

THE COMMUNICATIVE FUNCTIONS OF GESTURES IN L2 SPEECH

Jun Zhao
University of Arizona

By comparing the frequency of hand gestures used by native Chinese speakers in their L1 Chinese conversation, and that of the same speakers in their L2 English speech when they talk to native speakers of English, this study supports Gullberg (1998) and Hardar, Dar and Teitelman's (2001) claim that L2 speakers do tend to use more gestures in L2 speech. Unlike previous gestural studies that focus on gestures used while narrating a watched cartoon or a video to the interlocutors, this study investigates the use of gestures in conversational settings and transcends the narrator-centered paradigm of data analysis to incorporate the interaction of the interlocutors and how that influences their subsequent use of gestures. Detailed analysis of the contextualized gestures in their L2 English speech suggests that interlocutors use gestures as a communicative strategy to ensure the smooth flow of the conversation and to enhance comprehension of their speech.

INTRODUCTION

The comparison of gestures used by different cultural groups has revealed cross-linguistic differences. For example, Italians were found to use more gestures to describe the shape, size and location of the entities mentioned in their utterances, while Jewish speakers tended to have quick up-and-down movements of the hands more often (Efron, cited in Gullberg, 1998). However, no studies have been conducted to prove that Chinese speakers generally gesture less in their L1 Chinese than speakers of some other languages, such as Spanish, Italian, or English in their respective L1s. Nonetheless, observations and anecdotal evidences suggest that, compared to speakers from other cultures, native Chinese speakers generally use less body language such as gestures and facial expressions in their Chinese speech. Shrugging is a popular gesture in China now, but one can definitely trace its origin from English-speaking countries. Moving one's hands frequently and widely for a variety of manners is often not seen in the Chinese gesture repertoire. However, it has been observed by the author and other Chinese learners of English that many native speakers of Chinese studying at American universities tend to increase their gesture usages while speaking in English. Gullberg (1998), Hadar, Dar and Teitelman (2001) also reported the general tendency of their participants using more gestures in L2 speech. The current study examines why L1 Chinese speakers gesture more in their L2 English speech than in their L1 Chinese speech. By comparing the frequency of hand gestures of native speakers (hereinafter NSs) of Chinese in their Chinese conversation, and that of the same speakers in their L2 English speech when they talk to NSs of

English, this study supports the above observation of increasing usage of gestures in L2 speech. Detailed analysis of the contextualized gestures in their L2 English speech suggests that both interlocutors use gestures as a communicative strategy to ensure the smooth flow of the conversation and to enhance comprehension of their speech.

THEORETICAL BACKGROUND

What is considered as gesture is not as clear-cut as it seems to be. Kendon's Continuum (1992) covers the broadest scope of the term in that it categorizes gestures into gesticulation (improvised gestures that are speech-synchronized and created online by speakers at the moment of speaking), pantomime (occurs without speech), emblem ("lexicalized gestures" that have "highly specific meanings, can be interpreted in the absence of speech, and vary significantly from culture to culture" (Tuite, 1993, p. 83)), and sign language. Kendon's Continuum arranges these types of gestures along the axis of language-likeness and co-occurrence with verbal expression. It ranges from least language-like to most language-like in the order of gesticulation, pantomime, emblem and sign language. As to the feature of co-occurrence, to the left end of this continuum is pantomime and sign language, which can't co-occur with speech, while gesticulation, to which speech is a necessity, is to the right end of this continuum. Emblem lies in between and may or may not co-occur with speech.

A great number of studies seem to focus on gesture as "a form of cognitive expression that spontaneously co-occurs with speech and can be used to access a speaker's mental representations" (McNeill, 1997, p. 190). Thus "gesture", as used by many researchers, refers to gesticulation. McNeill (1997) further divided gesticulation into iconics, metaphoric, beats and deictics. Table 1 lists the definition and provides examples of each type of gesticulation.

