Gesture as a Situated Communicative Strategy at a Japanese Manufacturing Plant in the US

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Based on the videotaped interaction between Japanese and American workers at a Japanese manufacturing plant in the US, this paper examines their use of gesture as an indispensable communicative strategy. Unlike most intercultural interactions examined in previous studies, the informants of the two groups had limited knowledge of one another’s language. Nevertheless, they needed to communicate as accurately as possible in order to accomplish tasks. Two functions of gesture were found in the present data. Firstly, the interactants used iconic gesture together with some of the most commonly appearing vocabulary in their interactions: namely, gestures of ‘assembly’, ‘stamping’, ‘finish’, and the like. This type of gesture was far from redundant. Instead, it served to secure the currently discussed major topic as a reference point for the interactants. That is, by amplifying the major topic being discussed such as ‘assembly’ through combining speech and gesture, the interactants could make sure that they were talking something about assembly. Secondly, when the interactants were temporarily lost in their interaction, iconic gesture was used as a means to elicit clarification. In the example segment, a Japanese engineer repeated the ‘stamping’ gesture used by his American interlocutor. This repetition of gesture functioned to request clarification from the interlocutor. These findings present ways in which gestures were actively and creatively utilized as an important communicative strategy in the intercultural work setting.

Keywords: gesture, workplace communication, communicative strategies, non-verbal repetition, Communication between Japanese and Americans

1. Introduction

This study examines the use of gesture that co-occurs with speech and is an indispensable part of interaction. The data for analysis is drawn from interactions on a factory floor between Japanese technical support members and American floor workers in a Japanese manufacturing plant in the US. The current setting is unique since the two groups of people had limited knowledge of one another’s language yet they needed to communicate in order to accomplish tasks. By investigating the Japanese and American workers’ interactions, I hope to give new insights regarding the role of gesture in interaction, particularly in an intercultural setting.

Gesture which co-occurs with speech has been examined in monolingual settings by different researchers. Kendon (1993), for example, paid attention to what he called gesticulation, and its nature of supplementing speech. That is, gesticulation which occurs in a course of speech functions to convey what cannot be articulated or communicated in the verbal, speech part by the speaker (e.g. the intensity of the motion being described or a three dimensional moving trace). McNeill (1987) described the nature of iconic gesture as not completely standardized among mem-

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bers of a speech community yet exhibiting common movement features associated with certain meaning features. For example, in an experiment where the informants had to narrate what they just watched in a cartoon, they commonly used an iconic gesture when describing a scene where a cartoon character tried to ‘climb up’ or ‘go up’ a drainpipe. Although the gestures they used were not identical, they nonetheless had something in common; that is, the upward motion of a hand or an arm.

Kita (1993) further explained the characteristic of this type of gesture as the product of the “negotiation” between language and thought. What a speaker had in mind as an image (of what to express) partially developed into the form of language, and partially into the form of gesture. This type of gesture is speaker-oriented. Firstly, this voluntary gesture evidently occurs even when the speaker and the listener cannot see each other while talking. Secondly, there seems to be no evidence that the speaker made an effort in order to make the gesture clearer or easier to understand for the listener.

The question that arises regarding this iconic or voluntary gesture is, then: What is the purpose of this type of gesture? If it is speaker-oriented and does not necessarily present what is missing in speech (like Kendon’s case), what is its function in human interaction? Is it simply an outcome of part of the speaker’s mental image of the message s/he wanted to convey? Or is there something else, which is interactional in nature?

A somewhat similar case is discussed in Goodwin’s work (2000, forthcoming). He examines videotaped Latino girls’ playing hopscotch, and in there, one of the girls, Blue, points out that another girl, Yellow, just cheated by skipping one grid, number four, and going to grid number five. As Blue says “Quatro” (four) and “Quinto” (five) in her utterance, she also simultaneously uses hand gesture indicating four (standing palm with four open fingers) and five (open palm). Goodwin points out that if the only concern was the conveyance of the content, then Blue’s hand gesture would seem to be completely redundant. Instead, he observes that Blue’s gesture was used to 1) “secure the orientation of a hearer,” (p. 9) and 2) “enhance and amplify the ignignant force of the action” (p. 9). In sum, talk and gesture mutually elaborated each other in this case. In the context where Blue “challenged” Yellow by pointing out that she did not play the game fairly, Blue’s use of gesture as an amplifier makes sense.

