Chapter Two Literature

2.1 History

The history of interpreting can be traced back as far as ancient Egypt (Herman, 1956). However, the most modern form of interpreting – simultaneous interpreting – did not come into being until 1927 at the League of Nations, on a rather modest scale (Wilss, 1999). The first major simultaneous interpreting event took place at the Nuremberg trial (1945-1946) (Gaiba, 1998), from which the profession of conference interpreting as we know it today began.

2.2 Definition of conference interpreting

Conference interpreting may be in the form of consecutive interpreting, simultaneous interpreting, simultaneous interpretation with text, or on rare occasions, sight translation. Descriptions of the various forms are as follows:

Consecutive Interpretation: The interpreter sits at the same table with the speaker and interprets a speech into the target language after the speaker speaks. The length of the speeches varies. For this purpose the interpreter may take notes (AIIC website, 2006).

Simultaneous Interpretation: The interpreter sits in a booth with a clear view of the meeting room and the speaker, and listens to and simultaneously interprets the speech into a target language. Simultaneous interpreting requires a booth (fixed or mobile) that meets ISO standards of acoustic isolation, dimensions, air quality and accessibility as well as appropriate equipment (headphones, microphones) (AIIC website, 2006).

Sight Translation: Sight Translation is rather infrequent in interpreting. It consists of reading a source-language text aloud in the target language. It occurs when the speaker receives a text and wants to have it translated orally on the spot, or when a speech segment has been read from a text and has to be interpreted consecutively.

Simultaneous Interpretation with Text: Simultaneous interpretation with text occurs frequently, when the speaker reads a text which has also been given to interpreters. Although a difficult exercise, it does seem to make interpretation possible under acoustic and delivery conditions which would be prohibitory without the text. The visual presence of all the information reduces memory problems and the deleterious effect of acoustic difficulties. In addition, the probability of failures due to insufficient processing capacity for listening and analysis is also reduced, in particular regarding names and numbers. However, the high density and peculiar linguistic constructions of written texts as opposed to oral discourse may have negative effects (Halliday, 1985). There are also risks of linguistic interference, as well as the added difficulty of following both the vocal speech and the written text and the temptation to focus more on the text than on the speech. Since all the information is present in the text, interpreters often try to translate all of it even when delivery is very fast and they are being outdistanced. They may then lose the speaker completely, and therefore also lose important speech segments. Also, speakers often deviate from the written text, by adding comments, changing segments, or skipping segments. When interpreters focus on the text, they may miss these changes (Gile, 1995).

2.3 Interpretation Studies

Interpretation as a topic for academic studies did not emerge until the 1950s. In addition to theories and models aimed at explaining the complex task of interpreting, other main focuses throughout the years have included the assessment of interpretation quality and the effects of training.

Interpreting as a profession serves as a communication channel between people of different languages, and for conference interpreting, an exact and faithful reproduction of the original speech is the ultimate goal (Jones, 2002). Therefore, many studies have focused on the quality of interpretation, such as proposing systems of error classification for simultaneous interpretation (Barik, 1975; Gerver, 1976), analyzing note-taking in consecutive interpreting (Seleskovitch, 1975), and defining meaning units and other features in speech (Lederer, 1978).

There have also been many studies regarding the effects of learning and training on the interpretation performance of university or graduate students. Most of these studies focused on simultaneous interpretation (e.g. Hung, 2002), but there were also some which explored other forms of interpretation, such as sight translation (e.g. Chang, 2002) or note-taking in consecutive interpretation (e.g. Lee, 2000). Actual speeches or excerpts of actual speeches were commonly used in the majority of these studies, meaning units and quality assessment methods were often applied, and control groups generally consisted of English department students.