Table 1: Definition and Examples of Gesticulation

Name	Definition	Example
Iconics	Using concrete references to display the concrete aspects described in speech (McNeill, 1997, p. 193)	"It is straight, very very straight, and <u>to this high</u> " <i>(raising left hand perpendicularly to a certain height)</i>
Metaphoric	Displaying "images of abstract concepts and relationships that refer to the discourse metastructure" (McNeill, 1997, p. 193)	"You can <u>search it on Google</u> " <i>(the right index finger draws a line on the left palm quickly)</i>
Beats	Baton-like movements that mark words at times of discourse level	"... so you drive to school <u>every day</u> ?"

	changes, which are “typically small simple movements that are performed more rapidly” (Tuite, 1993, p. 85)	<i>(the right hand point down quickly at “every day”)</i>
Deictics	Indexing new thematic units or pointing to “locations in a virtual space in which the objects being referred to are deemed to be located” (Kendon, 1992, p. 246)	“... and if you go to <u>China...</u> ” (<i>left hand moves away from the speaker’s body, pointing to the direction behind the speaker</i>)

Note: The underlined part in the speech synchronizes with the gestures. The bolded part represents the stressed words. The italicized part is the notation of the hand movement. All examples are taken from the current study.

McNeill (2000) summarized the four approaches to the study of gesture and speech: 1). the cognitive psychological approach to understand the relationship between gesture and speech in the real-time mental processes of individuals; 2). the communicative approach to understand the functions of gestures in contexts of social interaction; 3). to outline a computational model of gesture-speech performance; 4). to study the transition from gesticulation to sign language. The cognitive approach dominates the gestural studies since it is believed that this perspective could reveal “the inner processes that lie behind the act of speaking” (Kendon, 2001, p. 191).

Cognitive Approach to Gestural Studies

The cognitive approach focuses on the internal function of gestures. It highlights the idea that gesture is “a critical link between our conceptualizing capacities and our linguistic ability” (Armstrong, Stokoe, & Wilcox, 1995, p. 27). Gestures and linguistic expressions are believed to form a unity. Although gestures and speech belong to two distinct modes, they present a single cognitive representation, with speech providing a linear, sequential structure and gesture supplying synthetic, holistic and imagistic elements. As the utterance unfolds in real time, language and imagery mutually influence each other. This is the central argument of the cognitive approach.

Tuite (1993), McCafferty and Ahmed (2000) claimed that gesture use may be equally important for encoding messages and for decoding them. Tuite (1993) even maintained that “gesture is production-centered rather than reception-oriented” (p. 94). This is evidenced by the fact that gestures, for the most part, are employed by the speakers, not the listeners (listener gestural usage has been noted at much lower frequency, see Gullberg 1998), and gestures are synchronized with the speech they accompany or occur just before it. Over 90 percent of gestures accompany speech whether there is an interlocutor present or not (McCafferty & Ahmed, 2002, p. 203). People also produce representational gestures without visual contact with the interlocutor, such as talking on the phone, although under such a condition the frequency of gestures decreases. Working from the speaker’s point of view, Krauss and Hadar (1999) proposed a Lexical Retrieval Hypothesis with the claim that gestures are primarily produced to assist speakers in their lexical retrieval

process. Their study indicated more frequent use of gestures when their participants were at a loss of words.

The study of the cognitive functions of gestures in L2 speech is still in its infancy; however, several studies have already pointed out that when bilinguals have more difficulty speaking L2, they tend to gesture more (Gullberg, 1998; Krauss & Hadar, 1999), and the less proficient a speaker is in the L2, the more gestures will be produced (Goldin-Meadow, 2003). In addition, multiple gestures in one clause are taken to indicate L2 speech disfluency (Oda, 2001). When an American learner of Japanese was asked to describe the same picture to different listeners one by one within a short period of time, the gestures coordinated better with his verbal utterances in the later trials when his linguistic expression proceeded more smoothly (Oda, 2001).