The use of gesture observed in the present data is similar to Goodwin’s data described above in the sense that it had a purpose other than realization of the speaker’s mental process of a message. Furthermore, like Goodwin’s example, the gesture was not something redundant or irrelevant. At the same time, the gesture in the current data is different from Goodwin’s because of the limited linguistic resources the Japanese and American informants shared. In other words, in the context where the informants from the two groups could only partially rely on their linguistic resources, or speech, gesture was necessary to secure their shared topic.

The data below demonstrate how gesture was used as a complementary yet indispensable part of interaction.

2. Methods

The data for this study is drawn from fieldwork conducted at a Japanese auto-body manufacturing plant referred to as Japan Die Company (JDC) in a southern state of the US (see Sunaoshi, 1999 for more detailed discussion). While hired as a liaison, I was allowed to gather data through observation, interviews, and videotaping of interactions on the production floor. Both ethnographic and discourse data were gathered in order to incorporate the two for analysis. Of the workers in the plant, those in the Die and Maintenance area (D&M area) and in the Press area were chosen as the main informants of the
study. The informants were Japanese technical support members, who were in either a long term or a short term assignment, and American workers, who were hired locally.

3. Work Procedure at Japan Die Company

JDC manufactures dies (kanagata) in its headquarters in Japan and stamps car panels using the dies in its US plant. For one part (e.g. a right front door) there are the inner panel and the outer panel. For each panel (e.g. “right front door inner panel”), a sheet of flat steel must be stamped, usually in five steps. To stamp the panel five times, they need five sets of dies. Each set has an upper die and lower die which press the sheet between them. When a sheet of steel is finished after five rounds of stamping, it comes out as a stamped panel of, for example, a ‘right front door inner’. The panel usually has some defects and modification to the dies must be repeated until the panel’s quality is good enough for mass production. Finding out the root cause of a die defect by examining the resultant panel requires years of experience. This was the area JDC needed its skilled die makers from the Japanese headquarters i.e. “technical support members.”

When stamped panels reach a certain quality level (but not necessarily up to the mass production level), then the inner and outer panels (of a right front door, for example) are assembled in the Assembly area. Assembled parts (e.g. right front doors, hoods, left rear doors) are shipped regularly to the client (a major auto assembler) to be inspected. The client sets deadlines to receive a certain number of parts. JDC’s priority was to meet these deadlines and improve the panels’ quality each time. This explains why Ken and Dick were so eager to have die modification completed as soon as possible in Example 1) in the next section (because modified dies were necessary to stamp panels).

Die modification requires skill to adjust the defects which are sometimes as little as 0.1mm on the surface of a die. It usually takes approximately one year in order to complete this adjustment period before the auto assembler (i.e. JDC’s client) is ready for mass production of a new model of a certain car. In the D&M area, the technical support members’ responsibility was to modify dies and to teach American workers their skills. The Japanese members also spent considerable time communicating with the staff in the Press area, where the panels were being stamped. Therefore, unlike other areas such as the Assembly, where most workers were Americans, the D&M area and the Press area were where the most exciting, demanding, and complex projects occurred, and where the two sides constantly communicated with each other.

The Japanese die makers and American workers used a variety of linguistic, paralinguistic, and nonlinguistic communicative resources in order to effectively reach sufficient understanding in their interactions. The overall English competence level of the Japanese was low and the American workers had little previous experience of working with Japanese people or any non-native speakers whose English was poor; nonetheless, they managed to communicate with each other in a simplified register, into which both of them became socialized over time and which they felt comfortable using. Among several linguistic and nonlinguistic strategies workers from the two groups used, this paper focuses on the role of gesture.

