

## **Cultural Communication Styles and Accuracy in Cross-Cultural Perception: A British and Japanese Study**

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### **Abstract**

This study examines the effects of cultural communication styles on cross-cultural perceptual accuracy. In Experiment 1, the communication accuracy of the British and Japanese was examined within-culturally using interaction scenes of respective nationalities in five interpersonal contexts: age, competition, intimacy, kinship and status. The results showed that the British were significantly more accurate on intimacy scenes than the Japanese, while the Japanese were significantly better on age, competition, and status scenes than the British. In Experiment 2 of cross-cultural testing, when the British and Japanese viewed both British and Japanese scenes, the British were more accurate in the perception of kinship and status scenes than the Japanese, while the Japanese could perceive intimacy scenes more accurately than the British. The significance of the results is discussed in light of their expressivity, perceptual sensitivity, and social rules.

### **Introduction**

One of the factors attributing to intercultural miscommunication is differences in people's perceptual styles (Ting-Toomey, 1999). Ting-Toomey suggested that these differences arise through cultural socialization and stated, "Intergroup perception accentuates differences between identity groups." She emphasized the importance of "mindfulness" in intercultural encounters by referring to Langer (1989, 1997), who explained that mindfulness encourages people to tune in to their habitual mental scripts and preconceived expectations. In this study, examinations are made on how nonverbal perceptual styles which are formed in British and Japanese cultural environments affect cross-cultural perception.

Universal and culture-specific nature of nonverbal communication, particularly of emotion expressions, has been discussed by a number of researchers (e.g., Ekman & Friesen, 1969, 1971; Elfenbein & Ambady, 2002a, 2002b, 2003a, 2003b; Matsumoto, 1989, 1991, 1992, 1996; Matsumoto, Kasri, & Kookan, 1999; Rosenthal, Hall, DiMateo, Rogers & Archer, 1979). Ekman and Friesen (1975) identified seven universal emotion expressions - anger, disgust, fear, happiness, sadness, surprise, and contempt, concluding that basic facial expressions for emotions are innate and, therefore, understood across different cultures. They further stated that cultural specificity in emotional expression is observed due to the "display rules" of cultures, which control the amount of expression displayed, or mark one emotion by the expression for another. Similarly, Buck (1984) coined the term "decoding rules" in order to describe the cultural specificity in the decoding of emotional expressions.

Matsumoto (1992) compared the Americans and Japanese in emotion recognition accuracy using the Japanese and Caucasian Facial Expressions of Emotion (JACFEE; Matsumoto & Ekman, 1988), which was developed in the US. He found higher recognition accuracy of negative expressions (anger, disgust, fear and sadness) for the

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Americans than the Japanese, regardless of the race or gender of the encoder. He suggested that as the expression of negative emotions can be detrimental to social relationships and interpersonal harmony, Japanese culture suppresses their expression through cultural display rules and it might also suppress their perception of these emotions. His suggestions were, however, only partly supported by a previous study conducted by Shimoda, Argyle and Ricci Bitti (1978). Although they reported that Japanese negative emotion expressions were difficult to interpret for the English, Italians and even for the Japanese, the Japanese could interpret English and Italian negative emotion expressions as well as the English and Italians could.

Elfenbein and Ambady (2002a), in a meta-analysis of previous emotion studies, reported in-group advantage in the perception of emotion expressions. This was replicated across a range of experimental methods and nonverbal channels for both positive and negative basic emotions. They explained that although the communication of emotion may be a universal language, people can more accurately recognise emotion expressions of members of their own cultural groups than those of different groups. Their findings are perhaps not very surprising considering the suggestion made by Ting-Toomey (1999) on the socialisation of perception and its effect on cross-cultural perception. Elfenbein and Ambady attributed this in-group advantage to “nonverbal accents” (subtle differences in expressive behaviour across cultures), which seem to relate to display rules of cultures; they emphasised incremental effect of cultural learning. In support of their claim, Elfenbein and Ambady (2003a) found that cultural exposure/familiarity leads to increase in cross-cultural perceptual accuracy, and therefore decrease in in-group advantage. They reported that among Chinese (located in the US and China), Chinese Americans and non-Asian Americans, accuracy and speed in judging American and Chinese facial expressions increased with greater exposure to the group posing the expressions. The effects of cultural learning in perceptual accuracy were also observed across different generations of Chinese Americans. Similarly, Tibetans (residing in China) and Africans (residing in the US) were found to be faster and more accurate in judging emotions expressed by host nationals in comparison with those by non-host nationals. Based on these findings, Elfenbein, Mandal, Ambady, Harizuka and Kumar (2002) stressed their “relational theories” which take into consideration the interactions between the cultures of the emotional expressor and perceiver, and emphasised the importance of using the stimuli originating in particular cultures.

As summarised, cross-cultural researchers seem to agree that cultural specificity in perception arises due to cultural learning. However, the mechanisms of learning are yet to be clarified empirically. Halberstadt (1991) examined children’s sensitivity to nonverbal communication cues from the perspective of socialisation and argued for the influence of family expressiveness. Studying children of preschool to early adulthood, she found that children from high-expressive families tended to be expressive themselves and at the same time better decoders of nonverbal cues than children from low-expressive families. She found, however, that by early adulthood, those from low-expressive families were better decoders than those from high-expressive families. According to her interpretation of the findings, children from low-expressive families have to work harder than those from high-expressive families to decode emotion expressions of their family members. This trains them to be more sensitive to subtle nonverbal cues than those children who are always supplied with clear cues. Her findings suggested a negative relationship between

family expressiveness and one's perceptual sensitivity. The present study examines whether a similar mechanism is operative at a cultural level.

