Nonverbal perceptual styles of British and Japanese people:
A study of cultural influences and perception training

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Abstract

Cultural influences on perceptual styles of British and Japanese people were examined by developing the British and Japanese Social Perception Task (BJSPT). The results of cross-cultural comparisons were then utilised in a programme of nonverbal perception training with British and Japanese people.

The BJSPT presents 16 (8 British and 8 Japanese) naturalistic interaction scenes in four communication contexts - competition, kinship, intimacy and status. The format of the task is based on the Interpersonal Perception Task (IPT; Costanzo & Archer, 1989). In comparison with the original IPT, which contains only American encoders, the BJSPT includes both British and Japanese people. The BJSPT is also a purely nonverbal perception task containing visual and audio nonverbal cues, while the IPT is a full channel (containing both verbal and nonverbal cues) task.

The cross-cultural testing with a sample of British and Japanese university students revealed the following results: (1) overall, both the British and Japanese perceive their own nationality scenes better than cross-cultural scenes (2) according to the four communication contexts, the British were more accurate in perceiving British and Japanese status scenes than the Japanese, while the Japanese were better in interpreting British and Japanese intimacy scenes. These differences are discussed with reference to cultural theories.

Nonverbal perception training was focused on increasing cultural awareness in people's communication styles. Similar interaction scenes to the BJSPT scenes were shown to British and Japanese university students, and cross-cultural similarities and differences in behavioural appropriateness according to the four BJSPT contexts were discussed. The training led to improvements in their accuracy in the BJSPT cross-cultural scenes. However, few effects were observed in terms of achieving improvements of within-cultural scenes. The different aspects of skills involved in within- and cross-cultural perception are discussed, and suggestions made in the context of nonverbal perception training.

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Introduction

Studies of person perception have differed in their focus on the stages of perceptual processes and the communication cues used as the stimuli. A large number of studies have dealt with the perception of emotion expressions (e.g., Davitz, 1964; Ekman & Friesen, 1969, 1971; Elfenbein & Ambady, 2002a, 2002b, 2003a, 2003b; Rosenthal, Hall, DiMatteo, Rogers & Archer, 1979; Matsumoto, 1989, 1991, 1992, 1996); some others have looked into the perception of personality characteristics (e.g., Asch, 1946; Bruner & Tagiuri, 1954; Cronbach, 1955). Studies on emotion perception often examined the recognition accuracy of facial, bodily, or vocal expressions and investigated universality and cultural specificity in perceptual style. Studies on the perception of personality characteristics, on the other hand, have examined inferential processes from various communication cues presented, including written descriptions. Bruner and Tagiuri proposed the implicit personality theory to describe the network of inferential processes of individuals in impression formation. These perception studies have shown that perceptual processes are affected not only by objective stimulus characteristics of the person but also by perceivers' own personal characteristics (Livesley & Bromley, 1973). Perceivers' personal characteristics including their cultural backgrounds influence their perceptual styles while interacting with communication contexts (Argyle, 1994).

The selective and inferential nature of person perception has been described as one of the causes of misperception (Forgas, 1985; Hargie & Dickson, 1991; Hargie, 1997). Hargie described how our perception filter works in selecting and storing incoming information and how familiarity of stimuli affects this process. At the inferential stages, some information might

be omitted or new information added in order to eliminate inconsistencies in their categorisation (Livesley & Bromley, 1973). These stages of perceptual processes often occur out of awareness, and therefore, miscommunication caused by misperception is difficult to be realised. In intercultural communication in which people from different cultural backgrounds interact, there would be a higher possibility of misperception due to the higher level of unfamiliarity encountered.

Individual differences in perceptual sensitivity have been reported (e.g., Hall, 1978; Rosenthal *et al.*, 1979); these differences were found to be related to social skills (e.g., Fischetti, Curran & Wessberg, 1977; Spence, 1987; Philippot & Feldman, 1990; Carton, Kessler & Pape, 1999). In order to examine the causes for these individual differences, several authors (e.g., Blanck, Rosenthal, Snodgrass, DePaulo & Zuckerman, 1981; Halberstadt, 1991) have looked into the environmental influences on people's perceptual sensitivity. Halberstadt, for example, reported the influence of family expressivity on individuals' perceptual sensitivity to emotion expressions. According to her, family expressivity has a negative relationship with one's perceptual sensitivity. On the other hand, Blanck *et al.* found that nonverbal sensitivity is increased or decreased by accommodation to social rules. They reported that women, as they got older, lost their superiority to men in perceptual sensitivity to leaky or covert channels while increased their superiority in sensitivity to less leaky channels. The effect of accommodation to social rules was also reported in the cross-cultural study conducted by Matsumoto (1992) who compared Americans and Japanese. He reported that Japanese were less sensitive to negative emotion expressions than Americans, as communication of negative emotion is regarded as harmful for group harmony in Japan. As described, family and social environments have important roles in the development of one's perceptual sensitivity. Misperception in intercultural interactions, therefore, would be caused by the perceptual styles of individuals which have been developed in different

cultural environments. Ting-Toomey (1999) stated "perception is largely a learned process - to a great extent, it is learned through our cultural socialization" (p. 156).

