-taking is observed in SI whereas it is absent in SP as perceived by trainee interpreters.

Liu (2009) suggested that *Jiushi* serves two textual functions: pause filler/ floor holder, and helping to refer to an earlier topic. It can be said that the discourse function of serving as a buffer to think observed in the group of trainee interpreters is similar to Liu’s notion of pause filler. Nonetheless, the discourse function of helping refer to an earlier topic proposed by Liu is not observed in my data. The discourse functions of stressing the tone, initiating new topic, and indicating turn-taking observed in the group of trainee interpreters are, however, consistent with the notion of emphasis marker and conversational management marker put forward by Tsai (2012).

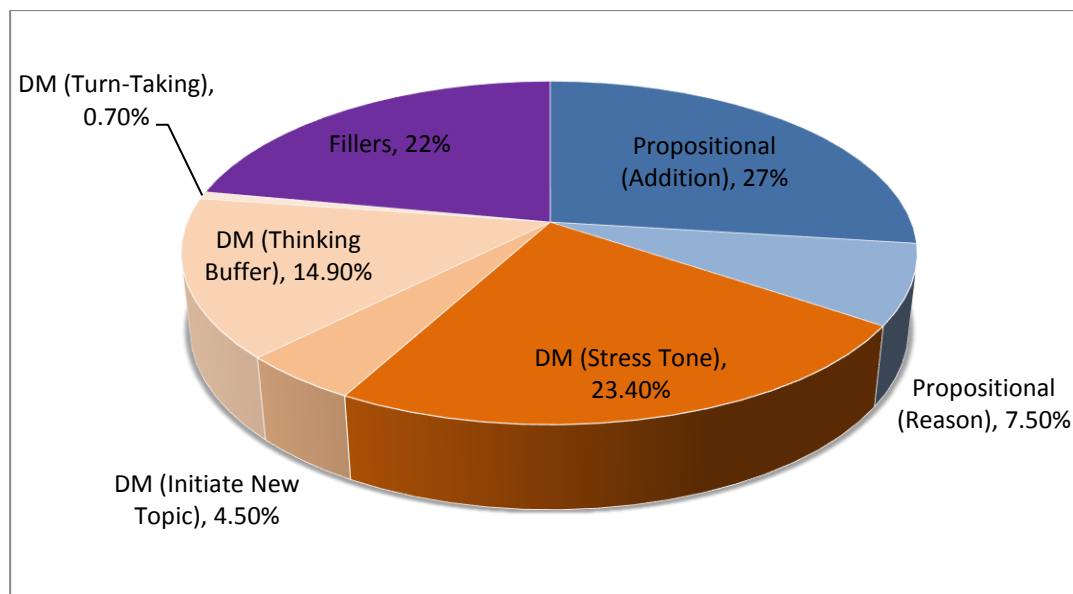


Figure 6-15 Uses of *Jiushi* as Perceived by Trainee Interpreters

The particle *Jiushi* was discussed previously in 2a, 2b, and 2c in Chapter 4 and in 3a, 3b, 3c, and 3d in Chapter 5. According to table 6-19, the results of observation by the interpreting group show that when *shi* is elongated out of *Jiushi* and that *Jiushi* co-occurs with “*shijian*” before it and “*keyi*” after it, more than half of its usage is considered as a filler as in Example 2a. When *Jiushi* co-occurs with a pause of less than 2 seconds before it and “*yodian*” after it in Example 2b, without elongating the target particle, it is more likely that *Jiushi* is perceived as a DM than as a filler or as suggesting

propositional meaning. For the use of *Jiushi* in Example 2c, it is observed that when *Jiushi* co-occurs with a pause of 430 milliseconds before it and followed by “*jianzhu*”, without elongating the target particle, it is more likely to be regarded as a DM than as filler or as suggesting propositional meaning. When *Jiushi* co-occurs with a short pause before it and “*jixian gangqing*” after it in Example 3a, without elongating the target particle, it is more likely to be seen as having propositional meaning than as fillers or as a DM. For the use of *Jiushi* in Example 3b, when it co-occurs with the particle “*ne*” before it and the elongated “*yao*” after it, without elongating the target particle, more than half of listeners regarded its usage as DM. In the case of Example 3c, when *Jiushi* co-occurs with “*ye*” before it and the English word “*piano*” after it, without elongating the target particle, more than half of listeners viewed it as DM. As for the use of *Jiushi* in Example 3d, it is observed that when the elongated *Jiushi* co-occurs with a pause of 107 milliseconds before it and “*lagong*” after it, more than half of participants viewed it as suggesting propositional use.

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “shijian” before “keyi” elongation of “shi” out of “jiushi” (2a)	9.2	36.3	54.5
following a pause of 194 milliseconds before “yodian” no elongation of the target particle (2b)	39.4	42.4	18.2
following a pause of 430 milliseconds before “jianzhu” no elongation of the target particle (2c)	30.3	34.9	34.8
following a pause of 83 milliseconds before “jixian gangqing” no elongation of the target particle (3a)	50	45.5	4.5
following the particle “ne” before the elongated “yao” no elongation of the target particle (3b)	15.1	54.6	30.3
following “ye” before “piano” no elongation of the target particle (3c)	41	54.4	4.6
following a pause of 107 milliseconds before “lagong” elongation of the target particle (3d)	54.6	36.3	9.1

Table 6-19 Uses of *Jiushi* by Example as Perceived by Trainee Interpreters

6.4.4 The discourse functions of *Lai*

It is observed in the group of trainee interpreters that the particle *Lai* is seen as having five discourse functions as demonstrated in figure 6-16. Among them, deictic propositional use accounts for 49.5% of its perceived usage. DM uses account for 29.2% of its usage, with serving as a buffer to think at 13.6%, delivering new information at 14.6%, and initiating new topic at 1%. Using the particle as filler accounts for 21.3% of

its perceived usage. On average, nearly half of the usage of *Lai* is regarded as deixis suggesting propositional meaning.

Based on frequency count, *Lai* is among the six particles to be compared in terms of what discourse functions it assumes in SI and SP, following *Suoyi* and *Jiushi*. It is observed that the discourse function of initiating the topic in discourse is present in SI whereas it is absent in SP. The rest of the discourse functions are the same in both scenarios.

Using Wu's (2009) work as a basis, *Lai* as a DM should function to deliver new pieces of information. This function was observed by the group of trainee interpreters. Wu (2009) also argued that *Lai* as a DM should serve to initiate a new turn or to signal the party involved in discourse. These two functions are not observed in the results of the trainee interpreters; nonetheless, the discourse functions of *Lai* to initiate new topic or to serve as a buffer to think are observed.

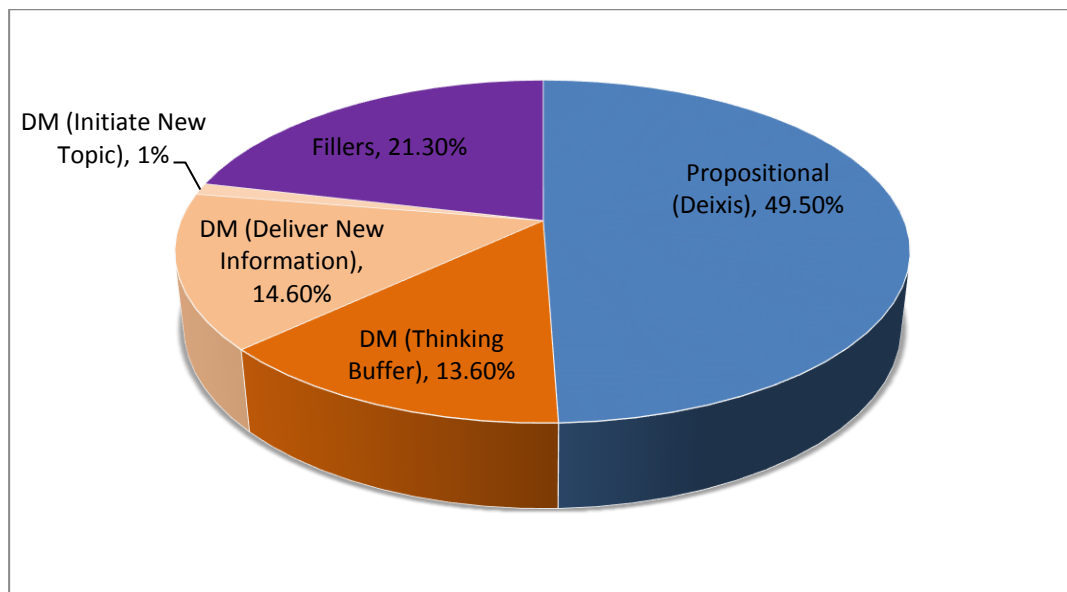


Figure 6-16 Uses of *Lai* as Perceived by Trainee Interpreters

The particle *Lai* was discussed previously in Example 4 in Chapter 4 and in Examples 4a and 4b in Chapter 5. The results in table 6-20 show that when *Lai* co-occurs with “*ziji*” before it and “*anpai*” after it in Example 4, without elongating the target particle, it is

more likely to be regarded as a filler than as a DM or as suggesting propositional use. In the case of Example 4a, when *Lai* co-occurs with “*yanzouzhe*” before it and “*kongzhi*” after it, without elongating the target particle, it is more likely to be viewed as suggesting propositional use than as a DM or as filler. For the use of *Lai* in Example 4b, when it co-occurs with the elongated “*shang*” before it and “*kongzhi*” after it, without elongating the target particle, there is 68.2% chance that it is seen as deixis rather than as a DM or filler.

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>ziji</i> ” before “ <i>anpai</i> ” no elongation of the target particle (4)	36.3	22.7	41
following “ <i>yanzouzhe</i> ” before “ <i>kongzhi</i> ” no elongation of the target particle (4a)	44	33.3	22.7
following the elongated “ <i>shang</i> ” before “ <i>kongzhi</i> ” no elongation of the target particle (4b)	68.2	31.8	18.8

Table 6-20 Uses of *Lai* by Example as Perceived by Trainee Interpreters

6.4.5 The discourse functions of *Zhe*

It is observed that *Zhe* has three perceived functions in the group of trainee interpreters as demonstrated in figure 6-17. Among them, propositional use accounts for 81.8% of its usage, with serving as a quantifier at 63.6% and head at 18.2% respectively. Using the particle as filler accounts for 18.2% of its perceived usage. None of the trainee interpreters regarded the uses of *Zhe* as DMs. In other words, it can be said that, in general, *Zhe* is employed to suggest propositional use from the perspective of trainee interpreters. As a consequence, its DM use¹¹ is not compared here.

¹¹ The DM use of *Zhe* can be introducing a new topic or referring to the previous topic (Fang, 2002).

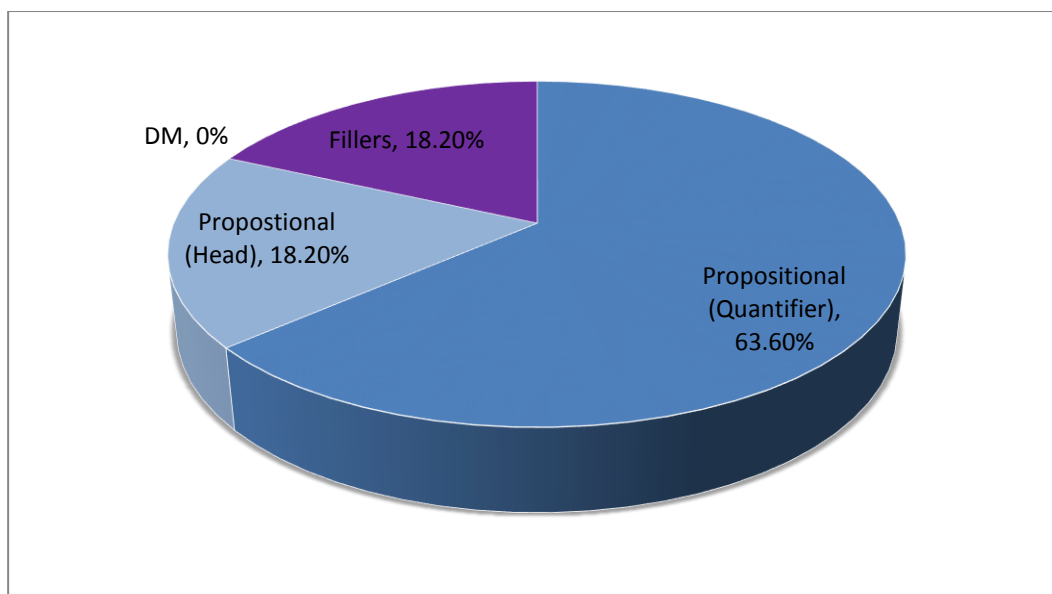


Figure 6-17 Uses of *Zhe* as Perceived by Trainee Interpreters

The particle *Zhe* was discussed previously in Example 5 in Chapter 5 in terms of determining its discourse roles and discourse functions. Table 6-21 shows that in Example 5 when it co-occurs with a very short pause before it and “*shi*” after it, without elongating the target particle, there is an 81.8% chance that it is seen to suggest propositional use rather than filler (18.2%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 48 milliseconds before “ <i>shi</i> ” no elongation of the target particle (5)	81.8	0	18.2

Table 6-21 Uses of *Zhe* by Example as Perceived by Trainee Interpreters

6.4.6 The discourse functions of *Name*

It is observed in the group of trainee interpreters that *Name* has four discourse functions as presented in figure 6-18. Among them, DM uses account for 78.8% of its perceived usage, with indicating topic shift at 43.2%, indicating turn of tone at 28.8%, and adding new information at 6.8% separately. Using the particle as filler accounts for 21.2% of its perceived usage. In other words, it can be said that trainee interpreters

considered *Name* to act as a DM in general.

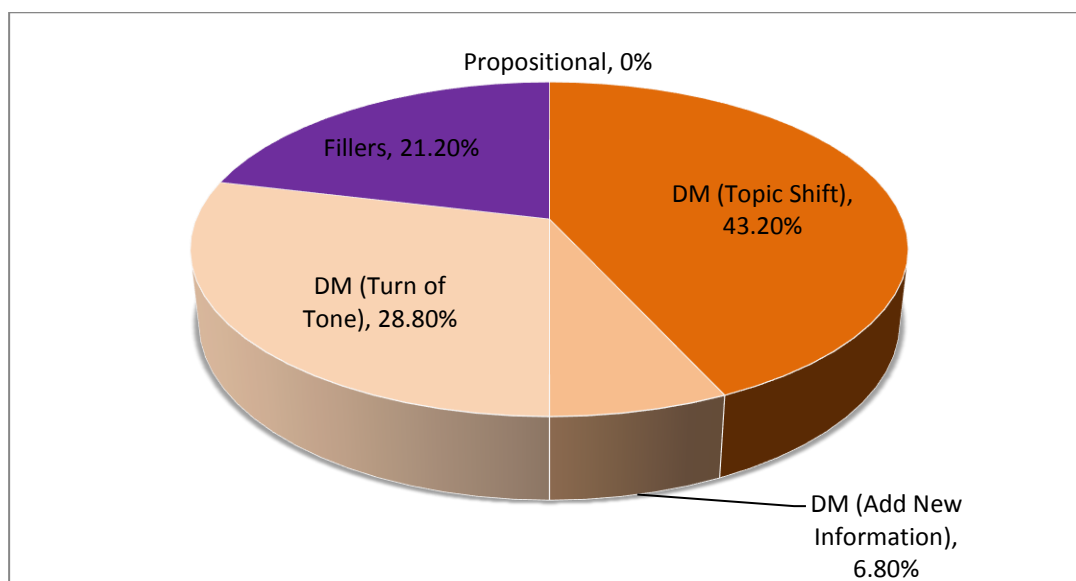


Figure 6-18 Uses of *Name* as Perceived by Trainee Interpreters

As mentioned in 6.3.2.6, Wang (2007) proposed that as a DM, the particle of *Name* has six discourse functions. These functions include topic shift, topic continuation, indicating the proceeding of an event, serving as a reminder, marking a discourse topic, and elaboration. Using Wang's work for comparison, two of these are observed in the responses of the group of trainee interpreters, namely, the discourse functions of indicating topic shift and elaboration by adding in new information. In addition, the discourse function of *Name* to mark the turn of the tone identified by the Chinese Word Net (CWN, an online dictionary developed by the Academia Sinica) is also observed in the group of trainee interpreters.