In terms of cultural profiles, Japan has been described as a collectivist (Hofstede, 1980, 1984; Triandis, 1990) and high context (Hall, 1976, 1983) culture; in comparison to the UK, which has been described as an individualistic and low context culture. Collectivist cultures favour group goals over individual goals while individualistic cultures prefer the latter. Triandis, Bontempo, Villareal, Asai and Lucca (1988) stated that people in collectivist cultures distinguish clearly between in-groups and out-groups, and cooperate within in-groups more than do people in individualistic cultures. People in individualistic cultures, on the other hand, are described as being good at meeting outsiders, forming new groups and getting along with new people. Triandis *et al.* also stated that in collectivist cultures vertical relationships (e.g., parent-child) are regarded as most important and unequal power is more common than in individualistic cultures where horizontal relationships (e.g., spouse-spouse, friend-friend) and equality are more emphasised.

A number of studies have indeed reported high expressivity of Japanese people in terms of hierarchical relationships (e.g. Kowner & Wiseman, 2003; Morsbach, 1988). In emotion studies, Matsumoto (1991) found that people from individualistic cultures tend to communicate a wider variety of emotional behaviours than people from collectivist cultures who may suppress emotional displays that are contrary to the mood of the group. Hofstede (1984) explained that as relationships are not determined socially in terms of group membership as in collectivist cultures, people from individualistic cultures must express intimacy cues more to negotiate relationships at individual levels. Similarly, Andersen (1988) explained that people from individualistic cultures are more nonverbally affiliative. Comparing communication styles of British and Japanese people, Brosnahan (1998) observed more intimacy cues among British in public than among Japanese. From the above studies the differences in expressive styles between British and Japanese can be summarised as: (1) Japanese would emphasis in-group harmony more than British, and would therefore be more likely to suppress emotional displays that can disrupt the mood of the group (2) Japanese would express status difference cues more overtly than British (3) British would express intimacy cues more overtly than Japanese

In previous cross-cultural perceptual studies, recognition accuracy was mainly examined using posed emotion expressions which were presented without context. In order to assess difficulties in perception in actual intercultural interactions, research has to be carried out with a more naturalistic method, using multiple spontaneous communication cues in various social contexts. This study, using multiple nonverbal cues in context, examines perceptual accuracy of British and Japanese people both within and between cultures in order to investigate how their habitual perceptual styles relate to their cultural expressiveness, and how the styles affect their cross-cultural perception.

In this study naturalistic interaction scenes were filmed based on the Interpersonal Perception Task (IPT; Costanzo & Archer, 1989), which was constructed in the US for the purpose of studying processes of interpersonal perception. Scenes were filmed in five types of actual interpersonal contexts (four of which were based on the IPT contexts): age difference, competition (winner-loser), intimacy (couple, friends and acquaintances), kinship, occupational status difference. Deception scenes in the IPT were replaced by age scenes, as the deception scenes filmed in the IPT were lacking in spontaneity. Instead, relative age was used as one of the interpersonal contexts which might affect interactants'

behaviour toward each other.

In Experiment 1, British and Japanese interaction scenes were filmed in the UK and Japan. Parts of the scenes were shown to respective nationalities in order to compare their within-cultural communication accuracy in five interpersonal contexts. The relationships between their perceptual accuracy and expressive styles in each context are discussed. In Experiment 2, selected British and Japanese scenes from those used in Experiment 1 were compiled into the British and Japanese Social Perception Task (BJSPT). The task was then shown to both nationalities to examine their relative perceptual accuracy with reference to their within-cultural perceptual accuracy.

Based on the previous studies reported above, it was hypothesised, firstly, in within-cultural communication, age and status differences would be more clearly communicated among Japanese than British. On the other hand, British would communicate intimacy relationships more clearly than Japanese. Secondly, in examination of relative perceptual accuracy in cross-cultural testing, Japanese would show higher sensitivity to intimacy cues than British while British would be more sensitive to age and status difference cues than Japanese.

#### Experiment 1

Within-cultural communication accuracy of British and Japanese people was examined. Firstly, naturalistic interaction scenes in five interpersonal contexts - age, competition, intimacy, kinship and status were filmed in the UK and Japan. Secondly, these scenes were shown to respective nationalities in order to compare their perceptual accuracy in each context.

#### *Method*

*Film materials.* Filming of British scenes was carried out mainly in Yorkshire in the UK; that of Japanese scenes was mainly in Hyogo Prefecture in Japan. Participants in the filming were recruited either through personal connections with the researcher or by contacting various organisations and groups, such as schools, companies and sports clubs. Before the filming it was explained that they would be filmed for a cross-cultural study intended to compare British and Japanese in their ways of communication. Participants were filmed while they were interacting naturally in their own environments; no scripts were provided. Filming sessions took place in various locations both indoors and outdoors, such as in the living room of a house, in a seminar room at a university, in a training room or outside court at a sports club, in an office at a company, in a café and in a park. During the filming the video camera was visible to the participants (normally installed on a tripod). The filming sessions lasted between 7 and 26 minutes.

The five interaction scene types filmed were: (1) age scenes which involve interactions between people with age differences or with no age differences (2) competition scenes which contain interactions between the winner and the loser of a game (3) intimacy scenes which are based on interactions between opposite-sex couples, between same/opposite-sex friends and between new acquaintances (4) kinship scenes which involve interactions between family members such as between a parent(s) and a child(ren) or between a brother and a sister (5) status scenes which contain interactions between those who have different/same occupational status in the same work-place. Six interaction scenes for each of the five contexts were filmed for both British and Japanese. Scene settings for each context were made as equivalent as possible between the two nationalities.

