

Chapter 1

INTRODUCTION

When we speak, our hands move to depict what we are talking about. For example, we might draw an outline of an object, enacting an action or set up objects in space. We also make such hand movements to talk metaphorically about abstract concepts. Sometimes, we mix such semantically rich hand movements with more simple hand movements which are stripped away of referential significance but have rhythmic quality to punctuate speech or to mark discourse boundaries. All of these are what McNeill (1985) call *gesture*. These so-called nonverbal behaviors (here the word ‘verbal’ is used in a similar sense as ‘vocal’ or ‘linguistic’) are distinct from other nonverbal behaviors in that they are related to speech in terms of their psychological origin and their use in interaction. Unlike other nonverbal behaviors such as foot tapping, head scratching, smiling and body posture, which generally index an individual’s emotional state and attitude towards other individuals, gestures are imbued with discursive meaning. It is in this sense that I use the word ‘gesture’ in this thesis.

Gesture is abundant in interaction. However, despite its pervasiveness in everyday communication, it rarely becomes part of a speaker’s conscious awareness. Gestures’ seeming redundancy with speech (we can communicate fairly well in writing and by talking over the phone) in conjunction with their inaccessibility to conscious awareness leads to a popular belief that gesture is not an essential part of communication. In connection to this, one may consider another popular belief that how

gestures are used is largely determined by culture (e.g., Italians gesture more than Asians). Quite contrary to this belief, however, researchers have accumulated evidence that gesture is indeed ‘linguistic’ or ‘verbal’ (as suggested by McNeill (1985) in the title of his seminal work on the relationship between gesture and speech). It is ‘verbal’ in the sense that it participates in the process of thinking within which speech and gestures are generated together.

The present thesis aims to explore the interpersonal aspect of gesture formation and thus the way speakers shape each other’s conceptualization of referents through their use of gestures. Investigation of such interpersonal effects necessarily involves inspection on both perception/recognition (decoding of information) and production (encoding of information) of gestures by the same listeners¹. In addressing the issue of how a perceived gesture feeds into the perceiver/listener’s subsequent gesture production, I will present a view in which the two processes comprise a single connected system.

Structure of the thesis

In Chapter 2, I will present a survey of previous studies on the functional role of gestures. It will be shown that even though gesture’s effectiveness in communicating meaning had been questioned by some studies, an increasing body of research provides empirical evidence for the view that gestures do indeed communicate meanings to listeners and thus the meanings encoded in gestures are decoded by listeners.

Chapter 3 prepares the ground for the studies presented in the following chapters by introducing the concepts of *schematization* and *abstraction* as being vital to the process of gesture production. I will list potential factors that have been proposed to provide input to gesture production and describe the ways in which the same referent

¹ In this thesis, the word ‘listener’ is used to refer to a speech participant who is listening to the other speech participant in the current turn. Therefore it should be distinguished from a listener as a fixed role in certain speech genres like lecture.

can be gestured differently. In the rest of the thesis, I will focus my analysis exclusively on one of these input factors, namely interpersonal influence on how a referent is conceptualized and gestured across speakers.

In Chapter 4, I will investigate interpersonal influence in gesture production based on video-recordings of joint cartoon narrations produced by dyads. Speakers' tendency to map referents' spatio-kinetic properties directly onto their gestures will be pitted against their tendency to coordinate gestures with those of their partner. To this end, I use two sets of stimulus clips which are identical to one another except for their left-right orientation (i.e., the two sets are mirror images of one another). By introducing a mismatch in the two speakers' mental representations of the same referents, I will examine what happens when a speaker's underlying image of the referent is contradicted by his or her partner's gestures.

In Chapter 5, I will continue to explore gesture coordination in dyad narrations by controlling speakers' mutual visibility. By using a screen that is placed between speakers during narrations, I will test whether or not speakers' mutual visibility increases the rate at which they produce similar gestures (an index of gesture coordination).

Speakers often co-construct speech by taking turns within a syntactic boundary. This enables a person who would otherwise be a passive listener to become actively engaged in the production of the talk by sharing the conversational floor. In Chapter 6, my analysis will extend such insight to gestures by showing how gestures and speech are organized together in co-constructed talk. The concept of *gestural mimicry*, defined as recurrence of the same gesture features (hand shape, movement, location, etc.) across speakers, will be introduced. Through detailed examination of the both linguistic and interactional context in which gestural mimicry appears, it will be shown that speech and gesture not only form a single psychological unit during the cognitive process of thinking, but they are also employed together to collaboratively construct referents' imagistic representations. Moreover, the psychological nature of gesture coordination will be discussed in relation to the coexpressivity between speech and gesture.

In Chapter 7, I will summarize findings in earlier chapters and discuss their theoretical implications for a model in which gesture production and gesture comprehension comprise a single connected system.