Universality and cultural specificity has been observed in both the encoding and decoding of nonverbal communication. The most well researched nonverbal channel has been the face which was originally studied by Darwin (1872), subsequently by various authors including Ekman, Friesen and Matsumoto. Ekman and his colleagues conducted research in literate cultures such as US, Japan and Brazil (Fridlund, Ekman & Oster, 1987) and a nonliterate culture, South Fore in Papua New Guinea (Ekman & Friesen, 1971). They reported six basic universal facial expressions - anger, disgust, fear, happiness, sadness, surprise and contempt - which are understood across cultures. At the same time, they observed cultural specificity which is based on the display rules of a particular culture and leads to cultural differences in facial expressions depending on social contexts.

Matsumoto and Ekman (1988) developed the task entitled the "Matsumoto and Ekman's Japanese and Caucasian Facial Expression of Emotion (JACFEE)" and examined universality and cultural specificity further. In terms of cultural specificity, it was found that Americans and Japanese differ in recognition accuracy for negative expressions (as described above, Matsumoto, 1992) and also in perception of the intensity of emotions (Matsumoto & Ekman, 1989). These studies were carried out using the photos as the medium and, therefore, the stimuli presented to the viewers were all static images of people.

Rosenthal *et al.* (1979) reported universality and cultural specificity in perception of nonverbal cues using their video task, the Profile of Nonverbal Sensitivity (PONS). They found that all the cultures studied could perceive the PONS scenes above chance level; however, the cultures which were closer to the US culture (where the task was produced) could interpret the scenes more accurately. As they examined the perception of face, body and paralinguistic

cues recorded on video, their findings proved that the previous claims on cultural influence on facial expressions extend to other nonverbal cues and also to motion images in addition to static ones. Their studies were, however, still limited in terms of measuring the perception of nonverbal cues in the natural flow of interaction, as the cues in the PONS are presented in isolation and for edited periods of time. This method does not enable examination of the everyday perceptual processes - how people take in information from various nonverbal cues available in interaction and how they interpret the information.

In intercultural interactions, cultural specificity in communication style often led to miscommunication and misunderstanding between people. For better intercultural understanding, cultural differences have to be clarified in three aspects - what differs, how they differ and why they differ. In the past, nonverbal perception research mostly looked into the aspects of what and how by examining recognition accuracy of nonverbal cues at the early stage of perceptual processes. In order to clarify why differences arise in people's interpretation of others, perceptual processes have to be examined as every stage of perceptual processes would be affected by cultural norms and values.

In research on perception within cultures, several researchers have constructed tasks which examine perceptual processes of people (e.g., Costanzo & Archer, 1989; Magill-Evans, Koning, Cameron-Sadava & Manyk, 1995). The Interpersonal Perception Task (IPT) (developed by Costanzo and Archer) has been an improvement on previous perception tasks in terms of making perceptual assessment closer to reality by containing naturalistic interaction scenes with various communication cues in video. This task has been used not only to examine perceptual processes (Smith, Archer & Costanzo, 1991) but also interpersonal perceptual skills (e.g., Costanzo & Archer, 1989; Ambady, Hallahan & Rosenthal, 1995; Schroeder, 1995; Woods, 1996). In cross-cultural research, similar attempts should be made to construct tasks which facilitate the examination of perceptual processes.

Unfortunately, no such tasks are available at present. These tasks would have to contain more than one nationality and ideally all of the targeted nationalities as encoders so that the examination of both within- and cross-cultural perception can be carried out. Comparisons of within- and cross-cultural perception would help to clarify cultural influence on perceptual processes.

In the area of cultural study, several cultural dimensions have been put forward to explain culture and its influence on people's behaviour (e.g., Hall, 1976; Hofstede, 1980). Hofstede, for example, advocated four dimensions - power distance, uncertainty avoidance, individualism-collectivism, masculinity-femininity - based on his questionnaire surveys in 40 countries. These four dimensions have been used to compare the characteristics of various national cultures and to explain the similarities and differences observed between them (e.g., Hecht, Andersen & Ribeau, 1989; Matsumoto, 1991, 1996; Schimmack, 1996). Cultural theories have been useful in linking behavioural characteristics of people to the social and historical background of their cultures and in providing theoretical explanations for cross-cultural findings. Bhawuk and Triandis (1996), in the context of intercultural communication training, explained how cultural theories help people to improve their understanding of culture and to apply their knowledge in actual intercultural interactions.

Intercultural/cross-cultural communication training has been devised in order to equip people with the communication skills necessary in unfamiliar cultures. Although these programmes differ in the focus and methods of training, a large number of training programmes deal with behavioural aspects by such methods as modelling and role playing. This seems to reflect the amount of research carried out on the what and how aspects of cross-cultural differences. The why aspect of cultural differences would have to be incorporated more in training programmes. Some training programmes, such as cultural awareness training (e.g., Kraemer, 1973, 1974; Hoopes, 1975), however, seem to focus on cognitive processes in intercultural communication.