The particle of *Name* was discussed in Examples 6a and 6b in Chapter 5. The results in table 6-22 reveal that in Example 6a when *Name* co-occurs with a pause of slightly more than 1 second before it and "*shengyin*" after it, without elongating the target particle, there is a 97% chance that it is seen as a DM. As for the use of *Name* in Example 6b, when it co-occurs with a long pause of more than 5 seconds before it and the elongated "*zaizuode*" after it, without elongating the target particle, there is a 60.5% chance that it is regarded as a DM rather than as filler (39.5%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 1022 milliseconds before “shengyin” no elongation of the target particle (6a)	0	97	3
following a pause of 5830 milliseconds before the elongated “zaizuode” no elongation of the target particle (6b)	0	60.5	39.5

Table 6-22 Uses of *Name* by Example as Perceived by Trainee Interpreters

6.4.7 The discourse functions of *Qishi*

It is observed that *Qishi* has five discourse functions as presented in figure 6-19. Among them, the propositional use of the particle to mark assessment by the speaker accounts for 49.7% of its perceived usage. DM uses account for 39.7%, with making the speaker’s utterance less subjective at 27.9%, holding the floor at 7%, and indicating topic shift at 4.8% separately. Using the particle as a filler accounts for 10.6% of its perceived usage. In general, when *Qishi* is utilized, nearly half of its usage is viewed as suggesting propositional use by trainee interpreters. As one of the six particles to be compared in terms of what discourse functions it assumes in SP and SI, the results show that the discourse functions *Qishi* assumes are the same across the two scenarios.

Liu (2009) held the view that *Qishi* as a DM should function to make the utterance by the speaker less subjective to make the utterance more indirect and to hold the floor. These two functions are observed in the group of trainee interpreters. The discourse function of indicating topic shift observed in the group of trainee interpreters is consistent with the notion put forward by Cui (2008), who proposed that as a DM, *Qishi* functions to shift the topic in discourse.

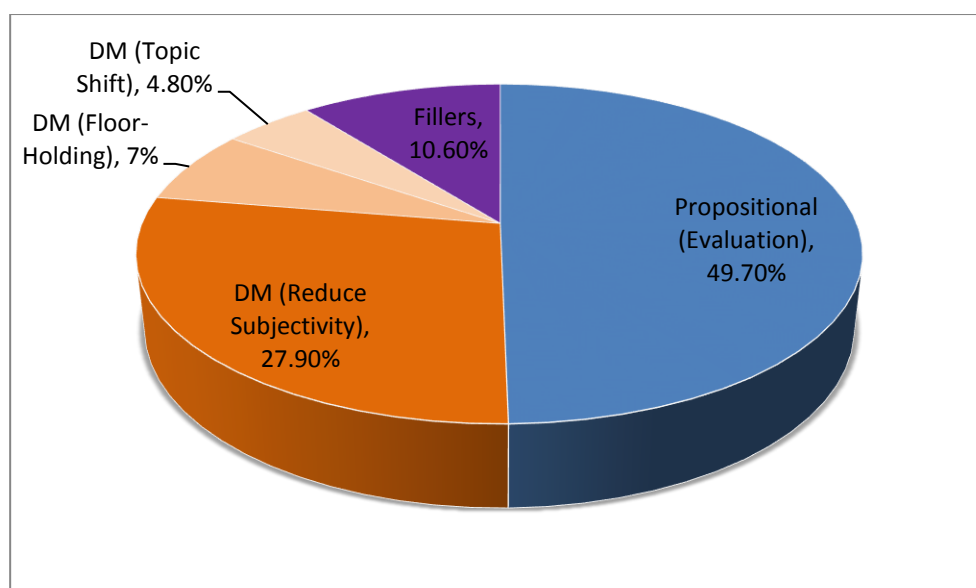


Figure 6-19 Uses of *Qishi* as Perceived by Trainee Interpreters

The particle *Qishi* was discussed previously in Examples 8a and 8b in Chapter 4 and in Examples 7a, 7b, and 7c in Chapter 5. The results in table 6-23 show that in the responses given by trainee interpreters, in Example 8a when *Qishi* co-occurs with a filled pause before it and “*wo*” after it, without elongating the target particle, there is a 59% chance that it is viewed as a DM. When *Qishi* co-occurs with “*shijian*” before it and “*shi*” after it in Example 8b, without elongating the target particle, it is more likely to suggest propositional meaning to mark assessment by the speaker. For the use of *Qishi* in Example 7a, when it co-occurs with “*tamen*” before it and the elongated “*xuede*” after it, without elongating the target particle, it is more likely to suggest propositional use than DM or filler use. As for Example 7b, when *Qishi* co-occurs with “*ta*” before it and the elongated “*shi*” after it, without elongating the target particle, it is more likely to be viewed as suggesting propositional use than as DM or filler. When *Qishi* co-occurs with a pause of more than 3 seconds before it and “*wo*” after it in Example 7c, without elongating the target particle, there is a 66.7% chance that it is regarded as suggesting propositional meaning to mark assessment by the speaker.

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a filled pause of 326 milliseconds before “wo” no elongation of the target particle (8a)	22.8	59	18.2
following “shijian” before “shi” no elongation of the target particle (8b)	47	39.3	13.7
following “tamen” before elongated “xuede” no elongation of the target particle (7a)	57.6	30.2	12.2
following “ta” before the elongated “shi” no elongation of the target particle (7b)	54.6	36.3	9.1
following a pause of 3485 milliseconds before “wo” no elongation of the target particle (7c)	66.7	33.3	0

Table 6-23 Uses of *Qishi* by Example as Perceived by Trainee Interpreters

6.4.8 The discourse functions of *Nage*

It is observed in the results of the group of trainee interpreters that *Nage* has seven discourse functions as demonstrated in figure 6-20. Among them, the propositional uses of the particle account for 28.3% of its perceived usage, with serving as a quantifier at 15.1% and indicating the subject matter of an event at 13.2%. DM uses account for 30.6% of its perceived usage, with serving as a buffer to think at 18.9%, initiating topic at 8%, holding the floor at 2.6%, and indicating topic shift at 1.1% separately. Using the particle as a filler accounts for 41.1% of its usage. In general, it can be said that from the perspectives of trainee interpreters, it is more likely that *Nage* is used as fillers than as a DM or to suggest propositional meaning.

As one of the six particles to be compared in terms of what discourse functions it assumes in SP and SI, the results in the group of trainee interpreters reveal that the discourse functions of referring to the subject matter of an event, initiating topic in discourse, and indicating topic shift are present in SP whereas they are absent in SI. In other words, more discourse functions are observed in SP than in SI where the particle is more often perceived as a filler by trainee interpreters.

Liu¹² (2009) thought that as a DM, the particle of *Nage* should serve one textual function: that of verbal filler. This function is conceptually similar to the discourse function of thinking buffer observed in the group of trainee interpreters with an aim to “make a lexical choice or to formulate a syntactic frame or to gather their thought” (Huang, 1999). The DM use of the particle to hold the floor observed in my data is also consistent with the notion proposed by Liu¹³ (2009).

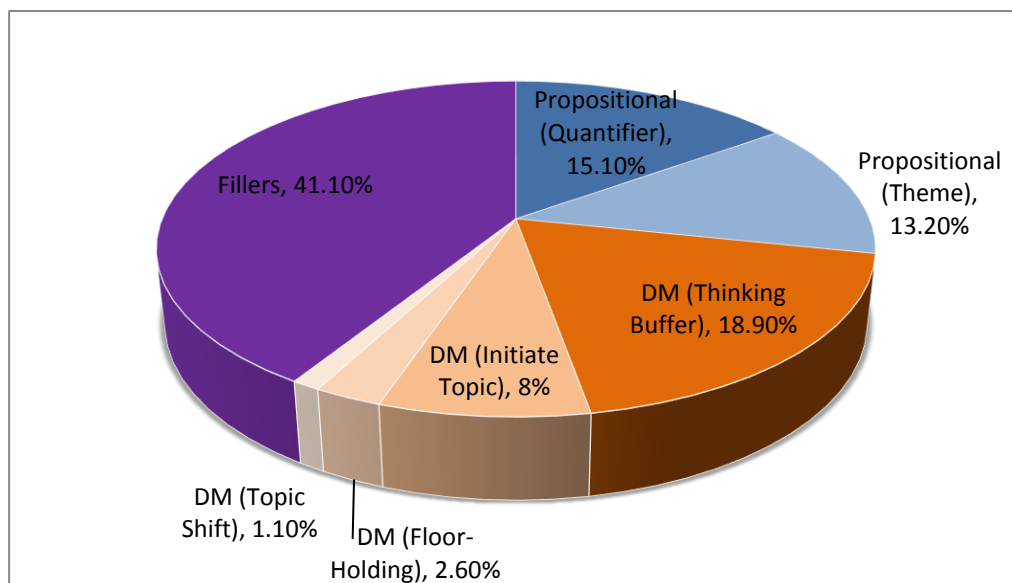


Figure 6-20 Uses of *Nage* as Perceived by Trainee Interpreters

The particle *Nage* was discussed earlier in Examples 6a, 6b, and 6c in Chapter 4 and in Example 8 in Chapter 5. The results in table 6-24 show that when *Nage* co-occurs with a pause of 446 milliseconds before it and “*nuzi*” after it in Example 6a, without elongating the particle, there is a 63.7% chance that it is regarded as suggesting propositional

¹² Binmei Liu.

¹³ Liyan Liu.

meaning by trainee interpreters. When *Nage* co-occurs with a pause of 453 milliseconds before it and a pause of 464 milliseconds followed by “*ni*” after it in Example 6b, without elongating the target particle, it is more likely to be viewed as a DM. In Example 6c, when the elongated *Nage* co-occurs with “*you*” before it and “*yang*” after it, it is more likely to be viewed as a filler. In the case of Example 8, when the elongated *Nage* co-occurs with a pause of 650 milliseconds before it and a pause of 62 milliseconds after it, it is more likely to be regarded as filler than as a DM or as suggesting propositional meaning

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
	Percent of Responses (%)		
following a pause of 446 milliseconds before “ <i>nuzi</i> ” no elongation of the target particle (6a)	63.7	9	27.3
following a pause of 453 milliseconds before a pause of 464 milliseconds followed by “ <i>ni</i> ” no elongation of the target particle (6b)	9.1	49.9	41
following “ <i>you</i> ” before “ <i>yang</i> ” elongation of the target particle (6c)	28.8	22.7	48.5
following a pause of 650 milliseconds before a pause of 62 milliseconds elongation of the target particle (8)	12.2	40.9	46.9

Table 6-24 Uses of *Nage* by Example as Perceived by Trainee Interpreters

6.4.9 The discourse functions of *Qu*

It was observed by the group of trainee interpreters that *Qu* has five discourse functions as demonstrated in figure 6-21. Among them, deictic propositional use of the particle accounts for 51.5% of its perceived usage. DM uses account for 28.1% of its perceived usage, with delivering new information at 12.9%, serving as a buffer to think at 9.1%, and initiating new topic at 6.1%. Using the particle as a filler accounts for

20.4% of its perceived usage. In general, it can be said that in the use of *Qu*, more than half of its usage is regarded as deixis to mark the tendency of a movement.

As the last of the six particles to be compared in terms of the discourse functions it assumes across the scenario of SP and SI, the results in the group of trainee interpreters reveal that the discourse function of initiating new topic is present in SI but absent in SP. The rest of the discourse functions it assumes are the same across the two scenarios as perceived by trainee interpreters.

Similar to the approach of the analysis in 6.3.9, Wu's (2009) work on identifying the deictic *Lai* as a DM has been utilized as a basis for identifying the DM use of the deictic *Qu* (i.e. by providing the discourse functions for the listeners to identify). As a result, three discourse functions, namely, delivering new information, initiating new topic, and serving as a buffer to think are the DM uses of the particle *Qu* identified in the current study.

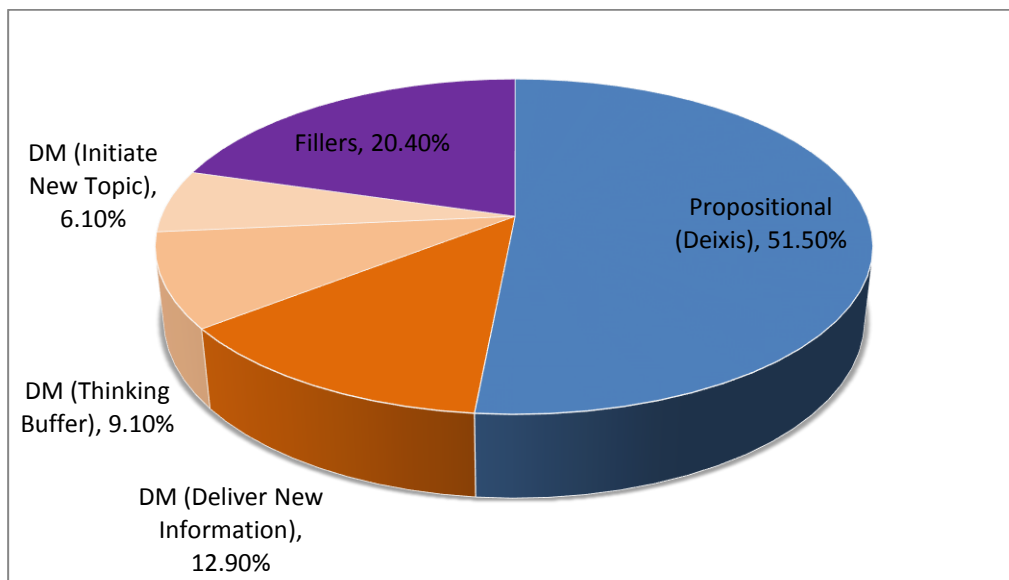


Figure 6-21 Uses of *Qu* as Perceived by Trainee Interpreters

The particle *Qu* was discussed earlier in Example 5 in Chapter 4 and Example 9 in Chapter 5. The results in table 6-25 show that in Example 5 when *Qu* co-occurs with “*neng*” before it and “*zuo*” after it, without elongating the target particle, there is a

59.1% chance that it is viewed as deixis to mark the tendency of a movement. When the elongated *Qu* co-occurs with “*xuesheng*” before it and a pause of 284 milliseconds followed by “*zizhu*” after it in Example 9, it is more likely to be regarded as deixis (44%) than as a DM (33.3%) or as a filler (22.7%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>neng</i> ” before “ <i>zuo</i> ” no elongation of the target particle (5)	59.1	22.7	18.2
following “ <i>xuesheng</i> ” before a pause of 284 milliseconds followed by “ <i>zizhu</i> ” elongation of the target particle (9)	44	33.3	22.7

Table 6-25 Uses of *Qu* by Example as Perceived by Trainee Interpreters

6.4.10. The discourse functions of *Ranhou*

It is observed in the group of trainee interpreters that *Ranhou* has eight perceived discourse functions as demonstrated in figure 6-22. Among them, the propositional uses of the particle account for 31.5% of its usage, with marking chronological order at 27% and marking causal relationship at 4.5%. The DM uses of the particle account for 64% of its perceived usage, with continuing topic at 23%, explaining further at 15%, adding information at 12%, serving as a buffer to think at 10%, and indicating topic shift at 4%. Using the particle as a filler accounts for 4.5% of its perceived usage. In general, it can be said that *Ranhou* in most cases is employed as a DM from the perspectives of trainee interpreters.

Liu (2009) held the view that as a DM, *Ranhou* serves two textual functions: topic-succession and verbal filler. These two functions are similar to the two discourse functions observed by the group of trainee interpreters, namely, continuing topic and thinking buffer. In addition, Wang (1998) suggests that as a DM, *Ranhou* serves to mark continuation, which is consistent with the discourse function of continuing the topic

observed in the group of trainee interpreters. Additional DM uses of the particle to add information, explain further, and indicate topic shift are identified in the current study although absent in the work of Liu and Wang.