4. Analysis and Discussion

I will discuss two major roles gesture played in the Japanese and American workers’ successful communication. The first role was to secure the conveyance of interactional contents, and the second role, which was closely related to the first one, was a means to elicit clarification and confirmation. To accomplish these roles, use of gesture played an important part in the situation where relying on linguistic means always had more risk
Example 1)

25I:  he said ++ cannot assemble ++ today↓
     <turns to D> <points to H>     <!--‘assembly’-->

26D: (can) we ship tomorrow?

(Ishige asks Hiki when he will finish fixing the die, and he says it will be Thursday.)**

36D: oh we need dies (xxx) to assemble?
     <!--‘assembly’-->

37I:  no?  uh=
     <looks at D, looks down, <looks back at D> <points to H>

38D:  =you said  die’s finished
     <points to I> <puts hand on die, ‘finished’>

    assembly only?
    <!--‘assembly’-->

** This part of the interaction occurred in Japanese without gesture. Ken and Dick stood and waited.

<Transcription convention>

A:  he said
     <points to H> ‘pointing to H’.
+  ++  +++
not:
(xxx): Inaudible parts of utterance
(can): Inaudible parts of utterance with the transcriber’s best guess
today ↓: Falling intonation
today?: Rising intonation
A:  aaa=  indicates where the channels are simultaneously allocated to
B:  bbb  speakers A and B
aa(yeah): Use of Japanese and its English gloss

than in a monolingual setting.

First of all, gesture was used in order to reinforce the interactants’ understanding of the content. Specifically, utterances about the actions/tasks commonly seen in the plant were often accompanied by gestures of those actions. For example, utterances such as “assembly” and “stamping” were accompanied by gestures (e.g. respectively: ‘bring two palms together in front of one’s chest a few times’, and ‘move an open palm (facing down) downwards a few times’). Interestingly, instead of complementing unusual or complicated actions that the American and Japanese workers had to (occasionally) discuss, this type of gesture was used together with some of the most frequently occurring words such as “assembly” in the Japanese and American workers’ interactions. Example 1) below shows how this kind of gesture was used.

In this segment the following interactants appear: Ishige (I), a Japanese technical support member, Hiki (H), another Japanese technical support member, Dick (D), the Press manager, and Ken (K), the Plant manager. Dick and Ken want to know when the particular set of dies will be finished with modifications (which have to be done by the Japanese members). This interaction turns out to be time-consuming and frustrating until sufficient understanding is reached.

In line 25, Ishige tells Dick that Hiki said he
would not be able to finish today. In saying so, his word “assemble” is accompanied by his ‘assemble’ gesture. After getting information that Hiki intends to finish fixing the die on Thursday, in line 36, Dick tells Ishige and Hiki that they need finished dies to stamp and assemble panels. Here, Dick’s utterance “assemble” is accompanied by his ‘assemble’ gesture. In line 37, we can even see Ishige’s confusion because the Japanese, at this point of interaction, have no idea why Dick and Ken are in a hurry and trying to get the dies finished earlier than scheduled. Dick, in line 38, tries to clarify again, since evidently he misunderstood and thought the dies were already finished and ready to be used for stamping and assembly. Here, he uses two gestures, one for “finished” (by horizontally moving both hands from in front of his chest to the sides of his body) and the other for “assembly.”

Here, a question arises reminiscent of Goodwin’s example (1999, forthcoming). That is, aren’t these iconic gestures redundant and unnecessary? Given that even the Japanese technical support members (whose English was worse than their other Japanese colleagues) knew crucial words such as “assembly,” “stamping,” “grinding,” and “finish,” what then is the need for an accompanying gesture?