These programmes aim at making trainees realise their own cultural values and analyse the differences with other cultures. Forgas (1988) stated that "communication is based on culture specific representations about reality" (p. 188) and emphasised the importance of cognitive learning in intercultural training. Brislin (1990) and Triandis (1990) also described cultural awareness as an important aspect of intercultural competence. Perceptual processes, as part of cognitive processes need to be examined and targeted for training. Making people aware of how cultures affect individuals' perceptual processes would be an important part of intercultural training.

In within-cultural perception and social skill research, several attempts have been made to improve people's perceptual skills (Davitz, 1964; Jecker, Maccoby & Breitrose, 1965; Rosenthal *et al.*, 1979). They have focused mainly on improving people's recognition accuracy of emotion expressions and reported some positive results. Perception training, however, needs to widen its scope by including other communication contents, such as the expression of interpersonal relationships and also by incorporating contextual cues. In intercultural settings, perception training needs to increase people's cultural awareness in perceptual processes in addition to improving their perceptual sensitivity to communication cues. The importance of contextual cues needs to be emphasised as cultural rules are embedded in communication contexts and the appropriateness of behaviour has to be assessed in contexts (Spitzberg & Brunner, 1991).

In this thesis, the results of three stages of cross-cultural perception research are summarised. In Stage 1, a cross-cultural perception task (the British and Japanese Social Perception Task, BJSPT) was constructed based on the previous perception tasks, particularly the Interpersonal Perception Task (IPT; Costanzo & Archer, 1989). The aims of the task were to examine: (1) whether it is possible to create a perception task which examine people's perceptual processes in a cross-cultural setting and (2) whether cultural

influences on people's perceptual styles can be examined using the task. Methodological issues in its construction process are discussed.

In Stage 2, nonverbal perceptual sensitivity and perceptual processes of British and Japanese people were compared using the BJSPT. Nonverbal sensitivity was measured by assessing accuracy on the BJSPT scenes. Perceptual processes were examined by investigating how nonverbal cues were processed and interpreted in four communication contexts - competition, intimacy, kinship and status. The nonverbal cues contained in the BJSPT scenes were also studied using the techniques of micro-analysis in order to examine the expressive styles of the British and Japanese. Two related questions were asked at this stage: (1) How do British and Japanese cultures as described by cultural dimensions relate to expressive and perceptual styles? (2) How does the nonverbal expressivity of a culture affects the development of individuals' perceptual sensitivity?

In Stage 3, the findings from Stage 2 were used for nonverbal perception training. The aim of the training was to increase people's cultural awareness of their nonverbal perceptual processes and improve their accuracy. In the training, nonverbal cues which are useful in the four communication contexts of the BJSPT were described to the participants using training video-clips; cross-cultural similarities and differences between Japan and the UK were also discussed. The issues addressed at this stage were (1) whether and how nonverbal perceptual accuracy can be improved by training (2) how cultural awareness helps improvement of cross-cultural perceptual accuracy.

This research programme extends from comparative studies of nonverbal perceptual style to intercultural perception training. In order to set these studies in context, the literature relating to person perception, nonverbal communication and social skills is reviewed in Chapter 1, followed by a summary of person perception measures in Chapter 2; the literature on intercultural communication, cultural theory and intercultural training is reviewed in Chapter 3. The empirical findings are summarised in the

following four chapters. Chapter 4 explains the construction process of the BJSPT, and Chapter 5 provides the results of cross-cultural testings using the BJSPT. Chapter 6 presents the results of a micro-analysis of the BJSPT scenes and an examination of the perceptual processes of the British and Japanese. Chapter 7 outlines the results of nonverbal perception training. The final chapter presents the conclusions.

CHAPTER ONE

Person Perception

This chapter reviews literature relating to person perception. The following sections focus on the three aspects of: (1) person perception and nonverbal communication (2) development of person perception and social learning and (3) person perception and social skills.

1.1. Person Perception and Nonverbal Communication

Livesley and Bromley (1973) defined person perception as "how we 'perceive' or 'cognise' other persons - their intentions, attitudes, traits, emotions, ideas, abilities and purposes, as well as their overt behaviour and physical characteristics" (p. 1). They explained that effective action in personal relationships requires: (1) selective perception of behaviour (2) a sensitive understanding of the covert psychological processes which underline overt actions (3) an appreciation of the emotional and behavioural relationships between one person and another and (4) the context of circumstances and events in which they are embedded. Hastorf, Schneider and Polefka (1970) explained two facets of interpersonal perception. Firstly, we perceive other people as causal agents, which enables us to organise the behaviour of others into intent-act effect segments. Secondly, we perceive other people as similar to ourselves, which forces us to infer that they possess attributes which we cannot observe directly but which we are aware of in ourselves such as emotions.