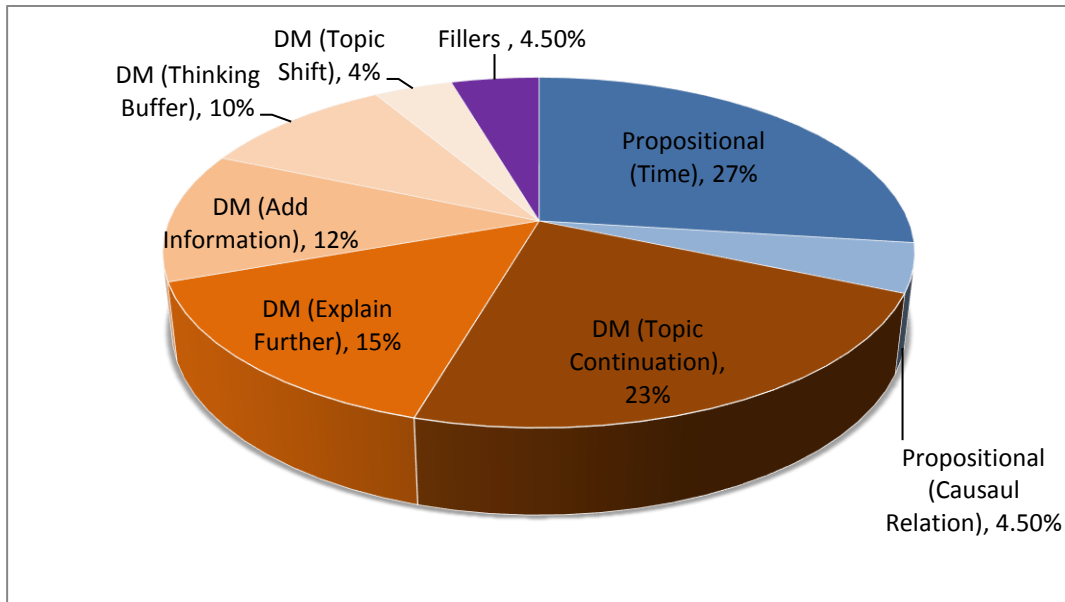


Figure 6-22 Uses of *Ranhou* as Perceived by Trainee Interpreters

The particle *Ranhou* was discussed previously in Examples 1a, 1b, and 1c in Chapter 4. The results in table 6-26 indicate that in Example 1a when *Ranhou* co-occurs with a pause of 138 milliseconds before it and “*shuohua*” after it, without elongating the target particle, it is highly likely to be regarded as a DM (88.6%). When *Ranhou* co-occurs with “*chuang*” before it and a pause of 292 milliseconds after it in Example 1b, without elongating the target particle, there is a 52.3% chance that it is viewed as a DM. When *Ranhou* co-occurs with a pause of 508 milliseconds before it and “*jibenshang*” after it, without elongating the target particle, it is more likely to be regarded as a DM (47.9%) than as suggesting propositional meaning (43%) or as a filler (9.1%).

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 138 milliseconds before “ <i>shuohua</i> ” no elongation of the target particle (1a)	2.3	88.6	9.1
following “ <i>chuang</i> ” before a pause of 292 milliseconds no elongation of the target particle (1b)	47.7	52.3	0
following a pause of 508 milliseconds before “ <i>jibenshang</i> ” no elongation of the target particle (1c)	43	47.9	9.1

Table 6-26 Uses of *Ranhou* by Example as Perceived by Trainee Interpreters

6.4.11 The discourse functions of *Haoxiang*

It is observed that *Haoxiang* has three discourse functions as demonstrated in figure 6-23. Among them, the propositional use to mark a guess by the speaker accounts for 31.8% of its usage as perceived by these listeners. The DM use of the particle to make the statement by the speaker less subjective accounts for 47.7% of its perceived usage. Using the particle as filler accounts for 20.5%. In general, it can be said that in the use of *Haoxiang*, it is more likely to be perceived as a DM than as filler or as suggesting propositional use.

According to Liu (2009), no previous study had analyzed *Haoxiang* as a DM. Therefore, in her data, it was discovered that as a DM, *Haoxiang* should serve one textual function, namely, interpersonal function to make the speaker’s utterance more indirect. This function – making the speaker’s utterance less subjective - was observed by the group of trainee interpreters.

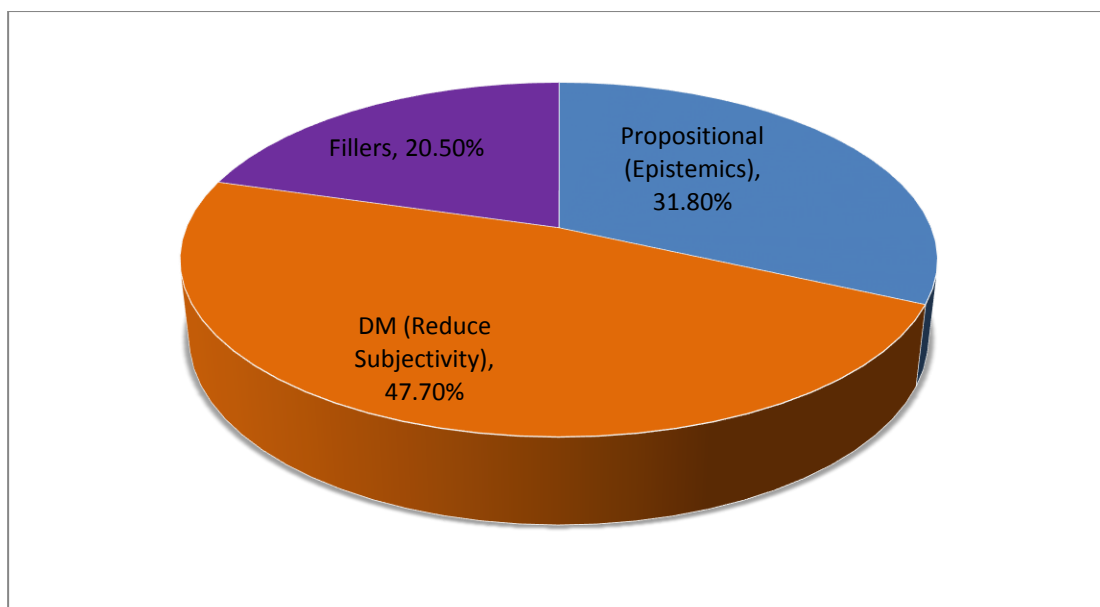


Figure 6-23 Uses of *Haoxiang* as Perceived by Trainee Interpreters

The particle *Haoxiang* was discussed earlier in Examples 7a and 7b in Chapter 4. The results in table 6-27 show that in Example 7a when *Haoxiang* co-occurs with “*guonei*” before it and a pause of 430 milliseconds after it, without elongating the target particle, it is more likely that *Haoxiang* is regarded as a DM (45.4%) than as a filler (36.4%) or as suggesting propositional use (18.2%). As for Example 7b, when *Haoxiang* co-occurs with a pause of 218 milliseconds before it and “*kan*” after it, without elongating the target particle, there is a 50% chance that it is viewed as a DM.

Contexts (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following “ <i>guonei</i> ” before a pause of 430 milliseconds no elongating of the target particle (7a)	18.2	45.4	36.4
following a pause of 218 milliseconds before “ <i>kan</i> ” no elongation of the target particle (7b)	45.5	50	4.5

Table 6-27 Uses of *Haoxiang* by Example as Perceived by Trainee Interpreters

6.4.12 The discourse functions of *Erqie*

It is observed that *Erqie* has four discourse functions as presented in figure 6-24. Among them, the propositional use of the particle to add information accounts for 79.5% of its perceived usage. DM uses account for 18.2%, with indicating topic shift at 11.4% and indicating gradual continuation at 6.8% respectively. Using the particle as filler accounts for only 2.3% of its perceived usage. On average, it can be said that *Erqie* is utilized to suggest propositional meaning by adding information in discourse. Liu (2009) and Fang (2000) both held the view that, as a DM, *Erqie* should serve to mark topic shift. This function was observed by the group of trainee interpreters. The discourse function of indicating gradual continuation, however, is identified in my data whereas it is absent in the work by Liu and Fang.

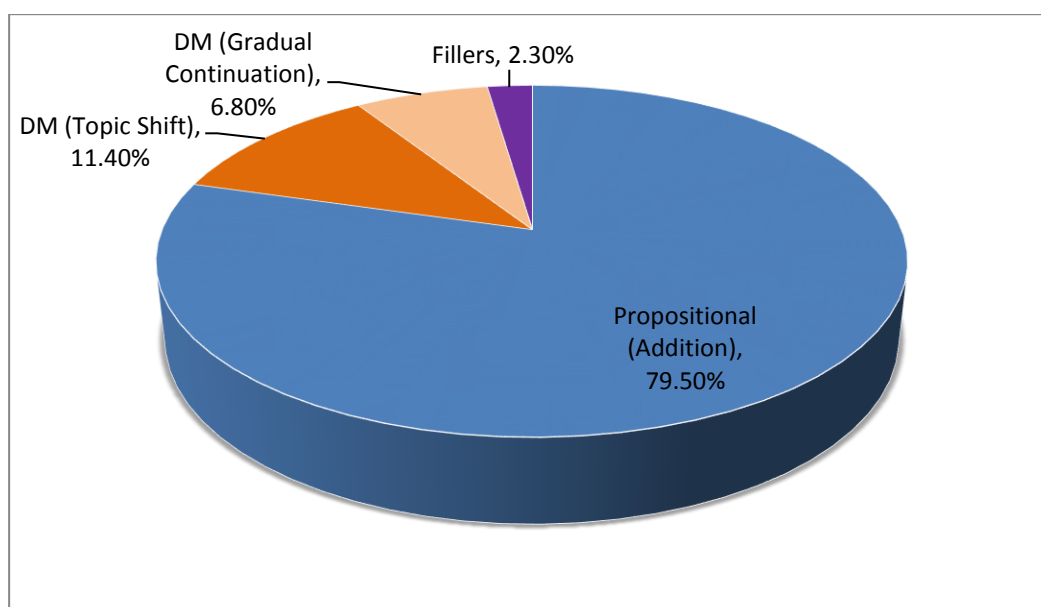


Figure 6-24 Uses of *Erqie* as Perceived by Trainee Interpreters

Erqie was discussed earlier in Example 9a and 9b in Chapter 4. The results in table 6-28 show that in Example 9a when *Erqie* co-occurs with a pause of 53 milliseconds before it and “*weidao*” after it, without elongating the target particle, it is highly likely (86.4%) that it is viewed to suggest the propositional meaning of adding information to discourse. When *Erqie* co-occurs with a pause of 352 milliseconds before it and “*tamen*” after it in Example 9b, without elongating the target particle, there is a 72.8% chance that it is viewed to suggest the propositional meaning of adding information to discourse.

Descriptive Parameters (Example)	Discourse Functions		
	Propositional	DM	Fillers
Percent of Responses (%)			
following a pause of 53 milliseconds before “ <i>weidao</i> ” no elongation of the target particle (9a)	86.4	9.1	4.5
following a pause of 352 milliseconds before “ <i>tamen</i> ” no elongation of the target particle (9b)	72.8	27.2	0

Table 6-28 Uses of *Erqie* by Example as Perceived by Trainee Interpreters

Having reported the results of listener surveys in terms of fluency and discourse functions in depth, 6.5 summarizes what has been discovered throughout the chapter.

6.5 Summary

In understanding the extent to which the use of the surveyed particles can affect fluency in Chinese SP and English-to-Chinese SI, this chapter assessed twelve particles by reporting their influence on fluency, or “usefulness”, based on numerical judgements made by participants. This provides an easier understanding of the extent to which the use of discourse particles can affect fluency with example-based contexts. The results have suggested that for both groups of listeners, scenarios and positions have nothing to do with fluency rating. However, both groups considered the use of *Erqie* and *Suoyi* most helpful in enhancing fluency. In addition, it can be seen that the mean ratings for each particle are significantly higher in the group of listeners from non-interpreting background than in the group of trainee interpreters. This implies that trainee interpreters tend to raise the bar higher when it comes to assessing the use of discourse particles than their counterparts from non-interpreting backgrounds. In other words, interpreter training does play a role in how trainee interpreters perceive the use of discourse particles.

On identifying the possible elements (e.g. pauses, elongations, or repetitions) that drive listeners to determine what discourse functions the surveyed particles assume in the

given context, it is hard to generalize as they are case-dependent. Nonetheless, some interesting tendencies were observed. For example, across the two groups, the particle of *Na*, *Name*, and *Ranhou* are perceived to function as DMs in most cases; whereas the particle of *Zhe* and *Erqie* are perceived to suggest propositional meaning in most cases.

In addition, listeners from non-interpreting background tend to categorize the surveyed particles as suggesting propositional meaning more easily than their counterparts in the case of *Suoyi*, *Lai*, *Zhe*, *Qishi*, *Qu*, and *Erqie*. It is however interesting to point out that, in the group of trainee interpreters, when *Name* follows a pause of more than 5 seconds, its probability of being perceived as a filler increases. When *Nage* is elongated, its probability of being perceived as a filler also increases. This can perhaps provide some insights into discovering what drives trainee interpreters' decision-making processes during listener surveys and also while interpreting. In general, the perceived use of particles after pauses or with elongation does not necessarily lead to the increase of their likelihood to be perceived as filler-use in the present study. More precisely, their perceived usage is context-bound and also depends largely on the background of the raters and what the rated particle is.

The results also suggested that among the twelve surveyed particles, four of them, namely, *Qishi*, *Qu*, *Ranhou*, and *Haixiang* are viewed to assume exactly the same subcategories of discourse functions by both groups although the proportion differs across the two groups. In general, more discourse functions regarding individual particles have been identified in the group of trainee interpreters than in its counterpart. This implies that trainee interpreters tend to be more sensitive to what precise contextual coordinates (Schiffrin, 1987) the surveyed discourse particles can offer in a given text, if discourse functions can be interpreted as contextual coordinates.

Chapter 7. Discussion

The current study investigated how discourse particles are utilized in Chinese SP and English-to-Chinese SI and to what extent the surveyed discourse particles may affect oral output by asking three research questions: i) *how different is the frequency of discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech*, ii) *how different are the discourse functions of the discourse particles in English-to-Chinese simultaneous interpreting from Chinese spontaneous speech*, and iii) *to what extent does the use of discourse particles impact fluency in English-to-Chinese simultaneous interpreting and Chinese spontaneous speech?*

In answering the first research question, the current study found that the most frequently utilized types of particle in Chinese SP are different from those in English-to-Chinese SI. In particular, conjunction particles are used most frequently in Chinese SP whereas in English-to-Chinese SI, quantifier (determiner) particles are used most frequently. Nonetheless, the results of the current study are unable to explain what contributed to such a difference in terms of frequency, as a consequence of the limited scale of the study or of the design of the study.

In answering the second research question, the present study found that the discourse functions of the surveyed particles are case-dependent across the two scenarios, depending mainly on the context in which they are utilized. Both listener groups held the same view that *Na*, *Name*, and *Ranhou* are in most cases in both SP and SI employed as DMs. *Zhe*, *Qu*, and *Erqie* are perceived by both groups to suggest mostly propositional meanings regardless of scenario. These will be discussed further in 7.5.

In answering the third research question, the results of the present study showed that on fluency rating of the surveyed particles, the ratings by the two listener groups, namely, non-T&I and T&I groups, differed significantly as discussed in 6.2.3. Ratings by the non-T&I group are overall higher than the T&I group regardless of the scenario (SP or SI) in which the surveyed particles are utilized. Despite the difference in fluency

rating, the two listener groups do share some common ground. For example, both groups gave higher ratings to all surveyed particles in SI than in SP, so it appears that both groups regarded the use of discourse particles as more helpful in SI than in SP for enhancing fluency. This may imply that the addition of discourse particles in SI could be thought of as one type of strategy in tackling SI tasks.

The current study has yielded findings that have important implications for discourse analysis and interpreting studies, in particular in terms of the effect using discourse particles may have on output in SP and SI. The following sections revolve around what has been discovered by the present study, starting with 7.1, using the parser as the basis for comparison.

7.1 The Gap between Real-World Usage and the Parser

Throughout Chapters 4 and 5, results by the semantic parser in reporting the discourse roles and the corresponding discourse functions of the surveyed particles were the principle connecting thread.

In analyzing the structure of a given text, given the amount of information contained in the treebank, converting the data into a parser provided easier access to exploring and understanding the discourse functions of the surveyed particles. In other words, without having to firstly resort to other approaches involving human participants, the semantic parser offers an automatic process from which the discourse functions identified by the parser can serve as a basis for comparison (Oliver, 2000). In the current study, the discourse roles of the surveyed particles identified by the parser are propositional. These propositional meanings were then utilized as a basis for comparison to investigate whether the surveyed particles had undergone meaning reductions, which served as an important indicator for probing Chinese DMs (Xu, 2008), as discussed throughout Chapters 4 and 5. The primary contribution by the parser can therefore be regarded as providing a stepping stone for the current research to start investigating the target particles in discourse and the links between the parser and other theoretical approaches.

Despite the contribution and convenience of use of the parser, however, it is not a silver bullet. For instance, as the parser only deals with written texts and the number of the discourse roles inherent in the parser is limited (see Appendix B for the 2013 technical report by CKIP), the scope of the results by the parser is restricted to certain extent. In particular, dealing with only written texts would imply that these texts have to be processed firstly by the user, meaning that prosodic features such as stress or intonation (Macías, 2006) present in the oral data are not included when inputting texts into the parser for analysis. More precisely, no symbols can be utilized to account for these features in the parser. Therefore, without considering prosodic features, automatic parsing and labelling could only reflect a fraction of how the surveyed particle is utilized in the real world and the discourse functions it assumes in a given text. Nonetheless, using the parser as a starting basis for comparison, analyzing the discourse functions of discourse particles based on prosodic features has also been an effective approach (Tseng et al., 2006).

After exploring both the advantages and disadvantages, it is believed that with on-going research devoted to refining and advancing the parser, it has great potential to be exploited as a mainstream research tool in the field of discourse analysis, although it is positioned as an exploratory tool in the present study. Other approaches were thus employed to compensate for the fact that the parser is unable to tell when a particle may be functioning as a DM, to be detailed in 7.2.