In the editing process, three different clips from each of 30 British and 30 Japanese scenes were selected to produce three versions of British and Japanese tasks separately, each comprising 30 clips of respective nationals. The length of clips selected varied between 12 to 66 seconds. Selection of the clips was based on the following two criteria: (1) the clips did not include any mention of the relationship of the interactants (2) the clips contained interactions of all the participants in the video. The first five minutes of each film were regarded as “warming-up” period for the participants to get used to the video-camera and therefore, no parts were selected from this period except for competition scenes. Competition scenes ended up shorter than other scenes as it was often difficult for the interactants to talk about the result of a game for more than 7 or 8 minutes; winners and losers also reacted most naturally to the result of the game at the beginning of their interaction. As such, the first 5 minutes of each of these scenes were included in the editing process.

Based on the actual relationships of the interactants, a multiple-choice question for each scene was created. For example, one of the competition scenes had a question “Who won the tennis game?” and the three possible answers were: (a) the man on the left (b) the man on the right (c) the two men played to a draw. The question was then edited into the film, so that it appears for 5 seconds before each scene as a caption (in English for the British tasks and in Japanese for the Japanese tasks); a question and three possible answers for each scene were also written in answer sheets. The duration of all three versions of the British and Japanese tasks was 22 minutes. Three versions of British and Japanese tasks on the u-matic master tapes were then copied onto VHS tapes through a low-pass audio filter which was adjusted at the corner frequency of 410 Hz. This filtering allowed frequencies below 410 Hz to pass through and copied onto the tapes while removing the higher frequencies of the audio information. The effect of this is to make the voices of interactants sound as if heard through a closed door; the verbal content becomes unintelligible, although variations in pitch, rate and loudness are still audible. This technique of low-pass filtering has been used in a number of nonverbal communication studies (e.g., Magil-Evans *et al.*, 1995; Rosenthal *et al.*, 1979), and it has been found that the lower frequencies of the voice spectrum can sufficiently communicate the affective state of a speaker (Scherer, Koivumaki & Rosenthal, 1972).

*Decoders.* British participants were recruited at the University of York, UK. In total, 30 male (mean age 23.1 years, SD 8.0) and 40 female (mean age 19.4 years, SD 2.3) undergraduates and postgraduates came to the video-viewing sessions in groups or individually in response to e-mail advertisements for participants. Psychology students were given a course credit and others were paid a participation fee of £2.

Half of the Japanese participants were recruited in the UK when they came to study English in summer English courses held in York, Leeds and Leeds Metropolitan universities. They (non-Psychology undergraduates and postgraduates) viewed the video in groups. They received a participation fee of £2 each. Another half of the participants were recruited in two universities in Japan, Konan University in Kobe and Osaka Kyoiku University in Osaka. Video-viewing was conducted as part of their undergraduate Psychology classes. They received no participation fees. In total, 37 males (mean age 22.3 years, SD 5.7) and 49 females (mean age 22.1 years, SD 5.5) participated.

*Procedure.* British participants were shown one of three British tasks and Japanese participants were shown one of three Japanese tasks. They were told that this testing was

for the development of a cross-cultural nonverbal perception task. They were asked to view 30 scenes on the video and to answer multiple-choice questions about the relationships of the people in the video. They were encouraged to answer all the questions even if they were not sure of the answers. Oral instructions for British participants were given in English, and a questionnaire which contained a question and three possible answers for each of 30 scenes was also in English. For the Japanese, oral instructions and a questionnaire were provided in Japanese. Translation contents were checked using a back-translation method (Brislin, Lonner & Thorndike, 1983) with help from another Japanese researcher. After viewing the video, participants were asked to write down their age and gender on the questionnaire sheet. The participants were not given feedback as to their performance; however, when they asked for the answer to particular scenes, they were provided with it.

## Results

Mean accuracy rates for five scene types of the British and Japanese scenes across three versions are summarised in Table 1.

**Table 1:** Comparisons of Within-cultural Perceptual Accuracy Rate Between British and Japanese Participants for Five Scene Types

Scene types	Mean accuracy rate (%)					
	British			Japanese		
	Male	female	Total	male	female	Total
Age	26.2	26.2	26.2	32.8	38.8	35.5
Competition	30.5	43.0	36.8	44.7	44.2	44.5
Intimacy	67.8	61.7	64.8	37.3	40.2	38.7
Kinship	47.2	43.8	45.5	49.2	53.7	51.4
Status	38.8	37.5	38.1	50.0	49.7	49.9
Total	42.1	42.4	42.2	42.8	45.3	44.0

In order to examine the differences, a 2 (nationality) x 2 (gender) x 5 (scene type) MANOVA was carried out. The analysis revealed a significant main effect of nationality ( $F(5,148) = 18.52, p < .01$ ) and a nationality x gender interaction ( $F(5,148) = p < .05$ ). Follow-up ANOVAs showed Japanese tasks gained significantly higher accuracy rates for age ( $F(1,152) = 8.97, p < .01$ ), competition ( $F(1,152) = 6.65, p < .05$ ) and status scenes ( $F(1,152) = 16.56, p < .01$ ) than the British tasks. On the other hand, the British tasks had significantly higher accuracy for intimacy scenes ( $F(1,152) = 79.74, p < .01$ ) than the Japanese tasks. A significant nationality x sex interaction was observed in competition scenes ( $F(1,152) = 4.58, p < .05$ ). Although the Japanese males were found to be nonsignificantly more accurate than the Japanese females in the interpretation of competition scenes, the British females were significantly more accurate than the British males on the same scene type ( $F(1,69) = 9.72, p < .01$ ).