Comparing person perception and object perception, Swann (1984) concluded that unlike judging the physical properties of objects, person perception involves a social interaction between the perceiver and the

perceived. He emphasised, therefore, that accuracy of person perception should be considered only within the context of interaction. From this point of view, person perception is considered as the reciprocal perspectives of interactants, given that they affect each other throughout their communication process based on their interpretation of others.

Historically, research regarding the accuracy of person perception has been divided into two topic areas: the perception of emotions and the perception of personality characteristics (Hastorf *et al.*, 1970). Perception of emotions requires the ability to interpret verbal and nonverbal emotion expression cues. Perception of personality characteristics requires the ability to infer the enduring characteristics of others from various information collected. In everyday perception, these two perceptual activities can constitute the whole process, where perception of emotion is part of perception of personality characteristics.

Adapting from Shrauger (1967), Livesley and Bromley (1973) explained that four temporal phases are involved in the process of person perception. The first is the cue selection phase, in which the perceiver selects only a part of all the information available due to some sort of personal relevance. The second is the interpretative inference phase, in which the perceiver interprets the information gained in order to infer general traits and other personal characteristics. The third is the extended inference phase, in which implications are drawn as to the other person's additional characteristics. The fourth is the anticipatory set or verbal report phase, in which the characteristics assigned to the other person are grouped and integrated to form a basis for consistent responses to the other person. According to these phases of person perception, emotion perception study seems to have focused on measuring the process and outcomes of the first phase while personality perception on those of the later phases.

At the cue selection phase, different levels of perceptual activities are carried out by the interactants. Some communication cues are consciously or

unconsciously perceived while some others are not taken in at all (Hargie, 1997). Hargie explained about the selective perception filter which filters a limited amount of information into the conscious mind, while storing the remainder at a subconscious mind. He referred to Bentley (1993), who explained about the cognitive framework which affects acquisition of new information by its associative link, and explained how perceptual ability is influenced by the familiarity of incoming stimuli. Hargie stated that if the language or the nonverbal signals do not register as understandable or acceptable, our perceptual reception is hampered and selectively filters out the unfamiliar or unacceptable. As a results, it receives a distorted or inaccurate message. This, together with inferential nature of person perception often leads to perceptual inaccuracy and miscommunication (Forgas, 1985; Hargie & Dickson, 1991).

Examination of people's perceptual processes reveals the personal worlds which reflect the way people seek stability and meaning in their interpretation of environments. Livesley and Bromley (1973) stated that we often try to see the other person as a 'gestalt' by looking at a particular quality of others in terms of its contextual relationships with the other qualities they are assumed to possess. They further explained that we process the stimulus information by omitting some items and adding new information in order to eliminate inconsistencies using categories which are particularly useful to us. Hastorf *et al.* (1970) explained that the inference process is one of the most salient outcomes of social interactions and one of the major determinants of the nature of interactions.

Livesley and Bromley (1973) summarised the factors affecting the process of person perception: (1) objective stimulus characteristics of the person (2) the nature of the stimuli to which the perceiver selectively responds and the contexts in which they are presented (3) perceiver's cognitive abilities and personal characteristics (4) the relationship between the perceiver and the stimulus person, and between perceivers' sharing impressions of the stimulus

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person. Perceiver factors are closely linked to situational factors as people's interpretative styles are the results of the accumulation of their communicative experiences in various situations. In this regard, Phares (1988, p. 26) stated:

> *People bring with them to every situation something of themselves. This 'something' is what makes each person different from all others. Therefore, every situation is interpreted, analyzed, filtered and perceived based on the unique set of past experiences, learnings and biological qualities of each individual.*

Argyle (1994) also explained the importance of personal and situational factors in person perception and concluded that the person-and-situation interaction is more important than either of the individual factors. Accuracy and the process of person perception, therefore, has to be examined as the products of interaction between the personal characteristics of the communicators involved and the particular interaction context.

Sources of information about other people are conveyed in some form of social interaction through various communication channels, both verbal and nonverbal. Nonverbal communication refers to communication through bodily activity, gesture, facial expression and orientation, posture and spacing, touch, smell and vocal cues (apart from the referential content of what is said, Kendon, 1981). Danzinger (1976, p. 80) explained the importance of nonverbal communication as follows:

> *Much nonverbal communication defines the social context in which messages are transmitted and received, thus making their interpretation possible. It is nonverbal communication that establishes an essential difference between human interaction and the interaction that takes place when two computers talk to each other.*

Wiener, Shilkret and Devoe (1980) reported the views of a spokesman for a deaf community and explained that one major problem of people born deaf is not that they cannot hear language, but rather they do not have an opportunity to learn background information about how one talks, apart from which words to use. Archer and Akert (1977) also stated that nonverbal cues provide a qualitative "script" without which verbal cues cannot be interpreted accurately.