7.2 Features Pertaining to Discourse Markers

As pointed out in 4.3, there is no single feature that can be deemed to determine what a DM is, therefore the present study included a number of criteria for investigating and identifying DMs among regular particles. Previous studies have suggested that in identifying DMs, one should take into consideration phonological, syntactic, semantic, functional, sociolinguistic and stylistic features (Jucker & Ziv, 1998). Although the present study did not employ all the features pertaining to DMs, the results did show that using multiple criteria is necessary, as using solely one or two features could be misleading as presented in individual examples throughout Chapters 4 and 5. 7.2.1

illustrates one of the features connected with DMs: meaning reduction.

7.2.1 Meaning reduction

As one of the primary criteria for identifying DMs in the present study, based on the examples given, it appears that when the discourse role identified by the parser on a given target particle is clearly not the discourse function the surveyed particle is assuming in a given text, showing change or reductions in the propositional meaning given by the parser, it is highly likely to be perceived as a DM by human listeners. This can be supported by the observations of particles *Na*, *Name*, and *Ranhou*, where reductions in the propositional meaning identified by the parser are pronounced and they are perceived as DMs in most cases by both listener groups. Under such a circumstance, the criterion of meaning reduction can be very helpful in identifying DMs.

Nonetheless, it struggles when the propositional meaning of the surveyed particle identified by the parser is not that evident in the given text. In other words, when a given surveyed particle seems to simultaneously and equally suggest propositional and non-propositional use, meaning reduction as a criterion for investigation can be of little help. This can be observed in the particle of *Nage* where the propositional meaning of quantifier and theme identified by the parser are unable to fully account for the possible discourse functions assumed in the examples. This is also reflected in the results of listener survey where the proportion of respondents choosing the propositional meaning of *Nage* is close to that of the non-propositional meaning (i.e. the DM use) for both listener groups.

Under such a circumstance, meaning reduction as an assessing criterion can be problematic when the discourse function of a surveyed particle is swinging between suggesting propositional and DM use. Therefore, other criteria such as Fraser's canonical forms can help locate potential DMs, to be detailed in the following section.

7.2.2 Fraser's canonical forms

With issues facing the criterion of meaning reduction, Fraser's canonical forms have

been utilized as another criterion in identifying potential DMs. The results of the current study in general agreed with Fraser's notion that DMs tend to occur in the segment-initial position in the form of either **S1** › **DM + S2** or **S1** ◦ **DM + S2**. To recap, in Fraser's canonical forms, S refers to a sequence of discourse segment where it encodes a complete message (Fraser, 1999). Discourse segment can refer to sentences or clauses for investigation on the sole premise that they encode a complete message. Fraser's canonical forms indeed help to identify particles that are likely to be perceived as DMs by examining the positions where they occur in a discourse segment. The present study also holds the view consistent with Fraser that DMs serve to signal a two-placed relationship between S1 and S2 by providing a certain degree of interpretation. Despite the merits the canonical forms can offer, the present study also found that they can be problematic under the following circumstance.

Fraser's canonical forms have excluded the possibility that DMs are flexible and can appear in different positions in discourse (Lenk, 2005), for example in the medial or final position in a unit of talk (Brinton, 1996). The notion that DMs are flexible and can appear in different positions can be evidenced by the particle *Haoxiang* in Example 7a in Chapter 4, which more than 60% of non T&I participants perceived as DM use to make the speaker's utterance less subjective in spite of its occurrence in the medial position in a sentence. The findings of the current study support the notion that the appearance of DMs in discourse is not restricted to only segment-initial position, although segment-initial position is the major position in which the surveyed DMs occur.

The findings of the present study also found that Fraser's canonical forms have inadequacies. For example, the particle of *Erqie* appears in both the form of **S1** › **DM + S2** and **S1** ◦ **DM + S2** (see 3.3.5.2 for more details on determining punctuation marks) in Examples 9a and 9b in Chapter 4, but more than 70% of its usage is perceived by both listener groups to indicate propositional use. Therefore, it can be said that particles appearing in the form of either **S1** › **DM + S2** or **S1** ◦ **DM + S2** does not necessarily make

them DMs. It appears that what makes them possible DMs has more to do with the pragmatic functions they provide in the text than the positions where they occur in terms of syntactic features. In addition, the findings of the present study support the notion that DMs are syntactically optional (Jucker and Ziv, 1998) and that their removal does not undermine the gist of the text, though the intensity of the connection between the first discourse segment and the second discourse segment may be subject to change.

In short, the findings of the present study agreed with the notion by Fraser (1999) that DMs should signal a two-placed relationship between S1 and S2, in particular, by enhancing the intensity of connection between S1 and S2 through the discourse functions DMs can offer.

7.2.3 Bracketing units of talk

As can be seen in 7.2.1 and 7.2.2, the adopted criteria for identifying DMs have their merits and inadequacies, which is why a third criterion is necessary, namely, DMs should bracket two units of talk, each encoding a complete message, as put forward by Schiffrin (1987). The findings of the present study in general agreed with this notion of the discourse management role of DMs, as evidenced by a number of examples discussed throughout Chapter 4 and 5. Particularly, the current study discovered that by bracketing units of talk, each unit can be of little or of great relevance to the other in terms of discourse topic, depending on the discourse functions of the marker in a given text.

7.2.3.1 Bracketing versus segmenting

As discussed in 2.1.3.3, the present study argues that bracketing units of talks (see 2.1.2.1) with the use of DMs could be conceptually similar to a strategy termed “segmenting” in SI, thus sharing some common properties. The similarity lies in that, by segmenting, interpreters divide units of talks according to meaning groups (Zhang, 2007). Dividing units of talks hence becomes the common ground shared by segmenting in SI and bracketing with DMs in SP.

Nonetheless, over the course of data analysis, no strong evidence can be found to suggest that segmenting in SI is similar to bracketing with the use of DMs in SP. Instead, differences between the two concepts have become more apparent. Take Example 6a in Chapter 5 on *Name* below for instance to illustrate the difference.

Example 6a:

Keyboard, right. How would the sound be produced?

沒錯是鍵盤那麼聲音是怎麼發出的

meicuo shi jianpan name shengyin shi zhenme fachu de

Segmenting in SI

沒錯/是鍵盤/那麼聲音是怎麼發出的/

meicuo/shi jianpan/**name** shengyin shi zhenme fachu de/

Bracketing with the use of *Name* as a DM:

沒錯/是鍵盤/那麼/聲音是怎麼發出的/

meicuo/shi jianpan/**name**/shengyin shi zhenme fachu de/

In this example, it is evident that the ways in which *Name* brackets the talk as a DM is different from how it segments the speech in SI. As a DM, *Name* serves to indicate topic shift between the segment preceding and following it. It somehow gives the segment preceding it a closure whilst opening up the segment that follows in a new topic with new information added. On the contrary, in the case of using *Name* to segment in SI, the degree of such interpretation is compromised. It is more likely that people would consider the two segments independent from each other. It should be noted that the objectives of segmenting and bracketing are different in nature. In particular, the objective of segmenting in SI is to mitigate memory burden by tackling and disposing of the incoming information in a shorter time on the part of interpreters (Zhang, 2007), whereas bracketing with the use of DMs aims to relate the previous unit of talk with the forthcoming utterance (Schiffrin, 1987) by signaling a two-placed relationship between

the first and the second discourse segment (Fraser, 1999).

Another reason underpinning the difference lies in the fact that the units divided through segmenting and through bracketing are different. Particularly, segmenting divides units of talk based on meaning group, which can refer to a variety of grammatical categories such as verbs, nouns, adjectives, or phrases, which do not necessarily encode complete messages. In contrast, DMs mark boundaries between discourse segments with each of the segments delivering a complete message and being related to each other to a certain degree. In other words, it can be said that bracketing with the use of DMs in SP is the organization of a given discourse topic to provide certain interpretations (Fraser, 1999) between different discourse segments whereas in segmenting in SI this is not necessarily the case, depending mainly on the complexity of the input text. Hence, more differences have been found between bracketing and segmenting than similarities.

7.3 What Can Be Inferred from the Listener Surveys?

Throughout Chapters 4 and 5, based on the given examples, it is evident that no single criterion can be used to determine what a DM is. Against this backdrop, listener surveys have been utilized as a complementary assessment tool to investigate not only how the surveyed particles may affect fluency but also what discourse functions they assume in a given text, adding to the results from the parser. The reason for adopting listener surveys as both a complementary and final assessment tool lies in the knowledge that human listeners are always the recipients in discourse, whether SP or SI. Therefore, it would be seemingly logical for human listeners to judge the roles of the surveyed particles in the given texts.

The analyses of listener surveys showed an interesting tendency that regardless of the text, more than 70% of the usage of *Erqie* and *Zhe* was perceived by both listener groups to suggest propositional meaning and hence non-DM use, as evidenced by Example 9a and 9b in Chapter 4 and Example 5 in Chapter 5. Judging from the data, it can be argued that the discourse functions of *Erqie* and *Zhe* are clear in the texts; the

former is associated with adding information and the latter is associated with modifying or specifying an object. In other words, on the use of the two particles, it can be argued that because of the clear discourse functions they offer, they are more likely to help direct the listeners to where the speech segment is heading. This argument is supported by the results of fluency rating in which *Erqie* topped the others to receive the highest usefulness rating as perceived by the two listener groups. *Zhe* received a mean rating of 4 (seen to be helpful) in the non-T&I listener group and 3.82 (ranked third) in the T&I listener group. This would also imply that human listeners may already have an entrenched impression towards the use of certain particles regarding their discourse functions.

7.3.1 Parameters for fluency rating

With the provision of the adopted criteria for listeners to assess whether particles had assisted the fluency of the text, fluency rating was one of the primary tasks in the listener surveys and it cannot be achieved by the parser or by the criteria for identifying DMs. Fluency rating provides a different perspective on the use of discourse particles, which is why listener surveys as an approach are not only complementary but crucial in the present study.

As discussed earlier, fluency embodies and reflects one aspect of quality in interpreting. As pointed out by Garzone (2002, p.107), "The basic problem is that quality is the sum of several different, heterogeneous aspects, some of which involve different subjects - interpreters, clients, users, speakers - each with a different view and perception of quality." Every party involved in the task of SI has different expectations of what constitutes interpreting quality as a whole. This has been supported by empirical research by Macías (2006) which stated that parameters pertaining to interpreting quality include such criterion as accent, voice, style, intonation, completeness, etc., totaling a number of fourteen parameters in which fluency plays a critical part. In short, there are no broadly accepted definitions for many of the widely used parameters for assessing interpreting quality, including the criterion of fluency of delivery (Macías, 2006).

Given that fluency is ill-defined, the present study employs the model put forward by Liu et al. (2007) for assessing interpreting fluency, which revolves around hesitations (including pauses and elongations), repetitions, and fillers as parameters for assessment. Undoubtedly, the parameters adopted in the present study have reflected a fraction of what fluency is and what possibly drives human listeners' decisions in fluency rating, but they can hopefully lay the grounds for probing criteria for fluency in SI.

7.3.1.1 Hesitations, repetitions, and fillers as assessment parameters

In 6.2.3, it was pointed out that fluency rating showed no correlation with the scenario (i.e. SP or SI) in which the surveyed particles occur or with positions where the surveyed particles appear. Apart from scenarios and positions, the findings showed that the relations between the results of fluency rating and the criteria adopted for assessing fluency based on Liu et al.'s model are case-dependent, hence hard to generalize in the present study; however, over the course of data analysis, some interesting trends emerged which are worth mentioning.

For example, it appears that when the surveyed particle co-occurs with pauses both before and after it, with each pause lasting between 453 and 464 milliseconds, the mean rating for fluency on the target particle across the two listener groups is below 2.50 (meaning the use of the target particle is between no comment and not helpful), as can be evidenced by Example 6b in Chapter 4 for the particle *Nage*. More than 40% of both listener groups perceived the usage of *Nage* in this example as filler. This may imply that the positions where pauses occurred in the text could play a role in affecting or disrupting fluency from the perspective of human listeners. Nonetheless, it remains unknown whether fluency rating may be subject to change according to the duration of pauses observed, given the limits of the existing data.

Apart from pauses, it also appears that when the surveyed particle is lengthened acoustically, the mean usefulness rating for the target particle across the two listener groups is below 2.75 (meaning also that the use of the target particle is between no

comment and not helpful to the fluency of the text), as can be evidenced by Example 6c in which the particle was elongated to 465 milliseconds in Chapter 4 for the particle *Nage*. Nearly 50% of the usage of *Nage* in this example was perceived by both listener groups as filler. This implies that elongation may play a role in affecting or disrupting fluency from the perspective of human listeners. Similar to Example 6b in Chapter 4, it remains unknown whether fluency rating could be subject to change according to the duration of the elongation of the target particle, given the limit of the existing data.

In terms of repetitions, in Example 1b in Chapter 5 the particle *Na* co-occurs with a pause of 5261 milliseconds before it and a pause of 3155 milliseconds followed by the repetition of *nimen* (meaning you in English) after it, and the mean rating across the two listener groups on the target particle is below 3 (meaning that listeners think fluency would be improved by removing the particle). However, considering that fluency rating is also based on the occurrence of pauses, and long pauses were present together with repetitions in this example, repetition is not the only aspect affecting fluency rating. Therefore, it can only be speculated that repetitions have a certain degree of influence on disrupting fluency according to human listeners.

It was mentioned at the beginning of this section that the relations between fluency rating and the adopted parameters for probing fluency are in general case-dependent, but the above examples can still lend empirical support to the notion by Corley (2008) that fillers and pauses are parts of hesitation disfluencies or of hesitation phenomena in discourse. Added to this, the present study has helped provide insights into elongation of discourse particles, which can arguably be viewed as a part of hesitation phenomena, as a potential parameter for probing fluency that awaits future research.

7.3.1.1.1 Issues facing the interpreting assessment model for fluency

Over the course of data analysis using the adopted model for probing fluency in SI, some issues have surfaced. The idea contained in the assessment model put forward by Liu et al. (2007) includes mainly parameters such as those discussed already in the previous section, the notion of whether the expressions and wordings in the rendition

are appropriate and of whether the rendered text is coherent or not. By including the notion of whether the expression and wordings of the rendered text are appropriate or not as the parameters for fluency, the model risks being critiqued for confusing fluency with cohesion.

By definition, cohesion can be described as “the way certain words or grammatical features of a sentence can connect that sentence to its predecessors and successors in a text” (Hoey, 1996, p.3). Simply put, cohesion presents “a surface structure linkage between elements of a text” (Tárnyiková, 2009, p.30). In other words, examining whether the expression and use of words is appropriate or not in the rendered text in the assessment model for fluency can be misleading, since fluency and cohesion are two different concepts for investigation and discussion. This argument is supported by the SI empirical study by Macías (2006) in which she singled out logical cohesion as one independent parameter for probing interpreting quality equally important to fluency, not as a sub-category within fluency.

More evidence underpinning the difference between logical cohesion and fluency can be found also in Kalina’s work (2002) on quality in interpreting and its prerequisites, where she mentioned a number of measurable parameters in terms of three categories - semantic content, linguistic performance, and presentation - as shown in table 7-1.

Semantic Content	Linguistic Performance	Presentation
consistency	grammatical correctness	voice quality
logic, coherence	adherence to TL norms	articulation
completeness	comprehensibility	public speaking
accurateness	stylistic adequacy	discipline
unambiguity	terminological adequacy	simultaneity
clarity	discretion	technical mastery
reliability	lack of disturbances	conduct

Table 7-1 Dimensions of Interpreters’ Output Quality (Kalina 2002)

As can be seen in table 7-1, the notion of logic and coherence is categorized under semantic content whereas lack of disturbances (conceptually similar to fluency) is

categorized as a parameter for linguistic performance. Although cohesion and coherence do not refer to exactly the same thing, i.e. the former mainly looks at the explicit expression of content-based connection in the text whilst the latter looks at content, thematic and semantic fields of the text based on causal relations, temporal frames, and sequencing of events, they can be researched together as a whole to understand how the text is connected together and how it conveys its message (Martinková, 2013). Though different disciplines may term them differently according to the objectives of the research, regardless of how they may be termed, cohesion and coherence share the common ground of requiring understanding of the semantic content of a text. This lends further support to the argument that logical cohesion or logic and coherence should not be categorized as a sub-parameter for fluency in the assessment model put forward by Liu et al.. Therefore, the current research proposes that in the assessment model for fluency proposed by Liu et al. (2007), descriptions revolving around cohesion and coherence such as use of words or semantic consistency should be removed so that the model can be a step closer to accurately reflecting and assessing interpreting fluency.