Lantolf and Thorne (2006) pointed out that one of the general interests in L2 gestural studies is the interface between speech and gesture, “Thinking for Speaking” (TFS). The tenet of TFS, initially proposed by Slobin in 1987 (Slobin, 2003) is that in speaking activity, thinking takes on a particular quality as experiences are filtered through languages into a verbalized event. Where languages differ in terms of the grammatical devices that are used to encode particular linguistic-conceptual domains, speakers of those languages will manifest different patterns of TFS about those domains (Duncan, 2002). The comparison of gestures accompanying motion verbs allows us to explore TFS across languages in an expanded manner. Typologically, there is the satellite-framed (S-language) and verb-framed (V-language) distinction regarding motion verbs. S-language, like English, will encode the manner of motion in verb and indicate the path of motion in a satellite phrase, for example, “The little bird hops out of the cage”. While a V-language like Spanish will encode the path (not manner of motion) in verbs. The literal translation of a Spanish sentence (of the similar meaning to the above example) will be “The little bird leaves from the cage, giving hops” (examples are taken from Negueruela, Lantolf, Jordan & Gelabert, 2004). English speakers may choose to highlight either manner or path in their gestures, but they rarely highlight manner in their gestures without a conflated manner verb. Spanish speakers will use manner gestures synchronized with path verbs and ground NPs when the manner information is not encoded in speech (Negueruela, Lantolf, Jordan & Gelabert, 2004). The same result is also borne by McNeill and Duncan (2000) study. Kendon (2004) found out that English speakers use a single gesture corresponding to its syntactic structure in motion verbs, while Japanese and Turkish speakers use two separate gestures, one with each clause, which also corresponds to the syntactic structure of these two languages. All these studies suggest that speakers of different languages create language-specific modes of TFS.

Since speakers tend to follow different TFS modes, the question to ask is whether L2 speakers switch to the L2 TFS pattern when they communicate in their second language. Studies of gestures related to motion verbs produced in L2 speech could help scholars find the answer to this question. Nugueruela, Lantolf, Jordan and Gelabert (2004) examined such

gestures by advanced Spanish learners of English and found out that their participants transferred their L1 Spanish TFS pattern to L2. Kellerman and Van Hoof (2003) compared gestures related to motion verbs by native speakers of English, Dutch, and Spanish, and by Dutch and Spanish ESL speakers. Spanish speakers demonstrated the same gestural pattern in both L1 and L2. Dutch speakers placed their path gestures mostly on the satellite phrase in Dutch, but the majority of their L2 English gestures accompanied the verbs, as if English were verb-framed like Spanish. These two studies suggest that L2 speakers tend to think in their L1 TFS pattern, and gestures could reveal L2 speaker's different thinking patterns which are not detectable in otherwise fluent and correct L2 speech (Kellerman & Van Hoof, 2003).

Communicative Approach to Gestural Studies

The cognitive approach to gestural studies leads to some very productive and encouraging results; however, it suffers from certain limitations. By focusing on the individual mind, the cognitive approach ignores the central role of communication in the thinking activity. Such an approach is directed solely toward the psychological processes within the individual, and it is not adequate to explain how and when speakers use gesture (Gullberg, 1998). Of the two functions, "the cognitive function of gesture... is derived from and predicated on its communicative function" (Negueruela et. al. 2004, p. 116). Similar ideas were echoed by Church, Ayman-Nolley and Mahootian (2004) when they expressed that "gesture is a modality that serves an external communicative purpose through its conceptual link with speech" (p. 315). As most gestures in natural speech are improvised by individual speakers in the moment of speaking, they are always intended for particular recipients and appeal to those recipients' knowledge that may have been acquired and co-constructed "over the course of the current situation" or "in a cultural and physical world that is in some part the shared property of the members of a single society or cultural group, and in other parts common to all human beings" (LeBaron & Streeck, 2000, p. 137). In other words, factors such as the context of the speaking situation and the relationship among participants are critical when studying why gestures are employed, as gestures rely on the addressee's knowledge of the world to facilitate communication. However, it has been scarcely studied so far how the interaction between the interlocutors affects the ongoing conversation and the use of gestures.

Kendon and Gullberg are two of the major proponents of the communicative approach of gestural studies. In terms of the communicative function, studies have shown that gestures take on assistive roles such as clarification, emphasis, avoidance of redundancy, replacement of speech, seeking for help, etc. (Antes, 1996, p. 439). Compared with L1 speakers, L2 speakers frequently produce gestures as compensatory strategies when they encounter problems in finding words. Gullberg (1998) probed the communicative functions of gestures produced by her Swedish and French language learners when they retold a cartoon to their interlocutors. She found

out that her participants performed iconics when they experienced lexical problems. The features exploited in their iconics were usually shape, size, manner, etc. of the concrete referents in their speeches. This seeking-for-lexical-help-gesture serves as a prompt to provoke their listener to offer help in supplying the word (Gullberg, 1998; McCafferty, 2002). McCafferty (2002) illustrated how a Chinese learner of English gesturally acted out the word “splash” when he could not produce it linguistically. At the sight of this, his native-speaking interlocutor provided the correct word, which was picked up by him to maintain the conversation. L2 speakers clearly rely on gesture as a means of soliciting help from their interlocutors (Lantolf & Throne, 2006).