In reviewing the research on the basic dimensions of nonverbal behaviour in interpersonal interaction, Mehrabian (1970) concluded that they consist of three dimensions: evaluation, potency or status and responsiveness. The first dimension, evaluation, indicates how well one person likes another. The second dimension, potency or status, reveals how two people rank on a status hierarchy. Finally, the third dimension, responsiveness, reveals how much one person is interested and involved with another person. Danzinger (1976) similarly explained that social interaction presents three components of social relationship - influence, intimacy and integration. These relationships are negotiated throughout the process of interpersonal communication. He stated (p. 55):

> *The fact that any extended act of interpersonal communication presents, at the same time, an influence relationship, a level of intimacy, and a mode of integration is merely an illustration of the fact that individuals must simultaneously relate to one another as sources of power and influence, as sources of personal satisfaction and as sources of resources that need to be shared.*

Understanding nonverbal communication cues, therefore, is essential in understanding the social context in which communication is carried out and in negotiating relationships with others in it.

A number of studies have examined the universal and culture-specific nature of nonverbal communication. 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 emotion 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 emotion expressions.

Rosenthal *et al.* (1979) compared different nationalities in their nonverbal perceptual sensitivity to face, body and paralinguistic cues portrayed in the Profile of Nonverbal Sensitivity (PONS); they found that their accuracy was above chance level regardless of their cultures. However, they also found that the more similar the culture is to the US, where the task was produced, the better people from the culture performed in the task. They attributed the differences between nationalities to the effects of their cultural learning of communication. Expression and interpretation of other nonverbal communication cues such as gestures (e.g., Efron, 1941; LaBarre, 1964) and personal space (e.g., Hall, 1959; Baxter, 1970) have also been examined as reflecting cultural norms and values. Understanding cultural norms and values of others, therefore, is an important element for appropriate understanding of social interaction and people within it.

Cultural norms and values are knitted into the person-context interaction in the process of person perception. Forgas (1976) compared the effects of behavioural cues and cultural expectation cues on the perception of social episodes. He concluded that cultural expectations embodied in the definition of an episode are extremely salient sources of information, and are much more resistant to discounting than other contextual cues were shown to be. This resistant influence of cultural expectations in perceptual processes suggests the important role social learning plays in the development of perceptual styles.

1.2. Development in Person Perception and Social Learning

As discussed in the previous section, perceptual processes are affected by various factors including individuals' cognitive abilities and personal characteristics. Personal characteristics in person perception develop, while being affected by various environmental factors including family, peers, and formal institutions such as school which transmit social norms and values to individuals. The process of social learning in person perception can be observed in the studies of children. Referring to the statements made by Feinman and Lewis (1983) and Walden (1991), Durkin (1995) explained that from the first year or so, children refer to others for feedback on how they are performing, for possible explanations of unfamiliar events and for cues as to how one should feel. He explained that social referencing instills elements of culture in children, providing not only opportunities to discover how adults react to particular stimuli and events, but also how adults react repetitively to particular aspects of the social environment. It can be assumed that through social referencing, children pay close attention to the facial expressions of adults in various contexts. This would, in turn, affect children's expressiveness and perception of others' facial expressions.

The human face is the most studied nonverbal communication channel in the context of emotion expression and its perception. Saarni (1989) emphasised that the development of emotional behaviour is tied to the social context in which information about emotional expression is learned directly through adult direction, indirectly through observation or through the social transmission of behavioral expectancies. Halberstadt (1991) similarly stated that an individual's own norms and values for expressiveness are affected directly by societal patterns for expression communicated via the media, school, and other institutionalised structures, as well as indirectly by societal patterns communicated via the family and peer norms, values and behaviours. Lewis and Saarni (1985) explained that well within the first year of life,

individual and group differences in emotional behavior exist, and suggested the importance of early socialisation of these behaviours.

Examining anthropological investigations, Halberstadt (1991) suggested that societies vary in: (1) their socialisation goals for expression, based on their values for emotion expression and (2) their socialisation time lines, based on their beliefs about when infants and toddlers are capable of learning and achieving those goals for expressions. In comparison with the US, she cited three societies - Utku Eskimo, Javanese and Gusii societies. She explained that the Utku, Javanese and Gusii all share values for inhibition of emotion expression, while the Americans encourage expression of positive emotions in their infants. Regarding socialisation time lines, the Utku and the Javanese believe that infants are not capable of being socialised immediately and, therefore, they do not expect any self-control from their toddlers. In contrast, the Gusii and Americans begin socialising their babies very early in infancy. Differences in expressiveness observed at various stages of children's development, therefore, would reflect norms and values of a culture concerning emotion expression. Lewis and Michalson (1983) suggested five aspects of the socialisation process that need attending to: (1) how to express emotion (2) when to express emotion (3) how emotions are managed (4) how emotions are labelled and (5) how emotions are interpreted. The first three relate to cultural display rules while the last two relate to decoding rules.