In short, the parameters adopted here for fluency rating reflect certain proportions of what should be seen to comprise fluency as a whole, but there are other aspects that may have been overlooked. It would therefore require more future research to bridge the gap in between.

7.3.1.2 Probabilistic relations between words

Apart from probing fluency based on the above-mentioned parameters such as pauses, repetitions, and fillers, the present study also touched on probabilistic relations between words in determining the discourse functions of the surveyed particles. This notion is inspired by a previous study by Jurafsky et al. (2000) who discovered lexical reductions in English words when a word co-occurs with another. A similar approach was taken in the field of Chinese discourse analysis by Xu (2008), who investigated the prosodic features of the particle *Na* and *Nage* based on a corpus of 493.19 minutes, totaling 141,619 Chinese characters in Chinese SP. He discovered, for example, that

when *Nage* serves to indicate topic shift, it is in most cases stressed and pronounced as *neige* instead of *nage*. It also appears that the target particle is not lengthened, and the pause following the target particle is usually shorter. Apart from prosodic features and discourse functions, he also looked into the positions where the surveyed particle *Nage* occurs when serving to signal topic shift and discovered that it usually appears at the beginning of a turn.

More evidence can be found to suggest the potential and importance of prosodic features as a direction for investigating the use of discourse particles, for instance, in the work by Yang (1996), who investigated the role of intonation in Chinese SP. Based on corpus analysis, she proposed that intonation in discourse should include three concurrent yet interrelated determinants, namely, topic organization, discourse interactional organization, and cognitive-emotional organization, each of which encompasses specific intonational patterns and degrees of influence. Particularly, topic organization in general affects the relative pitch height of phrases, whereas emotion and cognitive relationship often affect both the pitch height and the shape of syllables, words and phrases. Interactional determinants also affect the overall intonational structure. Therefore, she came to the conclusion that intonation is a critical element in expressing cognitive states, and discourse structure is inseparably associated with intonation through emotion, planning, and the sympathetic accommodation and interpretation of the states of participants involved in the discourse.

In light of her earlier work investigating the relationship between intonation and discourse, Yang further investigated duration and pauses as cues marking discourse boundaries and discovered that the duration of the pause is significantly correlated with specific boundary status (Yang, 2004). For example, the longest pauses occur on major phrase boundaries, while shorter pauses accompany minor phrase boundaries, and non-boundary pauses see the shortest durations on average, at 0.46 seconds, 0.35 seconds and 0.28 seconds respectively. She proposes that pauses in conversation function as interactive signals for turn-taking and for topic direction, and are also used

as elements of expression in discourse, especially for the purpose of emphasis or of dramatic effect and for building up tension and climax. She came to the conclusion that duration features are a valuable knowledge source and that it is crucial to integrate such knowledge to enhance performance in spoken language systems and discourse analysis (Yang, 2004, p.29).

The above studies not only provide empirical support for investigating discourse particles from the perspective of prosodic features but most importantly, they prove that the directions for investigating the use of discourse particles in the current research are theoretically and pragmatically-based.

In the present study, the results show that probabilistic relations between words in determining the discourse functions of the surveyed particles are case-dependent and therefore hard to generalize, depending mainly on who the listeners are (i.e. non-T&I vs T&I group) and what the surveyed particle is. For instance, in the group of trainee interpreters, when *Name* follows a pause of more than 5 seconds, its probability of being perceived as a filler increases. When *Name* is elongated, its probability of being perceived as a filler also increases. This tendency is, however, not evident in the group of non-T&I listeners.

Following the findings of the present study, the current research holds a view consistent with previous studies that prosodic features are a valuable knowledge source worth studying in the field of discourse analysis and that more can be discovered by investigating these features. What has been achieved and discovered in the present study should therefore help pave the way for future work examining the use of discourse particles, and more importantly, connecting discourse analysis with interpreting studies.

7.3.1.3 Discourse markers enhancing fluency

Previous studies have shown that DMs are of significant importance in discourse management. Based on the findings of the present study, it appears that the relation

between using DMs and enhancing fluency is not evident or can be regarded as case-dependent. For instance, while the particle *Suoyi* was perceived by trainee interpreters as a DM in most cases, its mean helpfulness rating was 3.82, meaning that listeners would tend to consider it helpful but it can still be removed from the text at the will of the speaker. On the other hand, *Suoyi* was perceived by listeners from non-interpreting backgrounds to suggest propositional use in most cases. Its mean rating was 4.25, meaning that the use of the particle is helpful in enhancing fluency with its propositional meaning.

In particular, of the particles that were perceived as DMs in most cases such as *Na*, *Name*, and *Ranhou*, only *Name* was perceived as helpful in enhancing fluency, with a mean rating of 4.06 by listeners from non-interpreting backgrounds, which dropped to 3.41 for trainee interpreters. For the particle of *Na* and *Ranhou*, the mean ratings by the two listener groups were 3.54 and 3.17. This indicates that for *Na* and *Ranhou*, although they were perceived as DMs in most cases by the two listener groups, listeners tend not to consider them helpful to fluency in the given text or think that they can be removed at the will of the speaker.

Based on the results, the present study holds the view that the relationship between using DMs and enhancing fluency is not significant. Nonetheless, this does not necessarily suggest that using discourse particles is not helpful in enhancing fluency in discourse. For example, among all the surveyed particles in the current study, the particle of *Erqie* was perceived by both groups to suggest propositional meaning in most cases by adding in information, and had the highest fluency rating. It can be argued that as the particle that topped the others to receive the highest rating across the two listener groups, one underlying reason would be its clear non-DM discourse function. It appears that when determining what discourse function *Erqie* assumes in the texts, listeners seldom struggle and usually associate it with adding information to discourse as a means of elaboration. This argument can be supported by figure 6-12 (see 6.3.12) and figure 6-24 (see 6.4.12) where the probability of *Erqie* being perceived to add information, indicating propositional use reached 81.2% in the non-T&I listener

group and 79.5% in the T&I listener group. In short, it can be argued that based on the findings of the current research, the grammaticalization of *Erqie* is relatively complete in Mandarin Chinese in terms of how it should be used in discourse - that of adding information, although it occasionally indicates DM use to suggest topic shift (Fang, 2000; Liu, 2009).

More evidence can be found also in the particles *Qu* and *Zhe* which had mean ratings of 4.13 and 4.00 respectively as perceived by listeners from non-interpreting background, though they were viewed to suggest propositional meaning, hence non-DM use. In other words, using discourse particles can be seen as helpful in enhancing fluency, depending on what the particle is and who rates it. Adding to this, the present study holds a view consistent with previous studies that different listener groups do have different expectations of what fluency is, as evidenced by the significant differences in fluency ratings between the non-T&I listener group and the T&I listener group.

To sum up, although the data in the present study shows that using DMs does not necessarily lead to the enhancement of fluency in a discourse segment, it has undoubtedly provided valuable insights into the influence of discourse particles on fluency with the presentation of numerical values in the current research, as discussed in 6.2. As far as studies on Mandarin discourse particles are concerned, the current research has pioneered investigating the use of Chinese discourse particles in terms of the extent to which they may affect fluency through demonstrating their individual mean perceived values. The present study hopes to pave the way for future research to include and investigate more potential particles in terms of the extent to which they can affect fluency in discourse.

7.4 The Two Listener Groups on Identifying Discourse Functions

Just as the difference between the two listener groups in fluency rating is significant, such a difference is also reflected in identifying the discourse functions of the surveyed particles.

In the analysis of the data, it was discovered that the listeners from the T&I group on average identified more discourse functions of the surveyed particles - a total of 63 discourse functions for the twelve surveyed particles, as opposed to 58 by their counterparts from non-interpreting backgrounds. In particular, more discourse functions have been identified for the particles *Na*, *Suoyi*, *Jiushi*, *Lai*, *Nage*, and *Erqie* by trainee interpreters.

In addition, over the course of listener surveys on identifying discourse functions of the surveyed particles, it appears that trainee interpreters were more sensitive towards the use of surveyed particles when asked to identify their discourse functions. For example, two of the trainee interpreters wrote down the discourse function they thought the particle was assuming in the given text although it was absent from the selections given in the questionnaire. This was not observed in the non-T&I listener group. This phenomenon suggests that in the design of the questionnaire, the discourse functions provided for the surveyed particles were not adequate or that some discourse functions of the surveyed particles may have been overlooked. Nonetheless, by giving the freedom for listeners to add in discourse functions absent in the questionnaire, the repertoire of the discourse functions of the surveyed particles can be increased.

This sensitivity on the part of the T&I group in identifying the discourse functions of the surveyed particles may have had the same underlying reason as why trainee interpreters appear to have raised the bar in rating the effect of the surveyed particles compared to their counterparts, as discussed in 6.2.3. In other words, it is highly likely that trainee interpreters have formed different perspectives on the use of discourse particles over the course of interpreter training. More on this can be found in the brief conversations held before the commencement of the data collection interviews, to be detailed in the following section.

7.4.1 Trainee interpreters' attitudes towards using discourse particles

Before conducting interviews with the participants from interpreting backgrounds (detailed in 3.3.1) in the main study, small conversations were held between the

researcher and the participants. During the talks, all seven participants reported that for a long time they have been aware of using discourse particles either during SI practices after class or in-class trainings as a common phenomenon. This not only lends support to Levelt's Perceptual Loop Theory (1989) that humans are able to monitor what they are saying (detailed in 2.3.1.1) but also points out that interpreters do multi-task as they interpret (i.e. language conversions, monitoring and corrections when necessary).

In addition to being aware of their use of discourse particles, when asked whether the use of discourse particles is helpful in buying time to think, four out of seven reported that using particles to buy time is helpful in processing incoming information. This may provide a reason why the use of discourse particles or the addition of discourse particles is observed frequently in SI, namely, buying time to process information that could be potentially challenging for trainee interpreters. One participant reported that the addition of discourse particles in SI can be helpful in making the rendered text closer to the ways in which the target language is usually expressed as in an SP situation, English-to-Chinese in this case. Another reason underpinning the use of discourse particles in SI may be that the trainee interpreter does not want the audience to notice that there is an unfilled pause, as one participant reported, hence the addition of discourse particles.

Regardless of why discourse particles are used by trainee interpreters, in general, it appeared that trainee interpreters were more reserved in using discourse particles as a strategy compared to other strategies during SI, as when asked what strategies they would use during SI tasks, most of them reported other strategies such as segmentation, anticipation, omission, generalization, paraphrasing, and summarizing. Only one out of seven reported that she would use the addition of discourse particles together with other strategies. In other words, among all the taught interpreting strategies, addition of discourse particles is not a priority strategy which trainee interpreters resort to, given the many coping tactics in their tool box. This gives rise to the interesting phenomenon that the addition of discourse particles is frequently observed yet is perhaps the last

option they would resort to in SI tasks, which is worth researching in future work.

While the conversations held between the researcher and the interviewees may reflect a small fraction of their attitude and why trainee interpreters use discourse particles in SI, it cannot be generalized given the limited number of participants. It, however, offers a snapshot of the use of discourse particles by trainee interpreters, which can be probed in depth for future studies.

7.4.2 Refining contextual coordinates

In Schiffrin's (1987) work, she proposed that DMs are able to provide contextual coordinates, such as by pointing out the intention of the speaker, and therefore enhance coherence in discourse. The findings of the present study, however, showed that enhanced fluency can also be achieved by particles that are perceived to suggest non-DM use, such as in the case of *Erqie*, *Qu*, and *Zhe* across the two listener groups. Therefore, the present study argues that contextual coordinates can also be found in discourse particles that suggest non-DM use.

In particular, what seemed to be underspecified in Schiffrin's work is the notion of contextual coordinates, namely, what can be regarded as contextual coordinates? Having analyzed the data with the use of the parser and listener surveys, the present study argues that contextual coordinates are all the discourse functions the surveyed particles assume in discourse.

Taking the particle of *Erqie* as an example, although it is perceived to suggest non-DM use, the discourse function it assumes in discourse in most cases is adding information to a given text. This should therefore be considered as a contextual coordinate as it facilitates the proceeding of a discourse. Another example is the use of *Name*, which is perceived to suggest DM use and to be helpful in enhancing fluency by the non-T&I listener group. The discourse function it assumes is showing topic shift in most cases, and therefore, the contextual coordinate it provides is indicating topic shift.

The findings of the present study also showed that all the surveyed particles have more than one discourse function in all the examples given, as perceived by human listeners. This means that one particle can have more than one contextual coordinate when used in discourse. For example, when *Name* is used as a DM in discourse, apart from indicating topic shift, it can simultaneously serve to signal the turn of the tone by the speaker and add information to discourse. In short, in refining contextual coordinates, the present study proposes that the discourse functions the surveyed particles assume can be regarded as the contextual coordinates they offer and these coordinates can differ, depending on who perceives them and on the texts in which the surveyed particles appear.

7.5 Links between Discourse Analysis and Interpreting Studies

The present study shows that the tendency in using discourse particles is different across the two scenarios, as was discussed earlier. However, the data of the present study is unable to explain what caused the difference, namely that conjunction particles are used most frequently in SP whereas quantifier (determiner) particles are used most frequently in SI. One possible explanation based on the analysis of the data is that, during the practice of SI, using quantifier particles by trainee interpreters does not add anything substantial to the meaning of the rendered text. In other words, compared to employing other types of particles such as conjunctions or adjectives, using quantifier particles has a much smaller effect on the semantic content of the text, and more precisely, on influencing the accuracy of the rendered text. Another speculation would be that using quantifier particles can be useful to help refer the listeners to the subject matter over the course of SI by specifying what the object being described is, since it is not uncommon for listeners to get lost when the segment to be interpreted is either too long or contains too many objects.

A third speculation would be the difference in register across the two scenarios that contributed to tendency difference in particle usage. By definition, register is the field of text that “captures social activity, subject matter or topic, including differentiations of degrees of generality, specificity or ‘granularity’ in lexical items according to rubrics

of specialized, general and popular” (House, 2001, p.248). In SI, compared to the interviews in SP in the present study, it involved higher information density as well as terminologies specific to one particular topic, for instance, the development of piano forte. This could therefore tax a significant amount of trainee interpreters’ capacity for comprehension, potentially leading to the different use of particles in SI and SP.

However, given the above speculations, more empirical evidence is still needed to account for the difference in tendency across the two scenarios, and this would therefore provide a field of study where future research can contribute to find out the reasons behind such a phenomenon. It can only be conjectured that the underlying reason for such a difference is in its nature associated with the form of the communication, namely, the conversion between two languages present in SI but absent in SP. The purpose and form of the communication probably plays a role in affecting the use of discourse particles.

The present study also shows that fluency rating is different across the two listener groups, as discussed earlier. However, the data in the present study is unable to account for what caused such a difference across the two listeners groups in fluency rating. The findings of the current study can only suggest that the two listener groups appear to perceive the use of discourse particles differently regardless of the scenario, that is, the T&I listener group tended to raise the bar in assessing the helpfulness of discourse particles compared to their counterparts from non-interpreting backgrounds. This provides a field of study where future research can delve further into finding out the factors driving listeners’ decisions on fluency rating across the two groups.

In response to the research question of whether the discourse functions of the surveyed particles are different in SI from SP, the findings show that, based on frequency count, by comparing the six surveyed particles (i.e. *Suoyi*, *Jiushi*, *Qishi*, *Nage*, *Lai*, and *Qu*) appearing in both SP and SI, differences do exist between the two scenarios in terms of discourse functions. In particular, in the survey of the non-T&I listener group, the data shows that *Suoyi*, *Lai*, *Nage*, and *Qu* assumed different

discourse functions between the two scenarios; the discourse functions of *Jiushi* and *Qishi* remained the same across the two scenarios. For example, the particle of *Suoyi* is perceived by listeners from non-interpreting background to assume the discourse functions of result, explaining further, topic continuation, and initiating new topic in the scenario of SP. Whereas in SI, in addition to the afore-mentioned functions, the particle of *Suoyi* is perceived to assume the function of serving as a thinking buffer (more details on individual particles can be found in table 7-2).