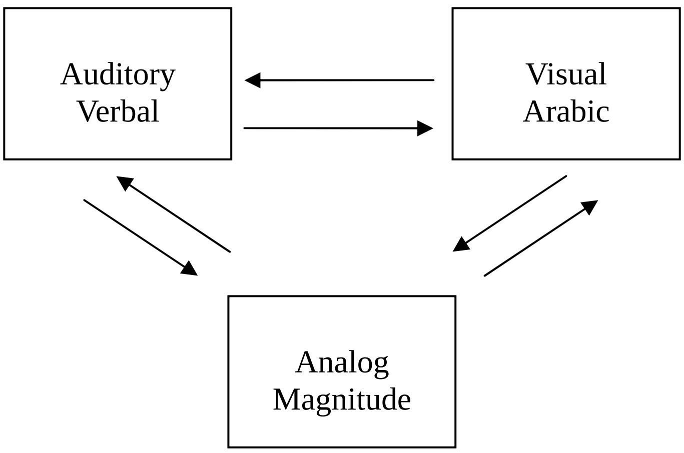
2.4 Numbers

For simultaneous interpretation, it is customary for interpreters to write down numbers when they appear during speeches so as to facilitate the process. For note-taking during consecutive interpretation, numbers are usually written down completely, as opposed to other information which may be substituted with symbols or abbreviations. Interpretation programs and classes often devote a certain amount of time to the practicing of number translation. Two main problems that interpretation students seem to encounter include difficulties with large numbers which contribute to errors during both interpreting and note-taking, as well as the conversion of number units between Chinese and English. There have been attempts to study the effects of training on the translation of various types of numbers, and it appears that with training, the accuracy of number translation tends to improve (Her, 1995). When stimuli are presented in blocks which consist of numbers with the same unit or digit length, the effort of translation seemed to decrease, whereas a change in unit or digit length immediately posed difficulties.

Despite the fact that numbers have straightforward one-to-one translations and less ambiguity than terms or sentences, they are often more difficult to translate than the rest of the speech in an interpreting environment because they are loaded with information that cannot be omitted or generalized, and interpreters must devote a noticeable amount of energy to take down or buffer the information, thus leaving less capacity to process other information. In addition, numbers in the form of Arabic numerals or audio input may automatically activate parts of the brain responsible for number processing (McCloskey, 1992), thus interfering with the interpretation process of sentences.

Different number units in Chinese and English also contribute to the difficulty of number translation. Common units in Chinese and English include ten ("十" in Chinese), hundred ("百" in Chinese), and thousand ("千" in Chinese). For larger numbers, English number units advance in sets of thousands, or three zeros (e.g. "million" and "billion"); but Chinese number units have a different pattern (e.g. "萬", which is equal to ten thousand in English, and "億", which is equal to 100 million in English). Multiplying the English unit "thousand" by 10 results in the Chinese unit "萬"; and multiplying the Chinese unit "億" results in the English unit "billion". Therefore, it may be assumed that the conversion of a number with unit in English or Chinese into a comparable number with unit in the other language requires the interpreter to utilize simple multiplication skills.

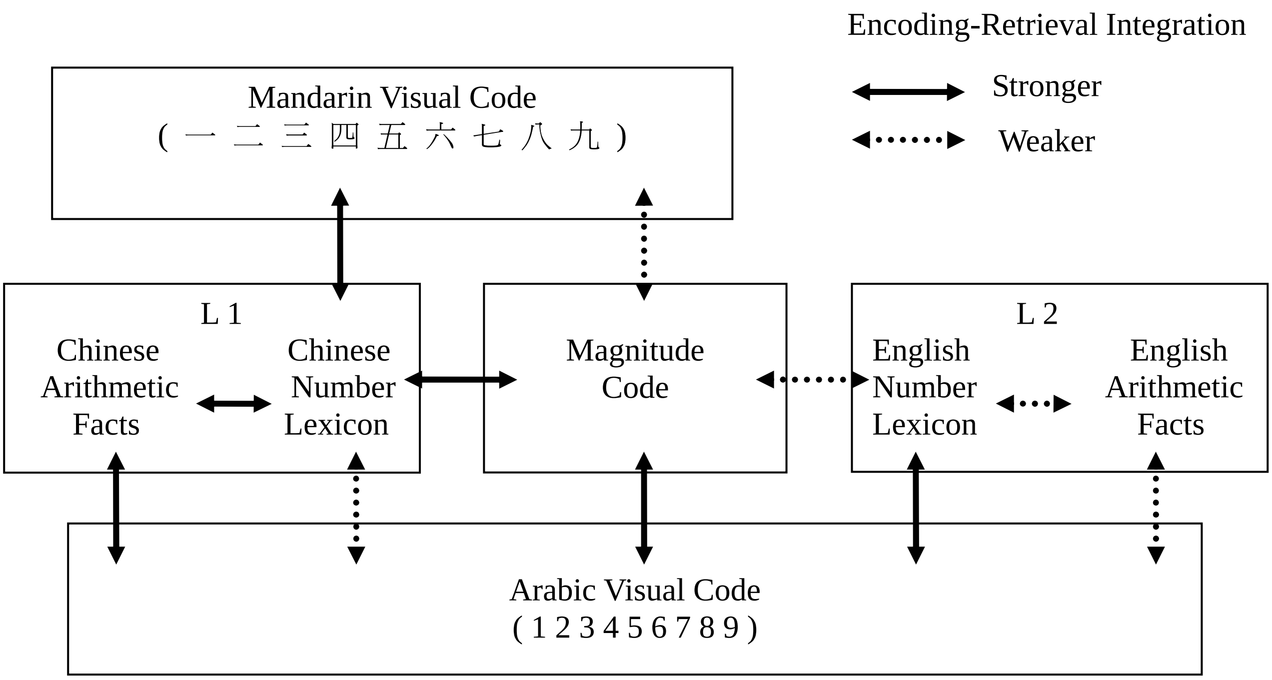
According to the triple-code model (Dehaene, 1995) (see Fig. 2.1), number processing is the result of three different types of codes: an auditory-verbal code, which is responsible for simple arithmetic facts and the input and output of spoken and written number words, a visual-Arabic code, which is responsible for digital input and output of Arabic numerals and parity judgment, and an analog-magnitude code, which supports size comparisons and approximate calculations. In the case that a number is presented in both audio and Arabic visual forms at the same time, the triple-code model would suggest competition or interference between the audio and visual codes, which might explain why many interpreters feel that simultaneous interpretation with text is more difficult. However, in the triple-code model, input is transcoded into and processed in appropriate internal representations, and whether the input was presented in a first or a second language does not seem to matter.