Studying the perceptual sensitivity of children, DePaulo, Rosenthal, Eisenstat, Rogers and Finkelstein (1978) reported children's inability to decenter from one channel of information in order to simultaneously evaluate other ones. Adequate interpretation of the environment involves sophisticated cognitive ability which enables children to process various information and weigh its social significance. Acquisition of this ability seems to lead to children's understanding of the display rules of the culture in which they live. It has been explained that children's understanding of display rules begins to appear or at least is effectively articulated between the ages of 6 and 10 years

(Gnepp & Hess, 1986; Saarni, 1988). During this period, they come to recognise the possible incongruity between others' emotional expressions and their emotional state (e.g., Harris, Donnelly, Guz & Pitt-Watson, 1986; Harris & Gross, 1988). Cognitive developments together with accumulation of display rules change children's tendency to focus on displayed emotions to that of adults who are more likely to rely on their knowledge of other people's possible feelings in a given situation, regardless of what they display (Lazarus, 1991).

Appropriate use of display rules is based on understanding of social relationships between communicators. Jablin (1985) summarised the studies on the development of children's concepts of social relationships. He stated that children as early as three years of age have developed sex stereotypes of occupational roles; most children have already developed the concept about the behaviours of leaders and followers in task relationships by the time they start their first grade. He explained the important roles educational institutions play in teaching children social relationships, particularly vocational relationships: (1) school has the explicit mandate to socialise people (2) school plays a role of transitional institution between family and job (3) children can observe and experience hierarchical divisions of labour through the relationship of authority and control between administrators and teachers, teachers and students, students and students, and students and their work (4) school probably provides the first context in which children can experience formal organising activity on a daily basis. School, therefore, is an important institution for children to acquire the concept of social relationships and the cultural norms and values they have to follow in interacting with others in a society.

It has been reported that in Japan, hierarchical relationships are very important (e.g., Argyle, 1975; Kowner & Wiseman, 2003; Matsumoto, 1996); it can be assumed that even at the level of school age, Japanese children exhibit distinct display and decoding rules which are controlled by this

particular interpersonal context. Observing the differences in perception of vocal emotion expressions between American and Japanese children as young as three years old (Matsumoto & Kishimoto, 1983), Matsumoto explained that Japanese children internalise their display and decoding rules by early childhood (three to four years of age).

Argyle (1975), examining the cultural differences and uniformities in bodily communication, stated that emotion restraint is the main difference between the Japanese and other cultures. He also explained the importance of situational rules in Japan, stating " behaviour is more a product of situations than persons" (p. 89). This indicates that Japanese display rules are strictly contextually bound and depending on the situations, socially unacceptable emotion are suppressed or masked by some other emotion expressions, such as the smile. Shimoda, Argyle and Ricci Bitti (1978) compared the English, Italians and Japanese in their perception of emotions posed by these three nationalities; they found that the English and Italians could judge their own and each other's emotions quite well, but not those of the Japanese. The Japanese, on the other hand, could judge the others better than they were judged by the English and Italians, and were not very good at judging the emotion expressions of their own nationality. As no contextual information was provided in the experiments, the Japanese might have had difficulty in interpreting the Japanese expressions.

In a more recent study, Matsumoto, Yoo, Hirayama and Petrova (2005) examined the display rules of Americans, Japanese and Russians using their Display Rule Assessment Inventory (DRAI). The five expression modes (based on the work of Ekman and Friesen, 1969, 1975) included in the inventory are: express (express the emotion with no inhibitions), deamplify (express the emotion with less intensity than true feelings), amplify (express the emotion with higher intensity than true feelings), control (express no emotions), qualify (express the emotion but together with a smile in order to qualify the feelings) and mask (smile in order to hide true feelings).

The participants were asked to consider what they would do if they felt each of seven universal emotions (anger, contempt, disgust, fear, happiness, sadness and surprise) in four social situations: with family members, close friends, colleagues and strangers. Their overall cross-cultural results showed that (1) Americans had higher expression and amplification scores than Russians and Japanese (2) Japanese had higher deamplification and qualification scores than Americans and Russians while Russians had higher qualification scores than Americans (3) Japanese and Russians had higher control scores than Americans (4) across the three cultures negative emotions (anger, contempt, disgust, fear and sadness) were more controlled, deamplified, masked and qualified than positive emotions (happiness and surprise) which were more likely to be expressed and amplified (5) all three cultures reported different behavioural strategies depending on the social situation (e.g. they amplify their emotions most to friends but qualify most to colleagues and mask most to strangers). Although these results were based on self-reporting rather than actual observation of behaviours, they were in line with previous studies which reported higher levels of (negative) emotion control Japanese engaged in public in comparison with other nationalities (Ekman, 1973; Gudykunst & Ting-Toomey, 1988; Matsumoto, 1996). In addition, they clarified various aspects of display rules each nationality internalised to different degrees in context.

Halberstadt (1991) explained the influence one's expressiveness has on his/her perception of others' expressions (p. 110):

> *Expressions are perceived as meaningful communications from infancy through adulthood and, as such, are subject to others' interpretations. These interpretations may be based not only on the expressions themselves in a particular context and on the expresser's individual expressiveness history but also on the interpreter's own expressiveness and experiences. Thus one's style of expressiveness may influence how*

others perceive one's own emotional states, and it may also influence one's perception of others' emotional states.

She examined children's sensitivity to nonverbal communication cues from the perspective of their socialisation process and indicated 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 at 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.