When interacting with NNSs, NSs tend to increase their gestural usage to better help NNSs understand the speech. Adams (1998) compared the gestures of NSs while talking to NNS and NS interlocutors, and found out that they used far more gestures while talking to NNSs. These increased gestures are regarded as a source of input to promote communication, and “an integral part of an individual’s overall communicative effort” (p.1). McCafferty (2004) also revealed the tendency of NSs to gesturally illustrate aspects of the discourse more often while talking to NNSs to enhance the comprehension.

THE STUDY

This study compared the gesture usage of ten native speakers of Chinese while talking to other Chinese speakers in their L1 Chinese, and native English speakers in English. Each videotaped session lasted about 15 minutes. The majority of the participants knew their Chinese-speaking interlocutors but did not know their English-speaking interlocutors before the study, and they were told to strike up a conversation with them, just as they do in real life: meet a friend and chat over current events, or meet a stranger and get to know each other. Unlike the overwhelming majority of gestural studies, no prompt such as a cartoon or picture was provided to the participants. Instead, all participants were told to choose a topic of common interest. This scenario is rather common in daily life, thus, it meets the genuine communicative needs of both parties. Such a design simulates natural conversation as much as possible to observe how gestures are used in conversational settings other than the genre of narration. At the beginning of their conversations, most participants were aware of the fact that they were being videotaped, but shortly after they were engaged in the conversation, they appeared to ignore the videotaping equipment.

Research Questions

This study focuses on the following two questions:

1. Is there any difference in the frequency of these Chinese speakers’ gesture usage when they talk in Chinese to native speakers of Chinese than when they talk in English to native speakers of English?
2. If a general pattern of increasing gesture usage is found among these participants while speaking in their L2 English, what are the communicative

functions of gestures produced by these speakers in their L2 production? How is the gestural usage of both interlocutors affected by the ongoing interaction?

Participants

There were 11 Chinese participants (all of them native speakers of Chinese) in this study, but only 10 participants' data were analyzed (one was dropped due to her deliberate constraint of her hand movements in the English conversation). At the time of data collection, the participants had been in America from 8 months to five years, and they were studying at an American university for master or doctoral degrees, with the exception of one male participant who recently graduated and secured a job in the same city. Of the 10 Chinese participants, there were 5 females and 5 males with ages ranging from 24 to 37. All of them had previous experience learning English in China. Following the ACTFL guideline, the researcher judged their oral English proficiency level in the range of *Intermediate* to *Advanced*.

Eleven native speakers of English were recruited to pair up with the Chinese speakers (one was dropped due to his interlocutor's constraint of hand movements). Most of the American participants were university students in their early 20's. They did not know their interlocutors before the study. The exceptions were two female participants; one is in her mid 50's and one is a graduate student. They were paired up with their Chinese friends who invited them to participate in this study. Of the ten American participants, there were also 5 females and 5 males.

Procedures

The Chinese participants first had a 15-minute audio-taped interview, which was conducted individually. The purpose of that interview was two-fold: 1) to gather information of their language learning background—i.e. to learn about the activities from which they gained new cultural and linguistic knowledge after they came to America—and 2) to judge their English proficiency level (oral proficiency) according to the ACTFL guidelines.

Next, these participants were paired up for the 15-minute videotaping of natural conversation in Chinese. Due to the odd number of the participants, one of the conversations was between three participants. They negotiated the topic of their conversation so that everybody was interested and could contribute to the dialogue. Some of the topics were their favorite movies, their recent traveling experience, things they like to do, etc. But very often the topics spread to other directions, as often seen in natural conversations. Most of the participants' sitting posture indicated that they were rather relaxed, but some were clearly aware of the existence of the camcorder at the beginning of the videotaping.