Particles	Discourse Functions	
<i>Suoyi</i>	SP	Result Explain Further Topic continuation Initiate New Topic
	SI	Result Explain Further Topic continuation Initiate New Topic Thinking Buffer
<i>Jiushi</i>	SP	Addition
	SI	Reason Stress Initiate New topic Thinking Buffer Fillers
<i>Lai</i>	SP	Deixis Thinking Buffer Fillers
	SI	Deixis Deliver New Information Fillers
<i>Qishi</i>	SP	Evaluation
	SI	Make Utterance Less Subjective Floor-Holding Topic Shift Fillers
<i>Nage</i>	SP	Theme Quantifier Thinking Buffer Initiate Topic Floor-Holding Fillers
	SI	Theme Quantifier Thinking Buffer Floor-Holding Fillers
<i>Qu</i>	SP	Deixis Deliver New Information Fillers
	SI	Deixis Initiate New Topic

Table 7-2 (continued)

		Thinking Buffer
		Fillers

Table 7-2 Discourse Functions of the Surveyed Particles between the Two Scenarios by Non-T&I Listener Group

In contrast, in the survey of the T&I listener group, the data shows that *Suoyi*, *Jiushi*, *Lai*, *Nage*, and *Qu* all assumed different discourse functions across the two scenarios whereas only the discourse functions of *Qishi* remained the same across the two scenarios. For instance, the particle of *Suoyi* is perceived by trainee interpreters to assume the functions of result, explaining further, topic continuation, thinking buffer, and fillers in the scenario of SP. Whereas in SI, in addition to the afore-mentioned five discourse functions, the particle of *Suoyi* is also perceived by trainee interpreters to assume the functions of initiating new topic and indicating topic shift (see table 7-3 for more details on individual particles).

Particles	Discourse Functions	
<i>Suoyi</i>	SP	Result Explain Further Topic continuation Thinking Buffer Fillers
	SI	Result Explain Further Topic continuation Initiate New Topic Thinking Buffer Topic Shift Fillers
<i>Jiushi</i>	SP	Addition Reason Thinking Buffer Stress Initiate New Topic Fillers
	SI	Addition Reason Stress Initiate New topic Thinking Buffer Turn-Taking Fillers
<i>Lai</i>	SP	Deixis Deliver New Information Thinking Buffer Fillers
	SI	Deixis Thinking Buffer Deliver New Information Initiate New Topic Fillers
<i>Qishi</i>	SP	Evaluation
	SI	Make Utterance Less Subjective Floor-Holding Topic Shift Fillers
<i>Nage</i>	SP	Theme Quantifier Thinking Buffer Initiate Topic

Table 7-3 (continued)

		Floor-Holding Topic Shift Fillers
	SI	Quantifier Thinking Buffer Floor-Holding Fillers
<i>Qu</i>	SP	Deixis Deliver New Information Thinking Buffer Fillers
	SI	Deixis Deliver New Information Initiate New Topic Thinking Buffer Fillers

Table 7-3 Discourse Functions of the Surveyed Particles between the Two Scenarios by T&I Listener Group

The findings show that, in general, more discourse functions of the surveyed particles have been identified by the T&I listener group than their counterparts from non-interpreting background. It can probably be speculated that trainee interpreters have gradually become more sensitive to the use of particles as a result of interpreter training. The data in table 7-2 and 7-3 would suggest that the discourse functions of individual surveyed particles are mainly subject to the scenarios in which the surveyed particles occur and to who the listeners are. This can also provide a basis for future investigation to know if different expectations on the part of listeners have contributed to such a result. For instance, it may be possible that human listeners would adjust their expectations towards the use of particles according to the scenarios in which they judge the discourse functions of the surveyed particles. In particular, in SI settings, speeches are strongly topic-oriented, namely, they cover a wide range of professional issues which requires and consumes a great amount of background knowledge. It would therefore be reasonable to expect interpreters to rely more on the use of discourse particles to understand what is being described and how a certain subject matter is linked with another, compared to in the scenario of SP where unprepared

speeches are the primary components. Therefore, in an attempt to survive the SI task, a situation apparently more different than SP, more discourse functions have been identified in SI in general in both listener groups because they are needed to comprehensively manifest the relations between individual segments in SI.

Overall, the findings of the present study may have provided some insights into the use of discourse particles in SP and SI. The remaining issues mentioned above, however, signal that these insights and answers have reflected only a fraction of the use of discourse particles in different scenarios and that this study has its inadequacies like all research, to be detailed in the following sections.

7.6 Limitations

As with all research, there are limitations to the present study in terms of research design and of how the findings of the present study should be interpreted. These limitations have to be taken into consideration when applying what has been discovered in the current research to broader contexts of interest.

7.6.1 Sample

The present study included a pilot test prior to its implementation to find out if the tendency in using discourse particles might be different between SP and SI. The number of participants in the pilot test and the main study is 31 in total, 5 for the pilot test and 26 for the main study (7 for the interviews and the SI tasks, 19 for the listener surveys). Due to the small sample, very few quantitative analyses could be carried out in the current study. Setton's (1999) model (see 3.1) for parsing together with data collection and analysis along with other approaches were adopted to establish the reliability of the current research. As in most qualitative research, bias as a result of the small sample size and the limited scale of the data cannot be completely avoided. Despite the limitations, the small sample size and qualitative analysis provided a platform on which the present study could investigate in-depth the use of discourse particles in SP and SI, as well as how different listener groups perceive it. Nonetheless, differences may be seen if more candidate particles were included for investigation and if the listeners

were more experienced interpreting service users.

The generalizability of the findings of the current research is also restricted by the fact that the sample was made up of only Chinese-speaking interpreting students and listeners, most of who had learnt English at school either in Taiwan or China. Therefore, caution is needed when attempting to generalize the findings of the present study to interpreting students from non-Chinese-speaking countries. Similarly, given that the current research investigated the use of discourse particles in the English-Chinese language pair, the findings may not be applicable to a different language pair, for instance, Japanese-Chinese or English-German.

In addition, the final-stage trainee interpreters recruited in the present study for the collection of SI data have received two years of interpreter training in the UK, so findings may not be applicable to interpreting students who are required to receive three years of interpreter training, for example in Taiwan. In particular, the number of hours required for interpreter training may also differ across countries, indicating that results for interpreters from those countries could be different from those in the current research. Without the participation of professional interpreters in the current research, the results of the current study are based on the observation of how trainee interpreters tackle interpreting tasks. The findings of the present study can provide guidance for interpreter training and also serve as a basis to investigate the use of particles by professional interpreters using the existing methodological framework. The ways in which professional interpreters tackle SI tasks or the tendency of using discourse particles may be different from that of trainee interpreters, which is worthwhile researching in the future.

7.6.2 Source texts

With an attempt to standardize the selection of source texts, the two source texts used in the main study were excerpted from an SI mock-conference, which is held on an annual basis as a part of the interpreter training at Newcastle University, UK. The two source texts were excerpted from two speeches on general science in a broader context,

one on the development of the pianoforte, and the other on computer science.

In other words, the findings of the present study may not be applicable to other speech topics, for example medicine or international relations. Although no topic-specific effects were observed in terms of the frequency of using discourse particles, caution is still needed in generalizing very different topics, as information density, the terminologies involved, or the nature of the speaker in SI could play a role in influencing the ways in which trainee interpreters tackle SI tasks, including perhaps the tendency of using discourse particles. However, the current research could still offer some insights into the use of discourse particles in SI, drawing on the two speeches excerpted as a basis.

7.6.3 Guidelines

For the listener survey used as a final approach for assessing the use of discourse particles in terms of fluency and discourse functions, similar guidelines were provided to the two listener groups. However, given that all 19 listeners were from mainland China, where simplified Chinese characters are used as the official writing system, traditional Chinese characters provided in the questionnaire may not have been familiar to them. One participant reported that, on a user-friendly basis, the questionnaire used in the survey should have been typed in simplified Chinese characters.

Nevertheless, before the commencement of the survey, the researcher had confirmed with all the participants that they had no difficulties reading and understanding the questions in the questionnaire. And, given that the aim of the listener survey is to assess fluency and identify the discourse functions of the surveyed particles, reaction time on the part of listeners was not a concern at all. Admittedly, different writing systems across the straits (Taiwan and China) should have been taken into consideration when the survey was conducted, although it is expected that this did not influence the listeners' perceptions.

7.7 Summary

This chapter discussed the effects of using discourse particles in SP and SI in terms of fluency and discourse functions, and how different listener groups perceive them. It also discussed a number of theoretical approaches taken to identify DMs as well as criteria adopted for assessing fluency. Finally, it pointed out how the generalizability of the findings of the present study may be limited and the measures taken to reduce the influence of these limitations. The next chapter will summarize the findings of the present study and the implications they hold for future research.

Chapter 8. Conclusions and Future Research

The present study is an exploratory endeavor to investigate and understand how discourse particles are used in English-to-Chinese SI by trainee interpreters. The findings of this study have been presented and discussed thoroughly in the previous four chapters. As the final chapter of the current research, this chapter summarizes the findings of the present study (8.1) and makes suggestions for using what has been discovered as a basis for future research (8.2), followed by final remarks (8.3).

8.1 Summary of Study Findings

As stated in Chapter 1, the main objective of the present study is to understand the use of discourse particles in English-to-Chinese SI by trainee interpreters through comparing their use between SI and SP. It has focused on investigating the discourse roles of the surveyed particles with the help of a semantic parser, identifying potential DMs using a variety of adopted criteria, investigating the effects of individual surveyed particles on fluency, and identifying the discourse functions of the surveyed particles through listener surveys.

The first research question aimed to investigate the difference in frequency of discourse particles used between English-to-Chinese SI and Chinese SP. The present study found that the tendencies in using discourse particles are different between the two scenarios (see table 8-1). In particular, conjunction particles are used most frequently in Chinese SP, whereas in English-to-Chinese SI quantifier (determiner) particles are used most frequently. Specifically, in Chinese SP, the particle of *Ranhou* topped the others to be used most frequently whereas in English-to-Chinese SI, *Na* topped the others to be the most frequently added particle.

The second research question was to explore whether the discourse functions of the surveyed particles may differ in English-to-Chinese SI from Chinese SP. The present study found that the results are case-dependent, depending mainly on who the raters are and what the particle is, as discussed in detail in 7.5. The findings of the present

study also showed that in the non-T&I listener group, the particles *Na*, *Name*, *Ranhou*, and *Haoxiang* are perceived to function as DMs in most cases whereas the particles *Suoyi*, *Lai*, *Zhe*, *Qishi*, *Qu*, and *Erqie* are perceived to suggest propositional use in most cases. In the T&I listener group, the particles of *Na*, *Name*, *Ranhou*, and *Suoyi* are perceived to function as DMs in most cases whereas the particles of *Zhe*, *Qu*, and *Erqie* are perceived to suggest propositional use in most cases. In general, it can be said that the background of human listeners, particularly prior exposure to interpreter training, plays a critical role in determining the ways in which surveyed particles are perceived in relation to the functions they assume in discourse management.

The third research question asked to what extent the use of discourse particles can influence fluency in both the scenario of English-to-Chinese SI and Chinese SP, investigated through fluency rating. The current research found that regardless of the listener groups, fluency rating of all the surveyed particles is higher in SI than in SP. This means that with the use of the surveyed particles, human listeners are inclined to consider them more helpful in enhancing fluency in SI than in SP. In other words, human listeners tend to view the use of the surveyed particles in SI as a language phenomenon that can aid fluency. On the other hand, the present study also found that the overall fluency ratings by the group of non-T&I listeners is higher than its counterpart from an interpreting background. This means that for listeners with prior exposure to interpreter training, they have raised the bar in assessing the use of discourse particles regardless of the scenario. Fluency rating on individual surveyed particles, however, differs across the two scenarios as discussed in Chapter 6. The present study found that, based on fluency rating for the particles that are perceived to be used as DMs in most cases by the two listener groups, using DMs does not necessarily enhance fluency. In other words, a correlation between the use of DMs and enhanced fluency is not evident in the present study.

Objectives	Scenarios	
	SP	SI
Tendency	Conjunction	Quantifier (Determiner)
Fluency Rating	Lower	Higher
Discourse Functions	Case-dependent	Case-dependent

Table 8-1 Summary of the Findings

8.2 A Link between the Present Study and the Future Research

Interpreting studies, compared to other disciplines of research such as linguistics, is a much younger discipline. It would therefore seem logical that it borrows theoretical frameworks from other established disciplines or that studies are conducted as interdisciplinary research, which can be evidenced by the variety of theoretical approaches adopted in the present study.

Although it is common to find that theoretical frameworks as well as approaches from other disciplines are exploited in interpreter studies, interpreting studies itself is in essence unique and different from other disciplines, and it has its own code of conduct and practice, in particular in the case of SI.

Against this backdrop, the present study took up the challenge of exploring and comparing the use of discourse particles in Chinese SP and English-to-Chinese SI, a phenomenon that is frequently observed in SI but has not been sufficiently attended to as a field of research. The findings and most of their implications have been discussed in the previous chapters. But, there are some remaining issues that may be of interest to other researchers for future work to continue, to be detailed below.

8.2.1 Reasons behind differences in usage tendencies and fluency rating

The present study has discovered that the tendencies in using discourse particles are different between Chinese SP and English-to-Chinese SI, and that fluency rating of the surveyed particles differs significantly across the two different listener groups. As discussed earlier in Chapter 7, given the limitations in research design, the present study is unable to explain what caused the difference between the two scenarios. For

example, is this due to the fact that information density is usually higher in SI (i.e. more terminology is involved) than in SP, which helps develop a different tendency in SI from SP? Or, is it due to the fact that the register in SI is usually higher than in SP? It may also be due to the fact that the number of candidate particles included in the present study for analysis is limited, resulting in an uneven distribution of the use of these discourse particles. All of these questions could help in designing the framework for future research.

The findings of the present study are also unable to explain what caused the difference in fluency rating across the two listener groups. In particular, what contributed to the fact that fluency rating is on average higher in the non-T&I listener group remains unknown. Although no relation is evident between fluency rating and the parameters adopted for fluency rating in the current research (detailed in 7.3.1.1), they could probably provide a direction for future research to probe the driving factors that distinguish trainee interpreters from average listeners in fluency rating.

8.2.2 Advancing the semantic parser

Another area of study on which future research can be based is diversifying the discourse roles provided in the parser. The semantic parser utilized in the current research contains a total of 60 discourse roles, which correspond to 60 discourse functions. It is, however, highly likely that this repertoire is far from being able to account for all the discourse roles of the surveyed particles. This can be evidenced by the fact that during listener surveys, some listeners added in discourse functions in the questionnaire which were absent in the parser. Nonetheless, advancing the semantic parser would require expertise from other disciplines such as programming in computer science, which is a different field of research not directly relevant to interpreting studies. Despite the requirement for different expertise, the findings of the present study have paved the way for connecting the semantic parser with both discourse analysis and interpreting studies as a multi-strategy approach in investigating discourse particles worth further contribution.

8.2.3 Approaching discourse particles through prosodic features

As discussed in the previous chapters, prosodic features have proved to be of significance in gaining insights into the discourse roles of discourse particles in discourse, for example, in terms of using them as fillers or as DMs (Tseng et al., 2006). Other work has also pointed to the fact that variation in prosodic features can signal changes in the discourse roles of a given particle in a given text (Xu, 2008). For example, on using the particle of *Nage* to indicate topic initiation, it is pronounced as *neige* and is usually lengthened in terms of duration, frequently followed by pauses. When used to indicate topic shift in discourse, the particle of *Nage* is stressed and pronounced as *neige* but is less frequently lengthened, and is followed by shorter pauses (Xu, 2008). These have paved the way for future research to delve further into the relationship between prosodic features and the discourse functions of the surveyed particles. It can be said that approaching discourse particles through prosodic features reflects more closely how language is used in the real world in terms of discourse management and interpersonal relations, compared with analyzing discourse through written texts. This is also an area of research worth investigating for both on-going and future work.

8.3 Concluding Remarks

To conclude, the present study has arrived at interesting findings by exploring and comparing the use of discourse particles between Chinese SP and English-to-Chinese SI based on multi-strategy approaches in terms of usage tendency, influence on fluency, and the discourse functions assumed by individual particles. It also sheds light on factors that might result in the different perceptions of discourse particles by different listener groups. This has contributed to deepening our understanding of not only how discourse particles are used differently in English-to-Chinese SI from Chinese SP but also how different listener groups may perceive them. Despite the fact that the work of the current research has reached an end, it has paved the way for future work and ongoing research, particularly in the field of interpreting studies.

APPENDICES

Appendix A: Questionnaire for Interviews

此次訪談的宗旨在於收集受試者在自然情境的對話中所產生的語料，作為後續研究目的之用。

1. 到目前為止，你還習慣在英國的生活與天氣嗎?
2. 英國的食物你吃的還習慣嗎?有沒有哪些道地的英國食物是你喜歡的?原因?
3. 在英國求學的這段期間，平常的休閒活動是什麼?
4. 在英國求學的這段期間，是否去過哪裡旅遊?風景如何?
5. 你有任何喜歡的英國電視節目或是電影嗎?為何喜歡?
6. 在英國求學的這段期間，讓你感受最深的是什麼?

