CHAPTER 2

LITERATURE REVIEW

This chapter is divided into two parts. In the first section, I will look at research about the relations between gesture and language use with respect to the issues of grounding and information state. Then, the studies from acoustic perspectives, especially for gestural beats, will be reviewed in Section 2.2.

2.1 Pragmatic Level

2.1.1 Grounding

Hopper (1979a) proposes general properties of grounding. Foregrounded clauses are narrated along the events of the main story line. They are “the skeletal structure of the discourse” (Hopper 1979a:213). In addition, foregrounded events in narratives have a sequential order which is the same as that in the real world. On the other hand, backgrounded clauses are supportive. They usually “amplify or comment on the events of the main narrative” (Hopper 1979a:214). Similar ideas for grounding are also presented in Hopper and Thompson’s (1980) study. In their study, background

refers to discourse that “does not immediately and crucially contribute to the speaker’s goal, but merely assists, amplifies, or comments on it” (Hopper & Thompson 1980:280). Foreground refers to main points of the discourse in contrast. Thus, grounding is “an important, fundamental property of text organization” (Chui 2001:1). In fact, grounding is an information structure which consists of foreground and background information.

Chui (2001) examines the correlation between grounding and transitivity in Chinese narratives and conversations. In the study, ‘topic chain’ (TC) is used to analyze the structures of conversational and narrative topics to identify foregrounded and backgrounded clauses in topic chains. Foregrounded clauses “introduce different topics within their local TC domain. On the other hand, backgrounded clauses are orientations, descriptions, elaborations, and digressions concerning one particular topic” (Chui 2001:230). In other words, foregrounded clauses move the topics forward when the speaker makes an utterance while topics in backgrounded clauses are not pushed forward.

The grounding status is not tied to the syntactic structure, but depends on the spontaneous topic development (Chui 2001:49). In this study, I analyzed narratives so foreground and background information can be identified based on the plot. The following Example (13) illustrates the identification of grounding status. It describes

how Mickey fought against an octopus by throwing an anchor.

(13) 1 → A: …miqi,\
Mickey
2 → ..jiushi reng yi ge% --
EMP throw one CL
3 → …reng yi ge mao./
throw one CL anchor
4 …(1.3)na,\
then
5 ⇨ …mao de houmian haiyou%,\
anchor POSS back still have
6 ⇨ …weizhe yi ge,\
tie one CL
7 ⇨ …shenghuan,/
rope with a shape of a circle
8 ⇨ (0)mao de houmian=,\
anchor POSS back
9 ⇨ …(.7)you jie shengzi,_
there is connect rope
10 ⇨ ..shengzi de weiduan you shenghuan.\
rope POSS bottom have rope with a shape of a circle

A: 'Mickey throws an anchor. Then, there is still a rope in the shape of a circle tied at the back of the anchor. There is a rope which is connected to the anchor at the back of the anchor; there is a circle at the bottom of the rope.'

In Example (13), the backgrounded clauses occur from IU 5 to IU 10 and they are elaborations about the circle at the bottom of the rope. There is one foregrounded event in this example, which is about the weapon Mickey used to fight against the octopus (IUs 1-3). From the above example, it is suggested that "a foregrounded

clause conveys information about the main character performing the major activity while a backgrounded clause performs a subsidiary function" (Chui 2001:61).

Gestures are part of discourse (McNeill 1992). McNeill's widely known book *Hand and Mind—What Gesture Reveal about Thought* published in 1992 played an important role in establishing the importance of gesture. McNeill (1985, 1992) used narrative data to do the research. He claims that "gestures show something about the process of narration that would be missed if only the speech channel were regarded as the vehicle of narrative" (McNeill 1992:183). A narrative is "structured on multiple levels, with subtle shifts of time and space, perspective, distance between narrator and narrated, and integration of the sequential with the nonsequential" (McNeill 1992:184). It may include three levels—the narrative level, the metanarrative level and the paranarrative level.

In fact, according to McNeill (1992), speakers can operate on one of three levels in narratives, and the occurrence of beats is revealed as related to the discourse structure. The first level is "narrative" in which the speaker conveys the events of the story itself following temporal order. The second one is "metanarrative" in which speakers make explicit information about the structure of the story as they build it up, for example, the introduction to the story. Finally, at the "paranarrative" level, narrators step out of the storytelling role and convey information of their own

experience of observing the film and their reaction to the events of the narrative itself. The gestures used in the three levels can be presented in Figure 1, originally from McNeill (1992:189, Figure 7.1).