## Discussion

The results support the first hypothesis that the Japanese would communicate status and age differences more accurately among themselves than the British. On the other hand, the British communicated intimacy cues more clearly within-culturally than the Japanese. Their overall accuracy across five scene types was similar between the two nationalities. Thus significant accuracy differences observed according to the five contexts showed the

different emphases these two national cultures place in their own communication. This was in line with the description of Japanese culture as a collectivist and hierarchical society and British culture as an individualistic culture (Hall, 1976, 1983; Hofstade, 1980, 1984; Triandis, 1990). Japanese have been reported to be expressive of status difference cues (e.g. Kowner & Wiseman, 2003; Morsbach, 1988) while British have been observed to be more expressive in terms of intimacy cues than Japanese (Brosnahan, 1988). Thus, the present finding seems to suggest that the context-specific differences observed in the communication accuracy of the British and Japanese might be attributed to their levels of nonverbal expressivity. At this stage, it is not clear how much their perceptual sensitivity affected these cross-cultural differences. Relative perceptual sensitivity is measured in the next stage of this study.

In the competition context, the Japanese were found to be more accurate in judging winner-loser behaviour than the British. This might reflect the more competitive nature of Japanese society in comparison with British society. Unfortunately there are no studies which examined relative competitiveness of British and Japanese people. Comparing the Americans and Japanese, Stephan, Stephan, Saito and Barnett (1998) reported the Japanese were found to be higher on the self-reliance/competition subscale of the individualism-collectivism measure than the Americans. This is contrary to the original categorisation of Japanese culture as collectivist which emphasises group harmony and of American culture as individualistic which endorses competition and individual achievement. The present study result might be related to this changing aspect of Japanese culture. In competition scenes, accurate understanding of emotions (such as pride, joy or disappointment of players about the result of a game) is more important than in other scene types in which an interpretation of social relationships is required. As has been reported (e.g., Ekman & Friesen, 1969, 1971; Matsumoto, 1989, 1991, 1992, 1996), emotion expressions tend to be controlled by cultural display rules in social contexts. With the video-clips used, the Japanese might have succeeded more in reading the significance of their emotion expressions including their display rule of masking inappropriate emotions in context (Matsumoto, 1996).

While there were no significant differences between the Japanese males and females in their accuracy on competition scenes, the British females were significantly more accurate than the British males. This might be a sign of females' higher competitiveness than males in British society. However, considering a relatively small number of decoders included in this study, further studies would have to be carried out to examine this gender difference further.

## **Experiment 2**

Relative perceptual accuracy was compared between British and Japanese decoders. Selected scenes from the previous within-cultural testing were compiled into the British and Japanese Social Perception Task (BJSPT). The task was then viewed by both British and Japanese decoders; their perceptual accuracy was compared according to the contexts.

## **Method**

*Video materials.* Scene selection criteria for the BJSPT were: (1) accuracy rate (the proportion of viewers getting the answer correct for each clip) should be significantly above-chance but below-perfect, so that the clips can reliably discriminate perceptual sensitivity (2) viewers' accuracy for the clips (correct/incorrect) should correlate significantly with their scene-type total score, so that the scenes become homogeneous

within the scene-type (3) scene settings and accuracy rates of British and Japanese scenes are equivalent for each scene-type. 8 British and 8 Japanese clips (2 British and 2 Japanese clips for each of the four scene-types - competition, intimacy, kinship and status – were finally selected. As only a few age scenes satisfied the criteria, age scenes were excluded from the task. Selected 16 clips were randomly edited into the BJSPT with English captions for British viewers and with Japanese captions for Japanese viewers. Description of each of the BJSPT scenes is shown in Appendix A.

*Decoders.* The British participants consisted of 91 Psychology undergraduate students - 15 males (mean age 19.4 years, SD 0.63) and 76 females (mean age 19.5 years, SD 1.53), who took part in the testing at the University of York, UK. Among them, 67 were tested during a Social Psychology practical class and the remaining 24 were tested outside of class in small groups, which entitled them to course credits.

The Japanese participants consisted of 102 Psychology undergraduate students - 36 males (mean age 20.8 years, SD 1.10) and 66 females (mean age 20.4 years, SD 0.75), who took part in the testing either at Osaka University or Kansai University in Japan. They were tested during a Social Psychology lecture at their respective universities. No participation fees were offered to them.

*Procedure.* British and Japanese participants viewed the BJSPT on a large screen which was installed at the front of the lecture theatre. Captions in the scenes, written instructions, questions and multiple-choice answers in the answer sheets and oral explanations for the British participants were all provided in English (the English questionnaire in Appendix B); those for the Japanese participants were all provided in Japanese (the Japanese questionnaire in Appendix C). It was explained that their data would be used for cross-cultural comparisons of British and Japanese perceptual styles. They were asked to view eight British and eight Japanese scenes, which appear randomly on the video, and answer multiple-choice questions about the relationships of the people in the video. They were encouraged to answer to all the questions even if they were not sure of the answers. After viewing the scenes, the participants did not receive any feedback as to their performance.

As a follow-up study, 30 British participants (7 males and 23 females) and 57 Japanese participants (21 males and 36 females) who took part in the above BJSPT testing viewed the task for a second time. While viewing the task again, they were asked to write the reasons for their choice of answers (to describe particular cues they used for interpretation and how they interpreted them). The results are also described in the following section.

## Results

Their mean accuracy levels for the British and Japanese four scene types were calculated. The differences between the British and Japanese were tested with a 2 (nationality) x 2 (gender) x 8 (scene types - 4 British and 4 Japanese scene types) MANOVA. A significant main effect of nationality was observed ( $F(8, 182) = 6.47, p < .01$ ). However, there was no significant effect of gender and, therefore the results for males and females were collapsed and reported together in Table 2. The results of ANOVAs for the comparison of each of British and Japanese four scene types are also reported in the table.