After all the Chinese conversations were videotaped, each Chinese participant was paired up with a native speaker of English for their 15-minute conversation in English. Again, the interlocutors chose their own topics for the conversation. Some of the topics were: movies they watched, their language learning experience, cities in China, life in USA, traveling experience, etc. The

topics of their Chinese and English conversations were very similar.

All the videotaping took place in a very quiet conference room. The participants sat next to each other, not directly facing the digital camcorder so that they would not feel intimidated by the equipment. Both participants' movements of the upper body were well captured. The camera was set up before the participants entered the room. After they started the conversation for one minute or two, the researcher left the room, leaving only the two participants in the room, hoping to ease their tension of being videotaped. After about 15 minutes, the researcher returned to turn off the digital camcorder.

When all the videotaping sessions ended, some of the Chinese participants were interviewed. The researcher first asked them about their general perceptions of their own gestures in the two languages, then showed them their Chinese and English videos, asking them to clarify and reflect upon some of the gestures they used in these videos.

Data Analysis

The data transcription focused on verbal utterances and the accompanying gestures by the Chinese participants. The native English speakers' gestures were also analyzed to incorporate the entire interaction process, and to answer the question of how that might influence the subsequent gestural usage of both parties. These gestures were codified under the category of metaphors, iconics, beats, deictics, and metaphoric attitudinal gestures. Examples of the first four types of gestures were listed earlier (see chart 1: Definition and Examples of Gesticulation), so only an example of metaphoric attitudinal gesture will be provided here. Metaphoric attitudinal gesture was proposed by Gullberg (1998) for the type of gestures which typically "involve circular movements (of the hands) at the wrist, or sweeping movements in the horizontal plane rightwards and/or leftwards", or "wiggling of the fingers, as if the speaker were leafing through a stack of papers" (Gullberg, 1998, p. 139). These gestures very often express speaker's affective states such as hesitation, uncertainty, attempt to hold the floor, or abandonment, etc. This kind of metaphoric attitudinal gesture is frequently encountered in the current study, as illustrated by the following example.

EX: "sometimes, may, maybe just go shopping (pause), because it's, you know, (laughing)"

(opening hands facing each other and shaking several times)

(Note: The verbal utterance is indicated with quotation marks. The depiction of gestures is italicized in the parenthesis following the sentence. The underlined portion indicates the stroke phase of their gestures. This notation will be used throughout this paper.)

Occasionally one gesture takes up more than one function. In that case, it will only be counted once according to the more prominent function it carries, depending on the context. For example,

"I have been here in Tucson for almost 3 years"
(left finger circling forcefully in front of the body).

This is coded as a deictic gesture, not a batonic gesture, as the main function under that particular situation is to indicate the place, although this gesture does accompany the stressed “here in Tucson” section, and could also be counted as a batonic one. In short, no gesture was double-counted.

When all the gestures by these Chinese participants were coded and counted, the trend of increasing usage for almost all types of gestures in their L2 English was easily detected. An overview of the total numbers of each gesture category used in Chinese (C) and English (E) is listed in Table 2.

Table 2: An Overview of the Total Numbers of Gestures Used in C and E by Categories

	Metaphorics	Iconics	Beats	Deictics	Metaphoric Attitudinal	Total
Chinese	72	106	46	58	52	334
English	233	155	326	212	690	1616

Due to the slight time variation of each videotaping session, the total number of minutes (including both listening and speaking time) of all the Chinese videotaping was 157 minutes, and that of English videotaping was 161 minutes. The total number of gestures in Chinese conversation was 334 and that for English (excluding the gestures of native speakers of American English) was 1616. Thus, the average number of gestures in Chinese was 2.13 per minute, and that in English by the same group of Chinese participants was 10.03 per minute. A big difference in the frequency of gesture usage by the Chinese learners of English has been found between conversations in the two different languages. The hypothesis that Chinese learners of English use more gestures in their L2 speech production is confirmed. However, why do learners tend to gesture more in L2? What are the functions of the increasing gestures of these learners when they communicate in L2? To answer that question, we need to analyze the use of gestures in context.