Appendix B: Semantic Categories Defined by the Parser

詞 庫 小 組

技術報告 13-01 Technical Report no. 13-01

句結構樹中的語意角色

中央研究院句結構樹語料庫中所用到的語意角色共有 60 個，之中有 5 個用 於修飾物體名詞，其他則是修飾事件動詞的角色，最後還有少數幾個用來標記語 法功能。

修飾物體名詞的語意角色包含 apposition、possessor、predication、property 和 quantifier 五種。語意角色的介紹依字母順序排列，這些角色的定義與例子如 下述說明。

apposition—表物體的同位語，即指涉相同的物體。

我想起好友容玉

S(agent:NP(Head:Nhaa:我)|Head:VE2:想起|goal:NP(apposition:Nab:好友
|Head:Nba:容玉))

美國總統歐巴馬昨日發表就職演說 S(agent:NP(apposition:NP(property:Nca:美國
|Head:Nab:總統)|Head:Nba:歐巴 馬)|time:Ndabd:昨日|Head:VC31:發表
|theme:NP(property:VA4:就職|Head:Nac: 演說))

possessor—表物體的領屬者，包含成員、創造者、擁有者和整體等皆為領屬 者。

我的學校很大 S(theme:NP(possessor:N • 的(head:Nhaa:我|Head:DE:的)|Head:Ncb:
學 校)|degree:Dfa:很|Head:VH13:大)

遵循父親死前的命令

VP(Head:VJ1:遵循|goal:NP(possessor:Nab:父親|property:V • 的(head:Dd:死前
|Head:DE:的)|Head:Nac:命令))

哥哥的書包

NP(possessor:N • 的(head:Na:哥哥|Head:DE:的)|Had:Na:書包)

車子的玻璃很髒 S(theme:NP(possessor:N • 的(head:Nab:車子|Head:DE:的)|Head:Nab:
玻 璃)|degree:Dfa:很|Head:VH11:髒)

predication—表修飾物體的相關事件，為名詞的關係子句，與事件中心語有 論元關
係。

我昨天遇見的人

NP(predication:S • 的(head:S(agent:NP(Head:Nhaa:我)|time:Ndabd:昨天
|Head:VC2:遇見)|Head:DE:的)|Head:Na:人)

送給堂弟的禮物 NP(predication:VP • 的(head:VP(Head:VD1:送給|goal:NP(Head:Nab:
堂 弟))|Head:DE:的)|Head:Nab:禮物)

property—表物體的特色和性質，也包含物體相關的時空訊息，是一個較上 位而粗
略的語意角色。

腐爛的木頭

NP(property:V • 的(head:VH11:腐爛|Head:DE:的)|Head:Nab:木頭)

參觀阿里山神木

VP(Head:VC2:參觀|goal:NP(property:Nca:阿里山|Head:Nab:神木))

秋天的葉子特別有詩意 S(theme:NP(property:N • 的(head:Ndabb:秋天|Head:DE:
的)|Head:Nab:葉 子)|manner:VH11:特別|Head:V_2:有|range:NP(Head:Nad:詩意))

quantifier—表名詞的數量修飾語，為數量定詞、定量詞等等。

許多人踩著陽光

S(agent:NP(quantifier:Neqa:許多|Head:Nab:人)|Head:VC2:踩|aspect:Di:著
|goal:NP(Head:Naa:陽光))

改變一些新花樣 VP(Head:VC2:改變|goal:NP(quantifier:Neqa:一些|property:VH11:新
|Head:Nac:花樣))

哥哥吃了兩碗飯

S(agent:NP(Head:Nab:哥哥)|Head:VC31:吃|aspect:Di:了
|theme:NP(quantifier:DM:兩碗|Head:Nab:飯))

相較於簡潔的修飾物體名詞的角色，修飾事件動詞的語意角色顯得複雜得多。這裡將修飾動詞的語意角色分為「事件參與者角色」、「事件附加的角色」以及表示「從屬關係的語意角色」三大類。事件參與角色一般視為必要論元，描述事件的主要參與者，以下說明參與角色的定義和例子。

agent—表事件中的肇始者，動作動詞的行動者。

年輕人擦著汗水 S(agent:NP(Head:Nab:年輕人)|Head:VC2:擦|aspect:Di:著
|goal:NP(Head:Naa:汗水))

他們散播熱情

S(agent:NP(Head:Nhaa:他們)|Head:VC32:散播|theme:NP(Head:Nad:熱情))

大家一起讀書

S(agent:NP(Head:Nhab:大家)|manner:Dh:一起|Head:VA4:讀書)

benefactor—表受益的對象，但非主要賓語。

哥哥幫媽媽洗碗 S(agent:NP(Head:Nab:哥哥)|benefactor:PP(Head:P37:幫

|DUMMY:NP(Head:Nab: 媽媽)|Head:VA4:洗碗)

為她寫下美麗的詩句

VP(benefactor:PP(Head:P:為|DUMMY:NP(Head:Nhaa:她)|Head:VC31:寫下
|theme:NP(property:V • 的(head:VH11:美麗|Head:DE:的)|Head:Naeb:詩句))

causer—表事件的肇始者，但肇始者並未主動促使事件發生。

這種情把我嚇壞了

S(causer:NP(quantifier:DM:這種|Head:Nad:情景)|experiencer:PP(Head:P07:把
|DUMMY:NP(Head:Nhaa:我)|Head:VH22:嚇壞|particle:Ta:了)

汗水溼透了衣服

S(causer:NP(Head:Naa:汗水)|Head:VH16:溼透|aspect:Di:了
|theme:NP(Head:Nab:衣服))

companion—表主語的隨同對象。

美國將繼續與蘇聯合作

S(agent:NP(Head:Nca:美國)|time:Dd:將|Head:VF1:繼續
|goal:VP(companion:PP(Head:P35:與|DUMMY:NP(Head:Nca:蘇聯)|Head:VH11:
合作))

這次跟媽媽到醫院探病 VP(time:DM:這次|companion:PP(Head:P63:跟

|DUMMY:NP(Head:Nab:媽 媽)|location:PP(Head:P61:到|DUMMY:NP(Head:Ncb:醫
院))|Head:VA4:探病)

comparison—表比較的對象，多在比較句中出現。

枝葉比以前更茂盛了

S(theme:NP(Head:Naeb:枝葉)|comparison:PP(Head:P49:比

|DUMMY:NP(Head:Ndda:以前))|degree:Dfa:更|Head:VH11:茂盛|particle:Ta:了)

不像小時候那麼淘氣 VP(negation:Dc:不|comparison:PP(Head:P55:像
|DUMMY:NP(Head:Ndda:小時 候))|manner:Dh:那麼|Head:VH11:淘氣)

experiencer—表感受所敘述的情緒感知狀況的主事者，為心靈類述語的主 語。

我好想念你

S(experiencer:NP(Head:Nhaa:我)|degree:Dfa:好|Head:VJ2:想念
|goal:NP(Head:Nhaa:你))

他最喜歡海

S(experiencer:NP(Head:Nhaa:他)|degree:Dfa:最|Head:VK1:喜歡
|goal:NP(Head:Nab:海))

goal—表動作影響的對象，或者為心靈動作的受事對象，在有物件轉移的事 件中
則是個接受者或終點。

武松打虎

S(agent:NP(Head:Nba:武松)|Head:VC2:打|goal:NP(Head:Nab:虎))

魯班喜歡觀察

S(experiencer:NP(Head:Nba:魯班)|Head:VK1:喜歡|goal:VP(Head:VE2:觀察))

要送什麼禮物給媽媽 VP(deontics:Dbab:要|Head:VD1:送|theme:NP(quantifier:Nep:
什麼|Head:Nab: 禮物)|goal:PP(Head:P04:給|DUMMY:NP(Head:Nab:媽媽)))

range—表分類的範疇或結果的幅度。為分類動詞及比較句的主要語意角色。

那位小姐姓張

S(theme:NP(quantifier:DM:那位|Head:Nab:小姐)|Head:VG2:姓

|range:NP(Head:Nbc:張))

老饕店以肉為主題 S(agent:NP(Head:Ncb:老饕店)|theme:PP(Head:P11:以
|DUMMY:NP(Head:Naa:肉))|Head:VG1:為|range:NP(Head:Nac:主題))

江陵距離白帝城一千二百里 S(theme:NP(Head:Nca:江陵)|Head:VJ1:距離
|goal:NP(Head:Nca:白帝城)|range:DM:一千二百里)

source—表物件轉移的起點。

向主人借了書

VP(source:PP(Head:P62:向|DUMMY:NP(Head:Nab:主人))|Head:VD2:借
|aspect:Di:了|theme:NP(Head:Nab:書))

台商自印尼進口水泥 S(agent:NP(Head:Nab:台商)|source:PP(Head:P59:自
|DUMMY:NP(Head:Nca:印尼))|Head:VC31:進口|theme:NP(Head:Naa:水泥))

target—述詞內容表達的對象或是轉移的方向。

他向老師承認過錯 S(agent:NP(Head:Nhaa:他)|target:PP(Head:P62:向
|DUMMY:NP(Head:Nab:老師))|Head:VE2:承認|goal:NP(Head:Nac:過錯))

它對主人忠心 S(experiencer:NP(Head:Nhaa:它)|target:PP(Head:P31:對
|DUMMY:NP(Head:Nab:主人))|Head:VH21:忠心)

theme—表靜態及分類述詞敘述的對象或動態事件中描述存在或位移的主事

者，以及因事件動作造成物體的狀態從無到有的受事者，皆使用這個語意角色。

媽媽暈倒了

S(theme:NP(Head:Nab:媽媽)|Head:VH14:暈倒|particle:Ta:了)

他們是鄰居

S(theme:NP(Head:Nhaa:他們)|Head:V_11:是|range:NP(Head:Nab:鄰居))

我們向山上前進 S(theme:NP(Head:Nhaa:我們)|target:PP(Head:P62:向

|DUMMY:NP(property:Nab: 山|Head:Ncda:上))|Head:VA11:前進)

在此建造城堡

VP(location:PP(Head:P21:在|DUMMY:NP(Head:Nep:此))|Head:VC33:建造

|theme:NP(Head:Nab:城堡)

topic—表事件所論述的主題。

功課年年拿第一

S(topic:NP(Head:Nac:功課)|time:Dd:年年|Head:VC31:拿|quantifier:DM:第一)

牛蒡我常煮湯吃

S(topic:NP(apposition:Nb:牛蒡|Head:Nhaa:我)|time:Dd:常|Head:VC2:煮

|goal:NP(Head:Naa:湯)|complement:VP(Head:VC31:吃))

第二種類型修飾事件的語意角色為事件的附加成分，屬於該事件的次要資訊，用來描述事件動詞相關的附加訊息，包含事件的程度、頻率，或是發生的時間、地點等等。

aspect—表動作的時貌。

整整工作了兩年

VP(quantity:Daa:整整|Head:VA4:工作|aspect:Di:了|duration:DM:兩年)

degree—表狀態的程度。

身體健康多麼重要啊

S(theme:S(theme:NP(Head:Nab:身體)|Head:VH11:健康)|degree:Dfa:多麼

|Head:VH11:重要|particle:Tc:啊)

deixis—表動作附加的指示成分。

我要去幫助他

S(agent:NP(Head:Nhaa:我)|deontics:Dbab:要|deixis:Dbab:去|Head:VC2:幫助
|goal:NP(Head:Nhaa:他))

deontics—表說話者對事件是否成真的態度，標示於此類型的法相副詞。

你不必謝我

S(experiencer:NP(Head:Nhaa:你)|deontics:Dbab:不必|Head:VJ2:謝
|goal:NP(Head:Nhaa:我))

duration—表事件持續的時間長度。

他齋戒五天

S(agent:NP(Head:Nhaa:他)|Head:VA4:齋戒|duration:DM:五天)

evaluation—表評價的語氣成分。

我竟然沒長高 S(theme:NP(Head:Nhaa:我)|evaluation:Dbb:居然|negation:Dc:沒
|Head:VH12:長高)

epistemics—表說話者對事件是否為真的猜測，標示於此類型的法相副詞。

一定還是你最快 S(epistemics:Dbaa:一定|evaluation:Dbb:還是|theme:NP(Head:Nhaa:
你)|degree:Dfa:最|Head:VH13:快)

frequency 表事件的頻率。

我只講一次

S(agent:NP(Head:Nhaa:我)|quantity:Daa:只|Head:VE2:講|frequency:DM:一次)

instrument—表動作時所使用的工具。

蘇利文小姐以手指代筆

S(agent:NP(property:Nba:蘇利文|Head:Nab:小姐)|instrument:PP(Head:P11:以

|DUMMY:NP(Head:Nab:手指))|Head:VC2:代|goal:NP(Head:Nab:筆))

interjection—表句中感嘆詞的角色。

唉呀糟糕了

VP(interjection:I:唉呀|Head:VH11:糟糕|particle:Ta:了)

location—表事件發生的地點。

我到他家等候

S(theme:NP(Head:Nhaa:我)||location:PP(Head:P61:到

|DUMMY:NP(possessor:Nhaa:她|Head:Ncb:家))|Head:VK2:等候)

manner—表主語的動作方式。

他細心觀察甲蟲動態

S(agent:NP(Head:Nhaa:他)|manner:VH11:細心|Head:VE2:觀察

|goal:NP(property:Nab:甲蟲|Head:Nad:動態))

negation—表否定。

也不願投降

VP(evaluation:Dbb:也|negation:Dc:不|Head:VK1:願|goal:VP(Head:VA4:投降))

particle—表句尾說話者的語氣。

他出差了

S(agent:NP(Head:Nhaa:他)|Head:VA4:出差|particle:Ta:了)

quantity—表事物的數量。

要多運動

VP(deontics:Dbab:要|quantity:Neqa:多|Head:VA4:運動)

standard—表憑據。

據可靠消息指出 VP(standard:PP(Head:P43:據|DUMMY:NP(property:VH11:可靠|Head:Nac:消息))|Head:VE2:指出)

time—表事件發生的時間。

今年暑假你會回台灣嗎 S(time:NP(property:Ndaba:今年|Head:Ndabf:暑假)|theme:NP(Head:Nhaa:你)|epistemics:Dbaa:會|Head:VC1:回|goal:NP(Head:Nca:臺灣)|particle:Td:嗎)

除了事件參與者及事件附加修飾的語意角色之外，句結構樹的角色另有表示修飾事件從屬關係的角色，用來連結並解釋事件之間的語意關係，或表示不同的語氣，為偏正複句的連接詞所使用的角色，例子如下。

addition—表附加。

並且打開盒蓋

VP(addition:Cbc:並且 | Head:VC2:打開 | goal:NP(Head:Nab:盒蓋))

alternative—表聯合複句中選擇的口氣。

不是頭太大 S(alternative:Cbbb:不是 | theme:NP(Head:Nab:頭) | degree:Dfa:太
| Head:VH13: 大)

avoidance—表應避免的情況。

以免發生不幸

VP(avoidance:Cbca:以免 | Head:VJ1:發生 | goal:NP(Head:Nad:不幸))

complement—表補充說明，進一步補充前一事件內容。

老人緊閉雙眼不說話

S(topic:NP(Head:Nab:老人) | Head:VH11:緊閉 | aspect:Di:著
| theme:NP(Head:Naea:雙眼) | complement:VP(negation:Dc:不 | Head:VA4:說話))

conclusion—表引介出的結論。

更何況條件嚴苛

S(conclusion:Cbaa:更何況 | theme:NP(Head:Nac:條件) | Head:VH11:嚴苛)

condition—表條件語氣的句子或是事件狀況。

只要走一百多步

VP(condition:Cbaa:只要 | Head:VA11:走 | quantifier:DM:一百多步)

concession—表讓步語氣的連接。

大海底下雖然平靜

S(theme:NP(property:Nab:大海|Head:Ncdb:底下)|concession:Cbaa:雖然
|Head:VH11:平靜)

contrast—表轉折語氣。

然而阿群總是說

S(contrast:Cbca:然而|agent:NP(Head:Nba:阿群)|time:Dd:總是|Head:VE2:說)

conversion—表引出轉變條件下的結果。

否則將沒有公信力 VP(conversion:Cbca:否則|time:Dd:將|Head:VJ3:沒有
|range:NP(Head:Nad:公信 力))

exclusion—表屏除的對象。

我喜歡各種運動除了游泳

S(experiencer:NP(Head:Nhaa:我)|Head:VK1:喜歡|goal:NP(quantifier:DM:各種
|Head:Nad:運動)|exclusion:PP(Head:P50:除了|DUMMY:VP(Head:VA4:游泳)))

hypothesis—表假設的語氣。

要是自己經營旅館

S(hypothesis:Cbaa:要是|agent:NP(Head:Nhab:自己)|Head:VC2:經營
|goal:NP(Head:Ncb:旅館))

listing—表條列的項目。

一來要討好她

VP(listing:Cbbb:一來|deontics:Dbab:要|Head:VC2:討好|goal:NP(Head:Nhaa:她))

purpose—表目的。

以達成其目的 VP(purpose:Cbca:以|Head:VC2:達成|goal:NP(quantifier:Nep:其
|Head:Nac:目的))

reason—表事件的原因。

怎麼還不回家呢

VP(reason:Dj:怎麼|evaluation:Dbb:還|negation:Dc:不|Head:VA13:回家
|particle:Tc:呢)

rejection—表取捨關係中的應捨部分。

與其繼續纏訟

VP(rejection:Cbaa:與其|Head:VF1:繼續|goal:VP(Head:VA4:纏訟))

result—表事件的結果。

於是發明了輪子

VP(result:Cbca:於是|Head:VC31:發明|aspect:Di:了|theme:NP(Head:Nab:輪子))

restriction—表遞進語氣的前半部。

不僅美國人大為震驚

S(restriction:Cbbb:不僅|experiencer:NP(Head:Nab:美國人)|degree:Dfa:大為
|Head:VH22:震驚)

selection—表取捨關係中的應取部分。

倒不如到陽明山去玩玩 VP(selection:Cbca:倒不如|location:PP(Head:P61:到
|DUMMY:NP(Head:Nca:陽明 山))|deixis:Dbab:去|Head:VC2:玩玩)

uncondition—表與現況不符的假設。

即使環境非常惡劣

S(uncondition:Cbaa:即使|theme:NP(Head:Nac:環境)|degree:Dfa:非常
|Head:VH11:惡劣)

whatever—表不論何種條件。

不管多麼不容易

VP(whatever:Cbaa:不管|degree:Dfa:多麼|negation:Dc:不|Head:VH15:容易)