To understand the function of these gestures related to most frequently discussed topics, the linguistic situation in JDC must be described further. As mentioned above, the Japanese members’ knowledge of English was extremely limited overall, to the extent that only a couple of them could utter a complete sentence and most of them confessed that even small talk or buying a hamburger at a local fastfood restaurant was a struggle for them. Considering their overall level of English, however, they were amazingly capable of “getting things done” on the production floor by often discussing, or rather, communicating highly technical issues. Their American interactants were either lower than themselves in the corporate hierarchy or in need of the Japanese technical expertise when working together. Meanwhile, all of them were under the pressures of deadlines and satisfying their clients’ needs. These factors, both linguistic limitation and challenging work environment, put the Japanese and American workers in the position where they could not afford to make mistakes, or leave miscommunication or non-understanding unresolved. At the same time, because of their linguistic limitation, where the Japanese spoke “broken English” at best and the Americans had almost no knowledge of Japanese, both parties were constantly in a vulnerable position for transparent exchange of information.

As part of their strategy for ‘successful’ communication, then, what the workers did was to secure the main topic being discussed by simultaneously using speech and gesture, thereby making sure that neither side would misunderstand. Most issues discussed in the present data were in fact something about or related to major activities in the plant: assembly, stamping, modifying dies, finishing, or fixing dies. The gestures, though not completely standardized, conveyed the meaning of these major activities to amplify the importance of the main topic in interaction. Thus both sides could be sure where they stood in the large picture of interaction. It was as if saying: “we have understood this far. We have a common ground. What we are talking about right now is something to do with ‘assembly’ (stamping, etc.).”

Goodwin’s informant Blue had a good reason to elaborate her expression using both speech and gesture (i.e. showing “four” and “five” using her hand); that is, she used both speech and gesture to indicate her indignation toward her playmate Yellow, who was playing in close proximity to her. Similarly yet differently, the Japanese and American workers had a good reason to elaborate their expressions with their words and gesture. They needed to guarantee that both sides were following the topic being discussed.

These terms which were frequently accompa-
Example 2)

22M: this job + [this job, hard to get running?]<'rolling' w/hand>

23T: <puts his ear closer to M> ('duba')?

24M: up'n stamping?
<machine's stamping' gesture>

25T: nn↓
<looks M's gesture>

26M: up'n running?
<continues 'stamping' gesture>

27T: aa(yeah)↓
<continues mocking M's gesture>

28M: very hard↓ yeah↓
<rolls right hand>

29T: very hard

nied by gesture were the most fundamental vocabulary in their everyday interactions on the production floor, but they also indicated major categories of tasks being completed there. Therefore, securing the correct topic was not merely to emphasize the most fundamental vocabulary in interaction. Rather, by reinforcing the utterance using gesture, this served both parties as a reference point and helped to focus on the common topic of interest.

Secondly, when the interactants from the two groups found that they could not gain sufficient information from linguistic resources, then, the accompanying gesture could be repeated and be imitated by the interlocutor (often Japanese) to request clarification. Use of verbal repetition has been known to play an important role for non-native speakers’ requesting clarification and confirmation (Broader, 1992), but the similar function of gesture has not gained much attention. Example 2) above shows a Japanese interactant’s repetition of gesture, which was first used by his American interlocutor in the previous turn. By doing so, the Japanese engineer Tsuchida signaled his non-understanding and uncertainty.

Because the Japanese technical support members’ English was extremely limited overall, linguistic resources in English were unevenly distributed between the workers from the two groups. In the highly task-oriented setting where accurate exchange of information was crucial for production, the workers shared the necessity to go “bald-on-record” (Brown & Levinson, 1987) rather than being socially considerate in their interactions. Therefore, in the videotaped interactions, there were numerous instances where the (mainly Japanese) workers requested clarification (when the level of understanding of the content by the interlocutor was relatively low) and confirmation (when the level of understanding of the content by the interlocutor was relatively high) from their interlocutors. Use of gesture was one of several ways to do so.

Max and Tsuchida are the interactants in Example 2). Max (M) is an American worker in the Press area, and Tsuchida (T) is a Japanese engineer from the vendor of the Press machines. They are talking by the Press machines. Max comments on how difficult it has been to operate the Press machines smoothly, but Tsuchida has a difficult time comprehending what Max is trying to say.