**Table 2** Comparisons of BJSPT Accuracy Rate Between British and Japanese Participants for Four Scene Types

Scene types	Mean accuracy rate (%)		<i>F</i>	<i>P</i>
	British	Japanese		
British scenes				
Competition	66.5	49.5	5.18	<.05
Intimacy	54.9	56.4	0.56	<i>Ns</i>
Kinship	51.7	29.9	12.95	<.01
Status	65.4	50.0	6.42	<.05
British scene total	59.6	46.4	20.04	<.01
Japanese scenes				
Competition	46.2	66.7	11.02	<.01
Intimacy	50.6	70.1	11.55	<.01
Kinship	48.9	52.5	0.45	<i>Ns</i>
Status	66.5	57.4	1.53	<i>Ns</i>
Japanese scene total	53.0	61.6	7.17	<.01
Grand total	56.3	54.0	1.68	<i>Ns</i>

As can be observed from the above table, the British and Japanese participants' overall BJSPT accuracy turned out to be similar. However, as one might expect, the British participants performed significantly better than the Japanese participants in all types of British scenes except in British intimacy scenes. The Japanese participants, on the other hand, performed significantly better than their British counterparts in Japanese scenes as a whole and in Japanese competition and intimacy scenes.

When the British and Japanese scene results were combined, the British participants' accuracy was found to be significantly higher than that of the Japanese participants in kinship scenes ( $F(1,189) = 6.60, p < .05$ ) and in status scenes ( $F(1,189) = 8.50, p < .01$ ). On the other hand, the Japanese participants' accuracy was significantly higher than that of the British participants in intimacy scenes ( $F(1,189) = 6.11, p < .05$ ).

When comparisons were made between the British and Japanese scene performance within each nationality, it was found, not surprisingly, that both the British and Japanese participants performed significantly better in their own nationality scenes overall ( $t(90) = -2.87, p < .01$  and  $t(101) = 6.04, p < .01$  respectively). In terms of four scene-types, while the Japanese participants perceived Japanese scenes significantly more accurately than British scenes in competition ( $t = 3.54, p < .01$ ), intimacy ( $t = 3.15, p < .01$ ) and kinship scene types ( $t = 5.14, p < .01$ ), the British participants perceived British scenes significantly more accurately than Japanese scenes in competition scenes ( $t = -4.53, p < .01$ ).

Nonverbal cues used often for the competition scenes by the British and Japanese participants were gestures and body movement cues (mean percentage between the two nationalities 34.6%). This was followed by posture (27.1%) and facial expressions (18.4%). Particular cues which often misled the British and Japanese participants were British and Japanese losers' constant body movements which were often mistaken as showing confidence. Another misleading cue was Japanese losers' smiles and laughter, which were often interpreted as showing confidence and happiness.

In intimacy scenes, proximity (44.4%), posture (22.7%) and gaze (17.9%) were frequently used. Nonverbal cues which confused particularly British participants were Japanese couple's larger proximity and shorter mutual gaze in comparison with British couples. On the other hand, the cues which often confused Japanese participants were British opposite-sex friends' long mutual gaze, by which they interpreted the friends as a couple.

In kinship scenes, the most often used cues by the British and Japanese were gaze (36.3%), proximity (25.3%) and posture (20.5%). The Japanese participants also used appearance cues at a similar frequency as posture cues. Appearance cues such as assumed age and facial similarity between interactants, when they were utilised on their own without consideration to the information from other cues, often confused the participants. Generally, more cross-cultural similarities were observed in the use and interpretation of nonverbal cues in this scene type than in other scene types.

In status context, gestures and body movements were most often used (41.6%), followed by posture (34.0%) and gaze (22.1%). While Japanese subordinates' avoidance of gaze, tense posture and frequent nodding were often interpreted accurately by the British and Japanese participants, British subordinates' direct gaze at their boss was misleading particularly for the Japanese participants.

### **Discussion**

British and Japanese participants' mean overall scene accuracy was 56.3% and 54.0% respectively, indicating similar levels of nonverbal perceptual accuracy. Both the British and Japanese participants performed significantly better on their own nationality scenes than on cross-cultural scenes. Overall accuracy of British scenes was significantly higher for the British than the Japanese while that of Japanese scenes was significantly higher for the Japanese. This result supports Elfenbein and Ambady's (2002a, 2002b, 2003a, 2003b) in-group advantage theory in emotion recognition which claims that recognition is more accurate when members of the same cultural group that express the stimuli also make the judgements. However, the examination of accuracy according to four scene types revealed that their perceptual accuracy of nonverbal cues differed depending on social contexts.

In status context, when British and Japanese scene results were combined, the British participants were found to be significantly more accurate than the Japanese participants in judging boss-subordinate relationships. This seems to suggest that British people might be more sensitive to status cues than Japanese people. This is contrary to the within-cultural testing results which showed that the Japanese decoders' accuracy for Japanese status scenes was significantly higher than the British decoders' accuracy for British status scenes. Higher accuracy of the Japanese in within-cultural testing seems to be due to the overt nonverbal cues contained in the Japanese scenes rather than the Japanese decoders' higher perceptual sensitivity. The results of the follow-up study also showed that the Japanese subordinates' overt cues were utilised accurately by both British and Japanese decoders. The nonverbal cues expressed by British bosses and subordinates seem to have been less overt and difficult to interpret, particularly for the Japanese.

Similar results were observed in the perception of intimacy scenes. Although the British decoders were found to be significantly more accurate than the Japanese decoders in the perception of within-cultural intimacy scenes, they were significantly less accurate on intimacy scenes than the Japanese decoders in this cross-cultural testing. Their higher accuracy in within-cultural testing seems to be due to the overt intimacy cues contained in

the British scenes, rather than the British decoders' higher perceptual sensitivity. The follow-up study suggested that a lack of overt intimacy cues in Japanese scenes affected the British decoders more than the Japanese decoders in scene interpretation. These findings in status and intimacy contexts supported our second hypothesis that the British would be more sensitive to status difference cues than the Japanese while the Japanese would be more sensitive to intimacy cues.