[Fig. 2.1] Triple-Code Model

A modified version of the triple-code model (see Fig. 2.2) incorporates the factors of first and second languages (Campbell & Epp, 2004), providing a more detailed structure which may be used to analyze number translation from one language into another. According to this model, efficiency of processing can vary with input language. The model was based on the results of Chinese-English bilingual number processing studies, and consists of five representational systems: the magnitude code, the Arabic visual code, the Chinese visual code, the Chinese verbal number code, and the English verbal number code. The distinct magnitude code provides a semantic representation of quantity, as well as transcoding pathways between the visual and verbal symbolic codes. The Arabic and Chinese visual codes are responsible for the input and output of the relevant formats, and the Chinese and English verbal codes are responsible for verbal input and output as well as language-based arithmetic facts, such as simple multiplications. The bi-directional arrows in Fig. 2.2 represent specific encoding-retrieval pathways between codes. Dark arrows represent stronger activation capacity. The pattern of strong and weak arrows in Fig. 2.2 is not definitive, but corresponds to results of previous studies and assumptions based on the linguistic abilities of the subjects. In real life, the arrows should vary on a continuous scale, and may be strengthened with practice. Assuming the conversion of number units between Chinese and English is a form of multiplication, it appears that the conversion of units should utilize the audio-verbal codes. Thus, if a Chinese-English bilingual is presented with a visual Arabic number with unit which requires conversion, and asked to translate it into English, the number processing pathway would be: Arabic Visual Code → Chinese Audio-Verbal Code (Chinese Arithmetic Facts) → Magnitude Code → English Audio-Verbal Code. However, when presented with a visual Arabic number without unit, the pathway should be much shorter: Arabic Visual Code → English Audio-Verbal Code, as there is no need to apply multiplication, thus reducing reaction time. It may be noted that, according to the model, a more balanced bilingual might be able to strengthen the weaker association between the Arabic Visual Code and the English Audio-Verbal Code, and thus go directly from Arabic Visual Code → English Audio-Verbal Code when translating Arabic numerals with no units.

[Fig. 2.2] Encoding-Complex Model



Real-life interpretation processes involve too many factors that result in complex effects (Tommola, 1997). However, numbers may be a good material for interpretation studies because there is a direct and definitive translation for each number, thus reducing subjectivity of accuracy judgments. Also, basic concepts of numbers and simple arithmetic facts are taught to most people at very young age, thus numbers in isolation do not have problems of background knowledge as many terms or sentences may do. In addition, existing number processing models and methodology can provide helpful insights and directions in terms of experimental design.