From his cross-cultural studies, Matsumoto (1996) reported a positive relationship between cultural expressiveness and perceptual sensitivity. He compared the display and decoding rules of Japanese and Americans using the Japanese and Caucasian Facial Expression of Emotion (JACFEE; Matsumoto & Ekman, 1988) and stated that although the ability to recognise emotions is universal, Japanese culture works to hinder the correct perception of negative emotions of anger, disgust, fear and sadness. He suggested that as the expression of negative emotions can be detrimental to social relationships and interpersonal harmony, the 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 Shimoda *et al.* (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. They attributed this in-group advantage to "nonverbal accents" (subtle differences in expressive behaviour across cultures) and 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) questioned "absolutist theories" which focus on the fixed attributes of cultural groups expressing emotion or perceiving emotion as put forward by Matsumoto. Instead, they 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.

The effects of social learning have also been observed in within-cultural sex differences in perceptual sensitivity. Several studies have found women's superiority to men in understanding nonverbal cues (e.g., Hall, 1978; Rosenthal *et al.*, 1979). Examining the development in females' superiority in decoding nonverbal cues, Blanck *et al.* (1981) found that as age increased, females lost more and more of their advantage for leaky or covert channels such as the voice but that they gained more and more of their advantage for less leaky channels such as the face. They interpreted the results as showing that as females grow older, they learn to be more nonverbally courteous or accommodating as society expects. Similarly, it has been found that as far as anger expressions are concerned, women seem to read facial cues less accurately than men do, especially when the encoder is a man (Rotter & Rotter, 1988; Wagner, MacDonald & Manstead, 1986).

As summarised above, individuals gradually form their own communication styles while assimilating norms and values of the culture in which they live. Matsumoto stated (1996, p. 156):

> *Although most people think of culture as a macrolevel, social construct, culture is at the same time a highly personal, individual construct. In one sense, culture can be defined by the degree to which a group of people shares norms, attitudes, values, or behavior, but I believe that definition of culture exists to different degrees in different individuals.*

Individuals' perceptual processes, therefore, would reflect the environments in which they have lived and how they have been socialised in them. Their level of social competence would be reflected in their perceptual accuracy and understanding of social rules.

1.3. Person Perception and Social Skills

Combs and Slaby (1977) defined social skill as "the ability to interact with others in a given social context in specific ways that are socially acceptable or valued and at the same time personally beneficial, mutually beneficial, or beneficial primarily to others" (p. 162). While their definition of social skill relates to the macro level of social interaction and emphasises the importance of interaction outcomes, other authors such as Argyle (1981), Kelly (1982) and Hargie (1986) defined social skill in terms of the behaviour of the individual. Kelly explained that social skills are made up of learned behaviours which individuals use to obtain reinforcement from their environment. Hargie defined social skill as "the process whereby the individual implements a set of goal-directed, interrelated, situationally appropriate social behaviours which are learned and controlled" (p. 12).

Due to differences in the theoretical focus and research environments, approaches to social skill research have been varied. Bierman and Montminy (1993), for example, studied peer relations, while Riggio, Tucker and Widaman (1987) looked at individuals' ability to create a specific social impression. In addition, social skill studies have been variously focused on communicative competence, emotional competence, cognitive competence and a number of other competencies, and their theoretical spectrum has ranged from the strictly behavioral to the psychodynamic (Feldman, Philippot & Custrini, 1991). In this review, communication competence is examined as an important element of social skills. Particularly, the importance of nonverbal perceptual ability is looked at in the context of interpersonal communication.

Communication competence is defined as "the ability of an interactant to choose among available communicative behaviors in order that he may successfully accomplish his own interpersonal goals during an encounter while maintaining the face and line of his fellow interactants within the constraints of the situation" (Wiemann, 1977, p. 198). Danzinger (1976) emphasised that

the effects of interpersonal communication extend throughout our life as we are essentially a communicating organism. He explained that our constant confrontations with others provide us with interpersonal feedback which challenges or supports our internalised self-image.

Wiemann and Giles (1988) described communication as the ongoing and dynamic sequence of events in which interactants are affected by each other in a system of reciprocal determination. In order to carry out this sequence of events skillfully, the ability to perceive communication cues from others appropriately is required. Forgas (1985, p. 21) stated "it is the first crucial stage in any interaction between people. We must first perceive and interpret other people before we can meaningfully relate to them." Cook (1979) regarded the study of person perception as the key to understanding social behaviour by stating that the way people see each other determines the way they behave towards each other.

There are two forms of face-to-face human communication - verbal and nonverbal. Although verbal elements often express contents of communication while nonverbal elements provide the contexts in which the contents are described, both of these elements of communication are closely connected. Hall (1979) divided social communication skills into two separate class of skills - reception of cues and action. She further described four kinds of abilities required for reception of cues: (1) ability to decode nonverbally communicated affect, interpersonal orientation and intentions (2) ability to understand verbally communicated meaning, including both the literal and metaphoric meanings (3) ability to integrate verbal and nonverbal meanings in order to detect the messages which are characterised by verbal-nonverbal discrepancy and also to understand the ways in which nonverbal cues amplify or qualify verbal messages (4) ability to understand social contexts and roles. Lack in even one aspect of perceptual ability, therefore, can lead to misperception of others, and miscommunication.