The above findings seem to indicate that there might be a negative relationship between social expressive environments and individuals' perceptual sensitivity. When people are accustomed to overt nonverbal expressions in their environments, their sensitivity to subtle expressions might not develop or even decline. On the other hand, when they are required to read subtle nonverbal cues in their environments, they have to make efforts to develop sensitivity to these cues. With regard to status, Japanese decoders might be too used to and expect certain overt expressions, particularly from subordinates, and therefore, are not prepared to look for other subtle cues. On the other hand, British decoders expect clear display of intimacy cues from couples, such as holding hands and sitting close to each other, they are not used to searching for more subtle cues in this context. This finding is in line with the previous claim made by Halberstadt (1983, 1986, 1991) concerning negative relationship between family expressivity and individuals' perceptual sensitivity. While her studies focused on nonverbal emotion expressions, the present study deals with wider aspects of nonverbal communication including expressions of interpersonal relationships and emotions. Additionally, this study revealed that nonverbal perceptual sensitivity is contextually bound, just as expressivity is influenced by social context.

The Japanese participants' accuracy for British kinship scenes was very low and lower than the chance level. This seems to have contributed to their significantly lower accuracy than the British participants in kinship scenes as a whole. In within-cultural testing perceptual accuracy of kinship scenes was similar for the British and Japanese. Also the follow-up study showed that the use of nonverbal cues in scene interpretation was similar between the two nationalities. The main difference seems to have been that the Japanese decoders were often misled by appearance cues such as assumed age and facial similarity between the interactants; this might have attributed to their low performance on British kinship scenes. In cross-cultural perception, appearance cues might be one of the causes of difficulty in terms of judging kinship relationships.

Competition scenes seem to be the ones most clearly affected by cultural norms as both the British and Japanese participants significantly outperformed each other in their own nationality competition scenes. This is in contrast to the other scene types in which either the British or Japanese participants could perform as well as or better than the other in cross-cultural perception. As stated earlier, accurate judgements of competition scenes is based on understanding the emotions experienced by winners and losers, which might have been controlled by display rules. One of the most confusing cues for the British participants in the interpretation of Japanese scenes was the smiles and laughter Japanese losers exhibited; these could have been intended to indicate the insignificance of the loss in order to maintain harmony between the players or alternatively occurred simply due to embarrassment. Matsumoto (1996) also explained the Japanese display rule of masking negative emotion expressions with smiles and laughter in social context. Emotion expressions in social context might bring out more difficulty in cross-cultural perception

than expressions of social relationships as emotion expressions are often controlled; people might have to speculate on others' feelings from leaked expressions or displayed emotions in terms of contextual appropriateness.

### **General Discussion**

The present study revealed how within-cultural communication styles affect cross-cultural perceptual accuracy, and possibly the level of intercultural understanding. Cultures differ in terms of expressivity of nonverbal cues - what cues should or should not be expressed overtly - based on social rules. In spite of possible cultural changes in recent years (Matsumoto, Kudoh & Takeuchi 1996; Stephen *et al.*, 1998), Japan seems to be still more hierarchical than the UK. It was observed in the Japanese interactants' high expressivity of status relationships as reported by the British and Japanese participants in this cross-cultural study; similar findings have also been reported in other studies (e.g., Kowner & Wiseman, 2003). On the other hand, the British were found to express intimacy cues more clearly than the Japanese as reflecting the differences in the individualism and collectivism dimension of culture (Andersen, 1988; Hofstede, 1984).

Their levels of expressivity of interpersonal relationships were found to be negatively related to their perceptual sensitivity. While the British could interpret status cues more accurately than the Japanese, the Japanese could interpret intimacy cues more accurately than the British. As Halberstadt (1983, 1986, 1991) explained in her developmental emotion studies, low-expressive environments seem to encourage people to be sensitive to subtle nonverbal cues. In spite of differences in context-specific accuracy, overall scene accuracy was similar between the British and Japanese. These results suggest that for the assessment of cross-cultural perception (and also within-cultural perception), context-specific accuracy has to be examined as communication contexts are closely linked to cultural appropriateness in behaviour.

In addition to differences in the expressions of interpersonal relationships, differences in emotion expressions seem to affect cross-cultural perceptual accuracy to a large degree. This was observed in the perception of competition scenes. Both the British and Japanese were significantly more accurate in the perception of their own nationality scenes. Cross-cultural differences observed in emotion expressions such as in the amount of smiles and laughter exhibited by winners and losers would be related to the display rules of British and Japanese cultures in this context. Competition involves both negative and positive emotions (e.g., sadness and anger / happiness and excitement) which would be controlled in a different manner depending on cultural rules. Thus, without appropriate understanding of display rules of other cultures (how and in what social contexts emotions are controlled) misperception would be inevitable.

The shortcomings of this study is firstly, only limited number of interaction scenes (six each for British and Japanese in Experiment 1 and two each in Experiment 2) for each context were used. The results were in line with previous research findings and this would validate the present findings. However, the examination of higher number of interaction scenes (also in different social contexts) would further clarify the communication characteristics of British and Japanese people.

Secondly, in the present study, the examination of British and Japanese expressivity was based on the participants' reports on their use of nonverbal cues. In order to clarify expressivity and behavioural rules of British and Japanese, closer examinations of their

behavioural patterns in context would have to be carried out. In addition, cultural profiles of individual encoders (and decoders) of the scenes would have to be studied in order to study the relationship between their communication patterns and cultural dimensions such as individualism and collectivism, and to clarify how much cultural profiles of individuals contribute to the observed group differences.