In line 24 below, Max says “Up’n stamping” and simultaneously makes the gesture of ‘stamping’ by moving his opened right palm (which is facing down) from a higher position to a lower
position a few times. This looks like an imitation of the movement of the stamping (Press) machines. In response to Max’s utterance, which was simpler than his original utterance (line 22), Tsuchida imitates his gesture of ‘stamping’ in line 25, together with a “still-don’t-get-it” expression. Tsuchida’s puzzled look in combination with his ‘stamping’ gesture leads to Max’s further attempt to clarify with his speech and gesture in line 26, which is followed by another non-verbal request for clarification from Tsuchida in line 27; there, he still continues imitating Max’s gesture. Finally, Max comes up with a simple non-idiomatic expression “very hard” in line 28, and this is understood by Tsuchida at last in line 29. He not only correctly repeats the phrase “very hard,” but also his ‘lost’ expression disappears, which signals his comprehension.

As seen, Tsuchida imitated Max’s gesture to elicit clarification. Max and Tsuchida’s continuous use of gesture: ‘stamping’ also secured a reference point for the interlocutors throughout this interaction (the first function described above). That is, even while they had not reached sufficient understanding, “stamping” remained the main topic to which they could both hold on. It is as if Tsuchida was saying “Well, I know you are talking something about stamping, but I don’t understand any more than that. Could you continue and clarify for me?”

5. Conclusion

The present study examined the function of gesture which accompanied speech used by Japanese and American workers on the factory floor. My main findings are as follows: 1) gestures co-occurred with the most fundamental vocabulary and served as a reference point of the main topic being discussed, and 2) these gestures were used in repetition to elicit and provide clarification.

As compared earlier, McNeill (1987) and Kita (1993), Goodwin (2000, forthcoming), and the present case all focused on referential overlap or redundancy between co-temporal speech and gesture. This seems puzzling from the point of view of efficiency in using communicative resources. The three approaches have different accounts for why this overlap happens. According to McNeill and Kita, it is the result of the underlying ‘negotiation’ of image and speech in the speaker’s mind. Goodwin suggested that certain information is particularly socio-interactionally significant in a given context, and gesture underlines the specific referential information with socio-interactional ‘colors’ (indignation, interactional orientation). This socio-interactional coloring of information presupposes full mutual understanding of the referential content of speech.

In the present case discussed in this paper, however, this mutual understanding could not be taken for granted. Therefore, gestures were marshaled in order to establish and secure mutual understanding at the referential level. Specifically, the categories that mattered in the interlocutors’ work were selected to be the information to be iconically represented. That is, gestures of ‘assembly’, ‘stamping’, ‘finish’ and so forth were not redundant; quite contrary, they were an invaluable part of the workers’ communicative strategies, and what kept them on track of the topic they were discussing. Related to this major function was the workers’ use of gesture in repetition to elicit clarification. That is, by repeating gesture, which iconically represents a major category of work (e.g. stamping), the interactants could attempt to clarify details of the interactional content.

As shown, the use of gesture examined here furthers our understanding of non-verbal means of communication. Moreover, such active utilization of non-verbal strategies has not gained sufficient attention in the field of intercultural communication. Even though the American and Japanese interactants suffered from insufficient linguistic resources, they were capable of actively and creatively making the most of the communicative strategies available to them.
The iconic gestures for the work categories were not standardized at JDC. However, three questions remain regarding the consistency of the use of these gestures. Firstly, how similar or different were the gestures to indicate a certain category (e.g. ‘assembly’) across workers? Secondly, how consistent were these gestures within one worker’s repertoire? And finally, was there a process of gestural socialization for a new comer in the D&M and Press areas? If so, how did it take place? Further examination of the data is necessary in order to respond to these questions. Analyses of gestures in other intercultural settings would also enhance our understanding of functions of gesture.

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References


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