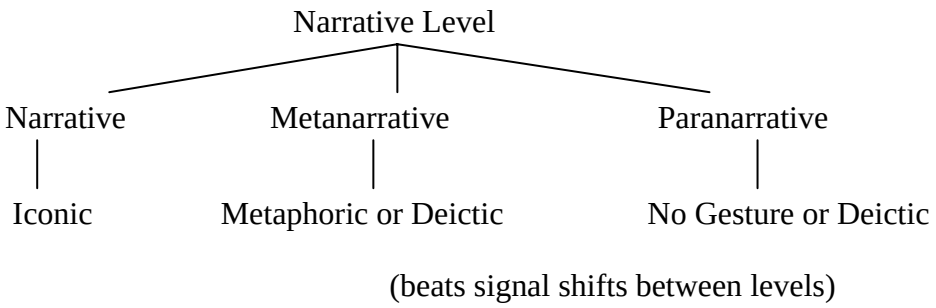

Figure 1. Narrative Structure and Gesture (McNeill 1992:189)

In Figure 1, iconics occur at the narrative level; metaphorics or deictics appear at the metanarrative level. At the paranarrative level, deictics may appear or there is no gesture at all. In brief, the function of beat gestures is to signal that the speakers/narrators shift among narrative, metanarrative, and paranarrative levels of discourse. This discussion is also referred to in Chapter 3.

In this thesis, the narrative data are identified and analyzed based on the grounding status. Based on the previous research, I will use the expression “foregrounded clauses” where the main plot line is conveyed to refer to McNeill’s (1992) “narrative” clauses and use one expression “backgrounded clauses” where they support the main story line and the events of the narrative are not pushed forward to

indicate McNeill's (1992) "metanarrative" and "paranarrative" clauses.

2.1.2 Information State

Previous research has also studied pragmatic functions of beat gestures. Efron (1941/1972) indicated that beats were used to accent or emphasize portions of co-occurring speech. McNeill (1985, 1992) notes that gestural beats emphasize off-propositional meanings while other types of gestures carry propositional contents of meanings. Beats typically accompany a word or phrase and have a discourse-pragmatic function, such as repairing, introducing new characters, and adding extra information. Bavelas et al. (1992) propose a division of gestures into topic and interactive gestures. Beats are considered as interactive gestures which "refer to the process of conversing with another person" (Bavelas et al. 1992:473). They (1992) propose that beats are gestured by four aspects, such as citing previous contribution, seeking agreement, conveying new or shared information, and taking turns.

In addition to studies on the pragmatic functions of beats, a few studies have further proposed a relationship between gesture and the information state of utterances. For example, McNeill and Levy (1993) propose that gesturing can be affected by the information state of the associated referents.

Chui (2005b) has investigated the relationship between topicality of utterances and gestural use in Chinese conversational discourse. Three findings are found in her study. First, gestural types themselves do not distinguish topical and non-topical clauses. Iconic gestures are mainly produced for new information in topical clauses when the information state of the associated referents is considered. Finally, Chinese speakers rarely produce gestures while conveying given information for referents. This study suggests a pragmatic dimension for studying how gesture coordinates with speech in communication.

In fact, the information state is also a kind of discourse structure. Clauses in oral conversation usually convey both old/given and new information. “The information in the clause is seldom totally new or totally old” (Givón 1990:897). I will now outline the studies of several researchers who have studied the concept of information state from various perspectives.

Chafe (1976) distinguishes the notion of given-new information in terms of the idea of *consciousness*. Given information means that “the speaker assumes some knowledge in the consciousness of the addressee at the time of utterance” (Chafe 1976:30). On the contrary, new information is “what the speaker assumes he or she is introducing into the addressee’s consciousness by what he or she says.” Later, Chafe (1987) revised his study and used a three-way system to distinguish the notion of an

information structure. Three different activation states, i.e., ‘given,’ ‘accessible,’ and ‘new,’ are used in the speaker’s consciousness at the time of utterance to explain the information state. These three activation states are realized as the concepts of ‘active,’ ‘semi-active,’ and ‘inactive’ states. According to Chafe (1987:25), an active concept is one that “is in a person’s focus of consciousness”; a semi-active concept is one that “is in a person’s peripheral consciousness, a concept of which a person has a background awareness, but which is not being directly focused on”; therefore, it is called accessible information; and an inactive concept is one that “is currently in a person’s long-term memory, neither focally nor peripherally active.”

Clark and Haviland (1977:3) also defined the notion of given-new information: “given information is that the speaker believes the listeners already knows and accepts it as true” while “new information is that the speaker believes the listener does not yet know.” This notion is related to the concept of the speaker and the listener’s shared knowledge.

Prince (1981) proposes a taxonomy of given-new information under the notion of ‘assumed familiarity’ which is related to the speaker’s assumptions of the listener’s belief-set. The concept of assumed familiarity consists of ‘new,’ ‘inferable,’ and ‘evoked’ information. For inferable information, the speaker can assume the listener can infer it logically. Evoked information includes both textual and situational evoked

information. However, the information state of inferable and evoked information was not resolved and indicated in the study.

Halliday (1985:274-275) claims that “information is a process of interaction between what is already known or predictable and what is new or unpredictable.” An idealized information unit consists of both given and new elements. “The significant variable is: information that is presented by the speaker as recoverable (Given) or not recoverable (New) to the listener” (Halliday 1985:277).