In conclusion, it is suggested that in the examination of intercultural nonverbal communication, the following three aspects have to be taken into consideration: (1) behavioural characteristics of a culture in contexts (2) social rules relating to contexts (3) perceptual styles which are based on social rules and behavioural characteristics of a culture. Examination of nonverbal communication styles both from expressive and perceptual aspects helps to uncover possible causes of misunderstanding between cultures. Perceptual styles are not observable unlike overt behaviour, and therefore causes of misunderstanding which result from them are often difficult to be detected. A large number of perception studies have been carried out using a limited number of posed expressions without contexts; they have failed to assess perception in actual intercultural encounters. This study examined the relationship between expressive and perceptual styles of British and Japanese people using multiple naturalistic cues in several contexts. In order to clarify their communication characteristics further, however, more detailed studies on their expressive and perceptual styles would be necessary. It is hoped that future intercultural studies incorporate examination of both expressive and perceptual styles of cultures using naturalistic methods.

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## **Appendix A**

### Description of the BJSPT scenes

#### **Scene 1 (Japanese intimacy scene)**

A Japanese married couple are having tea with one of their close female friends after dinner. They have all been invited to another friend's house. They are sitting around the table (the husband is sitting between the two women) and talking about a social dance class they have been attending. The couple have been married for four years and have known their friend for the last three years. They are all in their early 30s.

#### **Scene 2 (British competition scene)**

Two British Psychology course-mates are discussing the result of a squash game they have just played. They are standing side-by-side outside the university sports centre where they have played the game. They play squash games together regularly and are talking about each others' techniques and their improvements. They are both in their early 20s.

#### **Scene 3 (British intimacy scene)**

A British married couple are having tea with one of their close female friend after dinner. They are at the couple's house. They are sitting around the table (the husband is sitting between the two women) and talking about the university course the wife is considering applying for. The couple have been married for two years and have known their friend for the last two years. The women are in their mid or late 20s and the man is in his early 30s.

#### **Scene 4 (British kinship scene)**

A British mother and her daughter (about 10 years old) are talking with the mother's younger sister (daughter's aunt) at home. The mother and her sister are sitting on separate sofas and the daughter is sitting between them on a chair. They are talking about the daughter's school activities and her performance. The daughter often sees her aunt and is used to being with her.

#### **Scene 5 (Japanese intimacy scene)**

A Japanese male and his female friend are sitting side-by-side on a sofa and talking about a particular place they know well in Japan. They are in the woman's flat. They have known each other for the last two years but they are not very close friends. The woman is in her mid 20s and the man is in his mid 30s.

#### **Scene 6 (British kinship scene)**

A British man and his sister are sitting side-by-side on chairs. They are talking about home decoration. They are at their parents' home and having tea. They both live close by and meet very frequently. The woman is in her early 40s and the man is in his early 30s.

#### **Scene 7 (Japanese status scene)**

A Japanese man is sitting on a chair and talking with his female subordinate in the office. He is explaining to her the new security system the company is introducing. He has been working with his subordinate for more than 8 years. The man is in his late 40s and his subordinate is in her late 20s.

#### **Scene 8 (British intimacy scene)**

A British male and his female friend (house-mate) are sitting on chairs face-to-face. They have been sharing the house for the last one year. They are talking about football matches they have been to. Both the man and the woman are in their early 20s.

#### **Scene 9 (Japanese status scene)**

A Japanese man is talking with his male boss in a café after work. They are sitting at a table and talking about overseas assignments from their company. The man has been working with his boss for more than 5 years. The man is in his late 20s and his boss is in his mid 30s.

#### **Scene 10 (British status scene)**

A British man is sitting on a chair and talking with his female secretary in his office. They are talking about the news they have been listening to on that day. The man has been working with his secretary for more than 10 years. The man is in his late 40s and his secretary is in her 50s.

#### **Scene 11 (British status scene) - compound scene**

In the first scene a British female student is talking with another female student about her life at the university. They are sitting at a table in the seminar room at the Psychology department. The two people are meeting for the first time. In the second scene the same female student is talking with a lecturer at the university. She is sitting at a table and explaining the lecturer her plans for the future. They are in the seminar room at the Psychology department.

#### **Scene 12 (Japanese competition scene)**

Two high school male teachers are discussing the result of a tennis game they have just played on the tennis court at their high school. They are standing side-by-side and making critical comments about their techniques. They do not play tennis together regularly. They have similar teaching experiences at school and are of similar status. They are both in their early 30s.

#### **Scene 13 (Japanese kinship scene)**

A Japanese male and his sister are sitting side-by-side on chairs and talking about the brother's school trip. They are at their parents' house. The brother lives with their parents but the sister is living away at college and occasionally comes home. The brother is in his late teens and the sister is in her early 20s.

#### **Scene 14 (Japanese competition scenes)**

Two Japanese female friends are standing side-by-side and talking about the result of a tennis game they have just played on the public tennis court. They have played tennis together quite often in the past and know each others' games well. They are both in their early 30s.

#### **Scene 15 (British competition scenes)**

A British male and his female friend are standing side-by-side and talking about the result of a tennis game they have just played on the university tennis court. They are both students at the university and play tennis together occasionally. They are both in their mid 20s.

#### **Scene 16 (Japanese kinship scenes)**

A Japanese woman and her daughter (about 8 years old) are chatting with a female friend of the mother. They are talking about the daughter's school activities. The daughter is sitting between the mother and the friend on a sofa. The two women are close friends and see each other often. The daughter is familiar with the friend.

## Appendix B

### English questionnaire for the BJSPT

This video contains 16 brief scenes (8 British and 8 Japanese scenes in a random order). There is one question and three possible answers for each of the 16 scenes. A question appears on the screen before each scene, so you may want to read the corresponding multiple-choice answers written on this answer sheet between scenes. After viewing each scene, please indicate your answer to each question by drawing a circle around the letter 'a' 'b' 'c' next to the answer you think is correct. The video last about 15 minutes.