One striking difference between this study and many previous gestural studies lies in the data collection and data analysis method. Most gestural studies adopt the method developed by McNeill that asks participants to watch cartoon or pictures first, then relate that to their interlocutors who have not seen that prompt. By doing that, the data obtained is confined to gestures in narratives. Secondly, most studies only focus on gestures produced by speakers and ignore the possible influence from their interlocutors. This narrator-centered paradigm of data analysis was criticized by Kendon (1992) and Furuyama (2000). The current study transcends this paradigm to incorporate the background knowledge of the speakers, the relationship between interlocutors and the ongoing interaction to see how that might influence the use of gestures as a communicative strategy. The next section will discuss certain patterns discovered from this study.

Firstly, the participants’ background knowledge affects the way they gesture. In many cases, it is clear that what the speakers know or what they

assume their interlocutors know influence the way they interact with each other, including how they gesture. In this study, since the researcher knows all the Chinese participants and some of the American participants, many participants take advantage of that as an ice-breaking strategy. The researcher's name was not always mentioned, but they always pointed at the direction where the researcher just exited. For example, in one instance, a native English speaker Mike and a native Chinese speaker Chu, talked about the researcher at the beginning of their dialogue. All names used to refer to the participants are pseudonyms.

Mike: "She speaks pretty fast".

(the index finger of the right hand pointing at the direction where the researcher just exited)

Chu: "You mean his English, oh, her English?"

(waving his right hand outward to the same direction)

Similar gestural usage happened between Tina, an English speaker and Zhang, a Chinese speaker.

Tina: "Are a lot of people coming to your birthday?"

Zhang: "No, just several of my friends. Actually, I invited (name of a person), but ..."

(both hands moving outbound, to the direction where the researcher just left)

Second, the participants tended to assign anaphoric referents with certain deictic gestures for comparison, differentiation, and they followed the same usage throughout their conversation. For example, one Chinese participant Chu talked about the differences in the way people from Taiwan and Mainland China talk:

Chu: "Although both Taiwan and Mainland speak Chinese, Mandarin, basically I'll say...."

(hands forming a round shape, moving to the left of the body and moving down with "Taiwan" and maintaining the same shape but moving to the right of the body and moving down with "Mainland")

Taiwan, Taiwanese speak Mandarin a little bit less slower".

(left palm facing up, moving left hand downward, left hand is put to the left of his body, the same position when he referred to Taiwan in the previous sentence)

In order to differentiate similar concepts, the speakers tend to give each idea/object/place a different location in the gestural system. This was witnessed in many instances. Here are three examples from three Chinese participants' gestures.

Zhang: "Sorry, I always confuse "he" and "she"."

(both hands moving to the left of her body at "he", then to the right at "she")

Li: "Italy and Finland, uh, is too far away."

(hands move away from each other to indicate the distance).

It's south area and north area".

(hands closer to the body at “south area”, then moving away from the body at “north area”)

Wang: “She never confused German with Russian, but sometimes...”

(right hand moving downward, palm facing down for the word “German”, left hand doing the same for the word “Russian”)

Next, gestures are also found to be used as a communicative strategy by language learners to seek lexical help either explicitly or implicitly. This has been documented in many studies as well. For example, in the following dialogue, Zhang, a Chinese speaker of English, and Tina, a native English speaker, were talking about swimming when Zhang had trouble in using the word “breaststroke” to indicate the swimming style.

Zhang: “I only know how to... uh... what do you call this?... frog... in Chinese, we just translate it, when you swim, it is like a frog...”

(arms spreading out on different directions, moving in half-circles, to simulate the movement of arms in breaststroke, repeating the same gesture twice)

Tina: “This one?”

(imitating Zhang’s gesture in a slightly different way)

Zhang: “Yeah, this one. How do you call it?”

(repeating the previous gesture)

Tina: “Oh, breaststroke”.

(repeating her previous gesture)

Zhang: “Ah, breaststroke, breaststroke”.

(repeating the same gesture)

In another example, the Chinese speaker Ge was interested in a yellow band on his interlocutor Brad’s wrist, but he did not know if there was a special term for the band, so he asked by pointing to the band first, then referring back to his own wrist:

Ge: “What’s the meaning? Why you wear this one?”

(right index finger pointing to the yellow band on the interlocutor’s wrist, moving his right hand back to his own left arm, the fingers of the right hand form a half-circle around his left wrist)

Brad: “You mean this? Oh, it is for the Cancer...”

Unlike the previous example, here Ge did not ask for the word explicitly, but it is apparent that he did not know the word, thus, he turned to the gesture for help. In this way, gesture is a more economical and direct way to express his communicative intention.