最後一類型的語意角色則是標記語法功能，是因應語法結構需求而產生的語意角色。

DUMMY—表未定的角色，需要靠其上位詞組的中心語才能決定。若是在並列結構中則又有 DUMMY1 與 DUMMY2 兩個角色以區分前面部分和後面部分。

再往裡面走 VP(time:Dd:再|target:PP(Head:P30:往|DUMMY:NP(Head:Ncdb:裡
面))|Head:VA11:走)

休閒和運動也很重要 S(theme:VP(Head:V(DUMMY1:VA12:休閒|Head:Caa:和
|DUMMY2:VA4:運動))|evaluation:Dbb:也|degree:Dfa:很|Head:VH11:重要)

Head—表語意和語法的中心語，句子或詞組皆有 Head 這個角色。

我會說故事 S(agent:NP(Head:Nhaa:我)|epistemics:Dbaa:會|Head:VE2:說
|goal:NP(Head:Nac: 故事))

head— 在「的」的結構裡，語意和語法的中心語不同時，表示為語意的中心語成分，以別於語法的中心語。

急促的腳步聲

NP(property:V • 的(head:VH11:急促|Head:DE:的)|Head:Nad:腳步聲)

nominal— 表名物化結構，用來標示中心語為名物化動詞的名詞短語中的「的」。

感謝祖先的護佑

VP(Head:VK1:感謝|goal:NP(agent:NP(Head:Nab:祖先)|nominal:DE:的|Head:Nv1:護佑))

其中幾個易混淆的角色，再說明如下：

1) property vs. predication

語意類型中的屬性值(value type)常以狀態不及物動詞形式(VH)出現，描述物體的特性，應標記為 property 這一個角色，如下述例子中「不中聽的」和「很大的」二詞組。對物體簡單的修飾描述以及物體內容描述，或者是不具論元(argument)關係的修飾皆屬於 property。

NP(quantifier:DM:一句|property:VP • 的(head:VP(negation:Dc:不|Head:VH11:中聽)|Head:DE:的)|Head:Nac:話))

NP(property:VP • 的(head:VP(degree:Dfa:很|Head:VH13:大)|Head:DE:的)|property:NP(property:Ncb:室|Head:Ncda:內)|Head:Nad:面積)

NP(quantifier:Neqa:這些|property:S • 的(head:S(theme:NP(Head:Nad:形狀)|Head:VH11:圓圓)|Head:DE:的)|Head:Nab:珠子)

NP(quantifier:DM:一個|property:S • 的(head:S(theme:NP(Head:Nab:神童)|Head:VG2:變成|range:NP(Head:Nab:常人))|Head:DE:的)|Head:Nac:故事)

但若屬性值加入其他成分變成特定事件(individual level or instance)，不再是簡單的屬性值，角色則應指定為 **predication**，表示所指涉的為特定的事件，請見以下三個例子。

NP(predication:VP • 的(head:VP(DUMMY1:VP(manner:VH11:慷慨|Head:VH11:赴義)|Head:Caa:、|DUMMY2:VP(manner:VH11:壯烈|Head:VH11:成仁))|Head:DE:的)|Head:Nba:荊軻)

NP(predication:VP • 的(head:VP(location:PP(Head:P61:到|DUMMY:NP(Head:Ncdb:哪兒))|quantity:Dab:都|Head:VH21:快樂)|Head:DE:的)|Head:Nab:民族)

NP(predication:VP • 的(head:VP(comparison:PP(Head:P49:比|DUMMY:NP(property:Ncb:足球場|Head:Nad:面積))|evaluation:Dbb:還|Head:VH13:大)|Head:DE:的)|property:NP(property:Ncb:室|Head:Ncda:內)|Head:Nad:面積)

2) property vs. possessor

我們將 **possessor** 限定在成員(member)、創造者(creator)、擁有者(owner)和整體(whole)，而親屬關係或其他人際關係則是屬於 **property**。例如「我的媽媽」、「他的朋友」、「你的老闆」、「我們的官員」、「她們的同伴」、「張三的鄰居」、「李四的球迷」等等，皆屬於 **property** 這一角色。

3) property vs. quantifier

定量複合詞(DM)大多是描述物體數量，但也有部分是描述時間頻率(frequency) 或長度(duration)，若此類定量複合詞用來修飾名詞，則目前會指派 **property** 為其語

意角色。

NP(property:DM:每年 | Head:Ndabb:春天) NP(quantifier:Neqa:部份 | property:DM:週
| Head:Nab:雜誌)) | quantity:Dab:都
| Head:VC31:出 | theme:NP(Head:Nac:書評))

且若該數量並非描述物體的數量，而是說明物體的內涵，則也是以 **property** 指派。
如例子中的「萬點」並非指「高檔」有一萬個而是達到萬點的檔期，為物件的內
涵描述。

VP(condition:PP(Head:P21:在 | DUMMY:NP(property:DM:萬點 | Head:Nab:高
檔)) | evaluation:Dbb:多 | deontics:Dbab:能 | Head:VA11:全身而退)

VP(evaluation:Dbb:並 | negation:Dc:未 | Head:VJ1:超過 | goal:NP(predication:S • 的
(head:S(agent:NP(Head:Nac:公司法) | quantity:Dab:所 | Head:VE2:規定) | Head:DE:
的) | property:Neqa:百分之四十 | Head:Nac:限制))

VP(Head:VC31:擊出 | theme:NP(property:DM:三分 | Head:Nac:全壘打))

VP(evaluation:Dbb:甚至 | time:Dd:將 | Head:VC2:延長 | goal:PP(Head:P61:到
| DUMMY:NP(property:DM:十二年 | nominal:DE:之 | Head:Nv4:久)))

4) location vs. condition vs. time

location 為事件發生的地點，**time** 為事件發生的時間，而抽象、隱喻的地點 或時
間皆視為 **condition**。

S(agent:NP(Head:Nad:鋤頭聲) | goal:PP(Head:P07:把 | DUMMY:NP(Head:Nhaa:
我)) | condition:PP(Head:P19:從 | DUMMY:GP(DUMMY:NP(Head:Nac:夢) | Head:Ng:

中)) | Head:VC2:敲醒) VP(Head:VA12:生活 | condition:PP(Head:P21:在
| DUMMY:GP(DUMMY:NP(Head:Nad:思想) | Head:Ng:中)))

VP(deontics:Dbab:要 | condition:PP(Head:P19:從 | DUMMY:VP(Head:VC31:建立

|theme:NP(property:V • 的(head:VH11:正確|Head:DE:的)|Head:NP(property:Nad:
性|Head:Nac:價值觀))))|Head:VA4:入手)

VP(time:Dd:已經|location:PP(Head:P06:由|DUMMY:NP(Head:Nab:手 腕))|Head:VC2:
套|location:PP(Head:P61:到了|DUMMY:NP(property:Nab:手臂
|Head:Ncda:上)))

S(theme:NP(Head:Nab:伯勞鳥)|time:Dd:通常|time:PP(Head:P21:在
|DUMMY:NP(Head:Ndabe:夜晚))|Head:VA11:起飛)

Appendix C: Questionnaire for Fluency Rating in Listener Survey

姓名：

年齡：

性別：

是否受過專業口譯訓練：

各位受試者好：

在接下來的測驗中，你們將會聽到取材自不同情境的錄音。你們所聽到的錄音皆為中文母語人士的對話，每段錄音以不超過 15 秒為原則，請專心聆聽，並根據以下的題目指引作答，現在我們即將開始。

1. 依據 1-5 分，此段對話中的口語詞「那」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 轉換話題
- 添加新信息
- 無意義贅詞

2. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

3. 依據 1-5 分，此段對話中的口語詞「那個」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件敘述的對象
- 作為定量詞或指示詞，用以代稱某物
- 引發話題
- 停頓填空
- 轉換話題
- 保持說話權
- 無意義贅詞

4. 依據 1-5 分，此段對話中的口語詞「好像」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示說話者對事件是否為真的猜測
- 降低說話者的主觀強度
- 無意義贅詞

5. 依據 1-5 分，此段對話中的口語詞「來」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 趨向動詞，表示移動的趨勢或方向
- 傳遞新信息
- 引發新話題
- 停頓填充
- 無意義贅詞

6. 依據 1-5 分，此段對話中的口語詞「而且」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 添加信息
- 轉換話題
- 無意義贅詞

7. 依據 1-5 分，此段對話中的口語詞「去」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 趨向動詞，表示移動的趨勢或方向
- 傳遞新信息
- 引發新話題
- 停頓填空
- 無意義贅詞

8. 依據 1-5 分，此段對話中的口語詞「其實」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 表時間順序
- 降低說話者主觀強度
- 保持說話權
- 轉換話題
- 無意義贅詞

9. 依據 1-5 分，此段對話中的口語詞「那」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 轉換話題
- 添加新信息
- 無意義贅詞

10. 依據 1-5 分，此段對話中的口語詞「其實」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 表時間順序
- 降低說話者主觀強度
- 保持說話權
- 轉換話題
- 無意義贅詞

~休息一下~

11. 依據 1-5 分，此段對話中的口語詞「然後」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示時間順序
- 表示因果關係
- 增添信息
- 停頓填空
- 進一步解釋
- 轉換話題
- 延續話題
- 無意義贅詞

12. 依據 1-5 分，此段對話中的口語詞「所以」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件的結果
- 延續話題
- 引發新話題
- 停頓填空
- 進一步解釋
- 轉換話題

無意義贅詞

13. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

14. 依據 1-5 分，此段對話中的口語詞「那個」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件敘述的對象
- 作為定量詞或指示詞，用以代稱某物
- 引發話題
- 停頓填空
- 轉換話題
- 保持說話權
- 無意義贅詞

15. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

16. 依據 1-5 分，此段對話中的口語詞「好像」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示說話者對事件是否為真的猜測
- 降低說話者的主觀強度
- 無意義贅詞

17. 依據 1-5 分，此段對話中的口語詞「來」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 趨向動詞，表示移動的趨勢或方向
- 傳遞新信息
- 引發新話題
- 停頓填充
- 無意義贅詞

18. 依據 1-5 分，此段對話中的口語詞「那麼」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 轉換話題
- 標記語氣轉折
- 添加新信息
- 無意義贅詞

19. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

20. 依據 1-5 分，此段對話中的口語詞「而且」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 添加信息
- 轉換話題
- 無意義贅詞

~休息一下~

21. 依據 1-5 分，此段對話中的口語詞「這」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示為該句的語意中心
- 定量詞，用以代稱某事或某物
- 轉換話題
- 停頓填空
- 無意義贅詞

22. 依據 1-5 分，此段對話中的口語詞「那個」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件敘述的對象
- 作為定量詞或指示詞，用以代稱某物
- 引發話題
- 停頓填空
- 轉換話題
- 保持說話權
- 無意義贅詞

23. 依據 1-5 分，此段對話中的口語詞「來」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 趨向動詞，表示移動的趨勢或方向
- 傳遞新信息
- 引發新話題
- 停頓填充
- 無意義贅詞

24. 依據 1-5 分，此段對話中的口語詞「那」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 轉換話題
- 添加新信息
- 無意義贅詞

25. 依據 1-5 分，此段對話中的口語詞「其實」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 表時間順序
- 降低說話者主觀強度
- 保持說話權
- 轉換話題
- 無意義贅詞

26. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

27. 依據 1-5 分，此段對話中的口語詞「去」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 趨向動詞，表示移動的趨勢或方向
- 傳遞新信息
- 引發新話題
- 停頓填空
- 無意義贅詞

28. 依據 1-5 分，此段對話中的口語詞「那個」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件敘述的對象
- 作為定量詞或指示詞，用以代稱某物
- 引發話題
- 停頓填空
- 轉換話題
- 保持說話權
- 無意義贅詞

29. 依據 1-5 分，此段對話中的口語詞「所以」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件的結果
- 延續話題
- 引發新話題
- 停頓填空
- 進一步解釋
- 轉換話題
- 無意義贅詞

30. 依據 1-5 分，此段對話中的口語詞「然後」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示時間順序
- 表示因果關係
- 增添信息
- 停頓填空
- 進一步解釋
- 轉換話題
- 延續話題

無意義贅詞

~休息一下~

31. 依據 1-5 分，此段對話中的口語詞「那麼」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 轉換話題
- 標記語氣轉折
- 添加新信息
- 無意義贅詞

32. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

33. 依據 1-5 分，此段對話中的口語詞「其實」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 表時間順序
- 降低說話者主觀強度
- 保持說話權
- 轉換話題
- 無意義贅詞

34. 依據 1-5 分，此段對話中的口語詞「所以」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示事件的結果
- 延續話題
- 引發新話題
- 停頓填空
- 進一步解釋
- 轉換話題
- 無意義贅詞

35. 依據 1-5 分，此段對話中的口語詞「就是」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表示與現況不符的假設
- 表示事件的原因
- 增添信息
- 加強語氣
- 停頓填空
- 引發新話題
- 無意義贅詞

36. 依據 1-5 分，此段對話中的口語詞「其實」對於提升表達流暢度與理解

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
非常沒幫助	沒幫助	沒意見	有幫助	非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

- 表評價的語氣成分
- 表時間順序
- 降低說話者主觀強度
- 保持說話權
- 轉換話題
- 無意義贅詞

37. 依據 1-5 分，此段對話中的口語詞「然後」對於提升表達流暢度與理解

1

2

3

4

5

非常沒幫助

沒幫助

沒意見

有幫助

非常有幫助

承上，你認為該口語詞具備以下哪些對話功能? (可複選)

表示時間順序

表示因果關係

增添信息

停頓填空

進一步解釋

轉換話題

延續話題

無意義贅詞

Appendix D: Summary of Listener Survey

In the listener survey in the main study, 19 participants (8 from non-interpreting and 11 from interpreting background) were asked to listen to a total of 37 excerpted speech segments to rate how the target particles affect fluency in the excerpted speech segments and identify the discourse functions of the target particles in the excerpted segments. For each excerpted speech segment, it contains only one target particle to be surveyed, which is pointed out clearly in each question, for the listeners to rate how it influences fluency of the speech segment on a scale from 1 to 5 (1 meaning not helpful at all, 5 meaning very helpful) and decide what discourse functions it assumes in the speech segment. Each excerpted speech segment was played only once. After listening to each question, the listeners tick firstly according to fluency rating and secondly the discourse functions of the target particle in the speech segment.

The results of the listener survey suggest that with the use of the target particles, fluency rating is overall higher in SI than in SP perceived by the two listener groups. In particular, *Suoyi* and *Erqie* are considered to be most helpful in enhancing fluency by the two listener groups. However, scenarios and positions where the target particles appear in the speech segments has nothing to do with how the two groups of listeners rate them. The results also show an interesting tendency that the group of listeners from interpreting background appears to be more linguistically aware than their counterpart from non-interpreting background as more discourse functions of the target particles have been identified. For example, adding to the existing discourse functions of *Erqie*, a new discourse function- marking gradual continuation has been identified by the interpreting listener group.

Above all, the results of the listener survey does not necessarily suggest that DMs can enhance fluency as it largely depends on which particle it is and also on what the background of the listeners is. It, nonetheless, provided some reasons and insights into why human language users may use discourse particles regardless of the scenarios of communication, even if one is under time pressure, since some of the particles do aid the hearers in understating and following the message by the speaker.

Appendix E: List of Abbreviations

SP: spontaneous speech

SI: simultaneous interpreting

IP: information processing

DM: discourse marker

ST: source text

TT: translated text

BT: back translation

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