1. Which woman is married to the man?
  - a) the woman on the left.
  - b) the woman on the right.
  - c) neither woman.
2. Who won the squash game?
  - a) the man on the left.
  - b) the man on the right.
  - c) the two men played to a draw.
3. Which woman is married to the man?
  - a) the woman on the left.
  - b) the woman on the right.
  - c) neither woman.
4. Which woman is the mother of the girl?
  - a) the woman on the left.
  - b) the woman on the right.
  - c) neither woman.
5. What is the relationship between the man and the woman?
  - a) they are a couple who have been together for about 4 months.
  - b) they are a couple who have been together for about 2 years.
  - c) they are friends who have known each other for about a year.
6. What is the relationship between the man and the woman?
  - a) they are a couple who have been married for about 3 years.
  - b) they are friends who have known each other for more than 15 years.
  - c) they are a brother and a sister.
7. Who is the man talking to?
  - a) his boss.
  - b) his subordinate.
  - c) his colleague of the equal status.
8. What is the relationship between the man and the woman?
  - a) they are a couple who have been together for about 4 months.
  - b) they are a couple who have been together for about 2 years.
  - c) they are friends who have known each other for about 1 year.
9. Who is the man talking to?
  - a) his boss.
  - b) his subordinate.
  - c) his colleague of the equal status.
10. Who is the man talking to?
  - a) his boss.

- b) his subordinate.
- c) his colleague of the equal status.

11. You will see the same woman in two scenes. In which scene is the woman talking to someone of higher occupational status?

- a) in the first scene.
- b) in the second scene.
- c) in neither scene.

12. Who won the tennis game?

- a) the man on the left.
- b) the man on the right.
- c) the two men played to a draw.

13. What is the relationship between the man and the woman?

- a) they are a couple who have been together for about 6 months.
- b) they are a couple who have been together for about 3 years.
- c) they are a brother and a sister.

14. Who won the tennis game?

- a) the woman on the left.
- b) the woman on the right.
- c) the two women played to a draw.

15. Who won the tennis game?

- a) the man.
- b) the woman.
- c) the man and the woman played to a draw.

16. Which woman is the mother of the girl?

- a) the woman on the left.
- b) the woman on the right.
- c) neither woman.

Thank you very much for your cooperation!

Your age: \_\_\_\_\_ Gender: male /female

**Appendix C**  
**Japanese questionnaire for the BJSPT**  
日英社会認知テスト(BJSPT)

このビデオは16の短い会話場面から構成されています(日本人場面8つと英国人場面8つがランダムに映し出されます)。それぞれの場面に対して質問が一つと三択の解答があります。場面が映し出される前に質問が画面に表示されますので、この解答用紙の三択の解答に目を通して下さい。各々の場面を見た後、正しいと思う選択枝(a)(b)(c)をマルで囲んで下さい。このビデオは約15分間です。

- 1) どちらの女性が男性の奥さんですか。
  - (a) 向かって左側の女性
  - (b) 向かって右側の女性
  - (c) どちらの女性でもなし
  
- 2) どちらの人がスカッシュの試合に勝ちましたか。
  - (a) 向かって左側の男性
  - (b) 向かって右側の男性
  - (c) 引き分け
  
- 3) どちらの女性が男性の奥さんですか。
  - (a) 向かって左側の女性
  - (b) 向かって右側の女性
  - (c) どちらの女性でもなし
  
- 4) どちらの女性が女の子の母親ですか。
  - (a) 向かって左側の女性
  - (b) 向かって右側の女性
  - (c) どちらの女性でもなし
  
- 5) 男性と女性はどういう関係ですか。
  - (a) 約四ヶ月間付き合っている恋人
  - (b) 約二年間付き合っている恋人
  - (c) 約一年間知り合いの友達
  
- 6) 男性と女性はどういう関係ですか。
  - (a) 約三年間結婚している夫婦
  - (b) 十五年間以上知り合いの友達
  - (c) きょうだい(姉弟、兄妹)
  
- 7) 男性は誰と話をしていますか。
  - (a) 上司
  - (b) 部下
  - (c) 同僚
  
- 8) 男性と女性はどういう関係ですか。
  - (a) 約四ヶ月間付き合っている恋人

- (b) 約二年間付き合っている恋人
  - (c) 約一年間知り合いの友達
- 9) 男性は誰と話をしていますか。
- (a) 上司
  - (b) 部下
  - (c) 同僚
- 10) 男性は誰と話をしていますか。
- (a) 上司
  - (b) 部下
  - (c) 同僚
- 11) 同じ女性が二つの場面に登場します。  
(職業上)立場が上の人と話をしているのはどちらですか。
- (a) 最初の場面
  - (b) 後の場面
  - (c) どちらの場面でもなし
- 12) どちらの人がテニスの試合に勝ちましたか。
- (a) 向かって左側の男性
  - (b) 向かって右側の男性
  - (c) 引き分け
- 13) 男性と女性はどういう関係ですか。
- (a) 約六ヶ月間付き合っている恋人
  - (b) 約三年間付き合っている恋人
  - (c) きょうだい(姉弟、兄妹)
- 14) どちらの人がテニスの試合に勝ちましたか。
- (a) 向かって左側の女性
  - (b) 向かって右側の女性
  - (c) 引き分け
- 15) どちらの人がテニスの試合に勝ちましたか。
- (a) 男性
  - (b) 女性
  - (c) 引き分け
- 16) どちらの女性が女の子の母親ですか。
- (a) 向かって左側の女性
  - (b) 向かって右側の女性
  - (c) どちらの女性でもなし

ご協力有難うございました。

年齢\_\_\_\_\_ 性別 男・女