Previous researchers used either a two-way or a three-way distinction to study the issue of the information state. The issue of the information state is also discussed in Chui’s (2001) study. In the study, she reviewed lots of related research and then, used “a two-way distinction of information state in preference of Chafe’s (1987) three-way system” (Chui 2001:124). The reason is that it is difficult to identify accessible information because the process of definition may be arbitrary. Moreover, she also proposes that the “information state has to be identified in the universe of discourse: a predicate or a referent which has never been brought up in the previous context at the moment of verbalization carries new information; its re-appearance conveys given information” (Chui 2001:124). Therefore, in this study, a two-way distinction of the information state, i.e., the notion of a difference between given and new information, is adopted for analysis.

2.2 Acoustic Level

One focus of the thesis is whether there is any acoustic pattern for gestural beats in the presence of speech. Previous studies have raised a connection between pitch and gesture. Kendon (1972) proposed a hierarchy of movement paralleling the organization of speech into various linguistic levels and proved a connection between gesture and intonation groups. Later, he suggested a possible connection between gesture and intonation based on his data when “level or rising pitch correlated with held or rising head or hand movements” (Kendon 1980:221). Bolinger (1983) considered facial gestures an important parallel to intonation and noted that the facial gestures move with changes in pitch. Moreover, he extended this claim and proposed that “facial and manual gestures of any will normally parallel the line of pitch” (Bolinger 1983:169). In addition, McClave (1998) also examined the correlation between pitch and manual gestures. In regard to propositional gestures only, it was established that the correlation still held. However, “the movement of the hands during gestural beats did not correlate with pitch” (McClave 1998:83). Thus the speaker seemed to be able to distinguish propositional gestures from beats. Therefore, she proposes that “although pitch and manual movements do parallel each other on occasion, the correlation is not biologically mandated” (McClave 1998:87).

In addition, the correlation between gesture and stress is also a common issue

discussed in previous studies. For instance, Schegloff (1984:273) proposes that “a gestural beat co-occurs with the major stress on beat of the turn-constructional-unit (e.g. sentence) in which it occurs.” This recurring phenomenon is an organized one. There are two pieces of evidence for this. One is that when a series of stresses occur one after the other, a series of gestures accompanies them. The other is that when the gesture is released from a preparation position, and “its major energy pulse or its point of maximum extension on the beat displays a designed and organized effort to achieve that co-incidence” (Schegloff 1984:274).

McClave’s study is the first and only full-scale empirical study of intonation and gesture (Loehr 2004). McClave (1994:45) indicates that gestural beats are typically small up and down or back and forth flicks of one or both hands. In her study, she found that gestural beats do not necessarily co-occur with stressed syllables. In contrast to earlier researchers, she discovered that not all beats occur on stressed syllables. She further proposed that beats are often organized in rhythmic patterns. In other words, a rhythmic group of gestural beats occurs around the tone-unit nucleus on which a beat occurs. Such beats are found at even intervals from the nucleus whether they fall on unstressed syllables or pauses. In addition, there are three other findings proposed in the study. First, if a beat gesture coincides with the tone-unit nucleus, the downbeat will co-occur. Second, when a beat gesture co-occurs with a

stressed monosyllabic word, either the upbeat or downbeat may coincide with the word. Third, when a beat gesture co-occurs with a multisyllabic word, a downbeat usually co-occurs with the primary stressed syllable. Moreover, McClave also revealed an interspeaker rhythm where the listener produces beats during the speaker's utterances.

Previous studies have proposed a relationship between gesture and intonation. In this study, the use of gestural beats will be also investigated in regard to the issue of pitch by examining Chinese narrative data. In addition, previous research discusses the issue of stress via examination of data from the English language. However, this issue can not be discussed in this thesis because of the language type. Stress does not exist in Chinese. Therefore, instead of examining the relationship between gestural beats and the stress of the associated speech, the intensity of the speech accompanying the occurrence of a gestural beat will be analyzed in the present study because the factor of intensity has a close correlation with the stress of a syllable. The acoustic feature—the intensity, is studied "based on the size of the vibrations of the vocal cords" (Crystal 2000) and the same method can also be used to measure the amplitude of a sound in Chinese. In addition, among the previous studies, researchers have also indicated a connection between beats and the rhythm of speech. According to the finding of McClave's studies (1994), she suggests a rhythm hypothesis for gestural

beats. In other words, gestural beats are organized in their own rhythmic patterns. This inspired me to question whether there is any acoustic pattern for beat gestures and motivated me to carry out an analysis. In the present thesis, the intervals between continuous beats will be further analyzed and considered to investigate if there is any acoustic pattern associated with this gestural type. The issue will be discussed in more detail in Chapter 4. In short, the relationship among pitch, intensity, and gestural beats at the acoustic level will be investigated in this study. Moreover, the issue as to whether there is a rhythmic pattern in beat gestures will be also examined and discussed.

The previous studies have provided different perspectives on the issues of the relationship among linguistic expressions, language use and manual movements and they provide a direction for exploring and analyzing gestural beats of the thesis.