Finally, it is interesting to point out how the ongoing interaction between the participants influenced their use of gestures in the subsequent conversation. In many cases, the speakers did not attempt to gesture at first, but seeing that their interlocutors did not understand them, they used gesture when repeating or paraphrasing the previous sentences. For example, Mike, an English speaker asked Chu, the Chinese learner of English, about the test in the medical school of that university:

Mike: “Have you taken the IMCAT yet?”

Chu: “Catch yet?” (looking confused)

Mike: “IMCAT”.

Chu: “IMCAT?”

Mike: “The test. The big test here at the medical school”.

(right hand acts out as if writing on a piece of paper, left hand lower than the right hand, suggesting a piece of paper)

The feedback from Chu made Mike realize that there was a communication problem. After two trials of the term, Mike chose to act it out gesturally, in addition to a more explicit explanation of the term. Even if the non-native speaker didn't ask for help explicitly here, his feedback sufficed to prove more clarification was needed. In other cases, Chu explicitly expressed the need for more explanation.

Mike: “... hard to find Chinese subtitles though”.

Chu: “Subtitle? What you mean subtitle?”

Mike: “You know, uh, they speak English, but there is Chinese at the bottom”.

(right index finger pointing to his own mouth; then right index finger moving in straight lines from left to right, with downward order, to simulate caption on the screen)

Chu: (looking at M's movement, seems to understand) “Is it the same like caption?”

It is apparent that Chu did not know the word “subtitle”. He even mispronounced the word as “subtiple”. So Mike acted that word out to enhance communication. With these communication problems so far, Mike might think Chu had trouble understanding some of his words, so later on, he increased his use of gestures even for very simple word such as “hear”. In the following conversation when they talked about Guilin, a tourist city in China, Mike gestured at the word “hear”.

Mike: “Guilin is beautiful, I hear”.

Chu: “You have been there?”

Mike: “No, I hear.”

(right hand pointing to his right ear)

Chu's English level is not very high. He had trouble expressing his ideas, which is evident from the above instances. The next example is taken from the later conversation between Mike and Chu when they talked about how difficult it is to get a student visa. Mike used the word “bureaucracy”, but his previous interaction with Chu made him doubtful whether Chu could understand this word, so unlike what he did previously (using gesture after seeing Chu's confused looks), Mike ventured to gesture right at the beginning without getting Chu's feedback:

Mike: “Bureaucracy, you know, papers and signatures. Uh, you know, put this paper here.”

(right hand acts as if writing, both hands hold in the position as if holding a paper, or a folder, then moving from one location to another and putting down)

The same pattern of speakers increasing their use of gestures in their later conversation also applies to a number of participants. However, the opposite trend was found between one pair who knew each other beforehand. The two interlocutors, the native English speaker Amy knew the Chinese speaker Qian when Qian just arrived here five years ago, but they have not talked to each other for a long time. At the beginning of their conversation, Amy employed gestures frequently, assuming that this will make it easier for Qian to understand her words. This is shown in the next example.

Amy: "Today I spent the morning over pillows like that ...

(right index finger draws a curve to indicate the top of the pillow)

... I have been doing a lot with the pounding of the sledgehammer.

(right arm moves as if pounding something)

Do you know what a sledgehammer is?

(hands forming a round shape to indicate the shape of a sledgehammer)

Very very heavy hammer.

(right hand moves back as if holding the handle, left hand keeps the round shape)

You know, standing up on a ladder and pounding really hard ..."

(right hand moves above the left hand then moves down as if pounding from a higher position).

It is worthy noticing that Amy asked Qian whether the word sledgehammer is familiar to him or not, but proceeded with gestures without getting Qian's feedback at all. Amy produced these long talks at the beginning of their conversation, during which she gestured frequently. The next two examples further illustrate this point.

Amy: "I was moving those from the front to the back.

(hands move from left to right)

They could weigh more than your books. And you know, your books, I could get them right up here...

(hands reach the height of her chest, apart from each other, as if holding a big box)

and put them not farther down.

(hands move to the left of her body and sank a little bit down as if putting the box down on a lower position)

but the clay was up on the ground,

(leaning down her body as if getting the bag from the ground)

and I had to get them up from the ground,

(body move back to the straight position and hands move up)

and carry them a long distance,

(moving her hands to the right of her body)

so it could have been the clay".

One minute later, Amy produced another series of gestures when she talked about different kinds of artistic works she liked.

Amy: "I like the work flat,

(hands moving apart from each other horizontally in front of her, as if depicting a plane)

I like the work big,
(hands moving further away from each other for a big size)
 I like the work small,
(hands moving back to form a small circle in front of her)
 I like the work three-dimensional,
(both hands swivel down, as if touching both sides of a 3D sculpture)
 I like the work, uh... a lot of different ways”.

The frequent use of gestures by Amy at the beginning of their conversation seems to be somewhat patronizing. However, she reduced the amount of gestures towards the end of the conversation. It might be that, during their conversation, she sensed the improvement of Qian’s English, and realized that there was no need for extra cues to help their communication. Although Amy and Mike took different patterns of their subsequent gestural usage towards the latter part of their conversation, their decision of increasing or decreasing their gestures were definitely influenced by their interaction with their Chinese interlocutors.

DISCUSSION

McCafferty (2002) claimed that “L2 students exposed to naturalistic contexts might benefit from becoming aware of the use of gesture as part of the overall process of making meaning in the L2” (p. 201). The participants’ performances in this study support this idea. In the follow-up interviews, some of the participants expressed their concern that their expression in English and/or their accent in speaking English might cause problems for native speakers to understand them. This concern provokes them to use gestures more often in English as a communicative strategy either consciously, when their utterance was not understood at first; or unconsciously, when they use gestures to accompany their speech without being asked to paraphrase or repeat. The following two examples show how Peng, a Chinese speaker, gestured in English. Peng’s case is worth mentioning as he tends not to gesture at all in Chinese. His gestures in English, although still not very much, were spread out throughout the entire conversation in this study.

Peng: “Usually what do you do with your dog? Do you (unclear word, sounds like leash) (unclear word) to the street?”

(right hand moving forward as if holding a leash while walking a dog)

Peng: “So I just graded the homework of the students”.

(right hand moving quickly as if writing on something)

In the first example, Peng’s unclear enunciation might create problems for his interlocutor to understand that sentence, so Peng gestured. However, in the second example, Peng’s enunciation was clear, and the sentence uttered was easily understood. There should be no need for Peng to turn to gestures as extra cues to make him understood. Peng himself could not analyze why that gesture was produced at that time. This kind of “unnecessary” use of gestures (not needed as extra cues to ensure that they are understood) was not unique in the current data. In the follow-up interviews,

when asked, all the Chinese participants were quick to point out the difference that native speakers of American English move their hands more often and are more animated in their facial expression while speaking. One possible explanation for this “unnecessary” gesture could be that these Chinese learners of English subconsciously tend to behave in the same way. In the interviews, although these Chinese participants clearly expressed the desire of maintaining their Chinese identities, the experience of studying and living in the target environment unavoidably filter through their acculturation process. The way they speak English, including these non-verbal channels, evidences that process. Kellerman and Van Hoof (2003) emphasized the need to “take the acquisition of appropriate gestural patterns into account” (p. 267) while talking about bilingualism. Together with other studies on gestures produced by L2 speakers, the current study hopes to shed light on the importance of investigating the use of gestures by language learners and how that relates to issues of acculturation and identity.

CONCLUSION

In the area of gestural studies, the communicative functions of gestures have not received as much attention as they deserve. Those studies that delve into the communicative functions of gestures have not yet addressed the possible influence of the ongoing interaction process on the subsequent usage of gestures. By not controlling the topics of conversation and not interfering with the interaction process between participants, this study goes beyond the investigation of gestural usage in narratives and the narrator-centered paradigm of data analysis, hoping to provide another side of the picture of how gestures are used under conversational settings. This study reveals that the use of gestures is not a fixed, but a dynamic process. The decision of when to use gestures and how gestures could be employed are influenced by the interlocutor’s background knowledge, and most importantly, by the ongoing interaction process in which the interlocutors are engaged.

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Jun Zhao is a 4th-year SLAT student, a major in Pedagogy and a minor in Use. Her research interests include the cognitive and communicative function of gestures used by L2 speakers.