Trower, Bryant and Argyle (1978) studying the relationship between social skills and mental health, stated that there is a tendency to misperceive particularly in unfamiliar settings, and this can lead to rapid breakdown in communication. Patients are often poor perceivers of other people, particularly of their feelings, schizophrenics being an extreme case (Davitz, 1964). It has been found that schizophrenics lack the ability to interpret emotions from photographs (Dougherty, Bartlett & Izard, 1974; Muzekari & Bates, 1977; Walker, Marwit & Emory, 1980; Cutting, 1981) and audio material (Turner, 1964; Jonsson & Sjostedt, 1973). It was also reported that they failed to accurately perceive social interactions depicted in audiovideo (Cramer, Weegmann & O'Neil, 1989). Trower (1980) speculated that the deficits in decoding messages from nonverbal cues may underlie patients' lack of skill in responding to situational cues. According to Trower *et al.* (1978), there are several forms of failure in perceptual processes: "(a) low level of discrimination and accuracy (b) systematic errors, e.g., perceiving others as more hostile than they are (c) inaccurate stereotypes or over-use of them (d) errors of attribution, e.g., attributing too much to person, too little to situation (e) halo effects, e.g., perceiving people as consistently good or bad" (p. 9). Misperception can occur with any individuals. However, misperception by patients seems to be more persistent and, therefore, to have greater effects on their communicative activity.

Contrary to the above findings on patients' poor perceptual ability, LaRusso (1978) and Davis and Gibson (2000) reported their heightened perceptiveness with spontaneous facial expressions as opposed to the posed expressions used in previous studies. Davis and Gibson found that paranoid schizophrenic patients were more accurate in the judgement of spontaneous facial expressions for surprise and for negative emotions (sadness, anger, fear and disgust) than the normal controls. In contrast, the controls were found to be better than the patients in interpreting posed expressions. Davis and Gibson's finding indicates that in terms of discrimination accuracy, patients

can perform better in certain forms of nonverbal expressions than non-patients. However, their sensitivity to negative emotions, which are often masked by social display rules, might work against them in social interaction. This would also affect higher stages of their perceptual processes, such as attributions.

It seems that those with psychological or psychiatric disturbances have not acquired or have lost the ability to utilise communication cues properly and suffer from their faulty perceptual styles (Trower *et al.*, 1978). Trower *et al.* stated two ways in which failure of social performance may be related to other aspects of disorder. Firstly, social failure may be primary, leading to social rejection and failure to cope, which results in anxiety and other symptoms. Secondly, social failure may be caused by other personality disturbances but this may lead to social rejection and incompetence and, therefore, aggravation of disturbances. There is a great deal of research and theory relating problems of anxiety and depression to social inadequacy (Dow & Craighead, 1984). Social anxiety is considered to be a kind of anxiety which often involves social avoidance (e.g., Watson & Friend, 1969; Curran, 1977), while depression has frequently been related to social inadequacy (Coyne, 1976; Libet & Lewinsohn, 1973; Weissman & Paykel, 1974). Children with learning disabilities and behavioral problems such as attention-deficit/hyperactivity disorder often have difficulty with social decoding which affects their acquisition of social skills (Flicek, 1992; Nabuzoka & Smith, 1995).

Differences in decoding ability and social skills were also observed among a nonclinical population. Edwards, Manstead and MacDonald (1984), testing children aged 8 to 11, found that popular children measured on a self-report scale demonstrated greater skill in identifying emotion expressions than those who are less socially successful. Spence (1987) found, among kindergartners, a strong correlation between the number of positive peer nominations received and accuracy in identifying the emotions portrayed in photographs. Reichenbach and Masters (1983) reported a significant positive

correlation between family stability and preschoolers' and third graders' ability to identify the emotions portrayed in the slides of children's facial expressions. It has been shown that from the toddler years, children's social competence in peer community is associated with their nonverbal encoding and decoding skills (Montagner, Restoin, Ullman, Rodriguez, Godard & Viala, 1984; Philippot & Feldman, 1990; Promnitz, 1992). This pattern from early age has long-term consequences, since an association between social skills, socioemotional adjustment and nonverbal behaviour was also reported from the observations of older children, adolescents and young adults (Edwards *et al.*, 1984; Feldman, White & Robato, 1982; Halberstadt, 1986, 1991; Rutter & O'Brien, 1980).

Examining adults, Steffen and Lucas (1980, in Glass & Merluzzi, 1981) found that in comparison with low competent males, socially competent males were more aware of the female confederate's appearance in a social interaction task and of their thoughts about the interaction and their feelings toward the female confederate. Fischetti *et al.* (1977) reported that socially competent males were better at discriminating a female's verbal and nonverbal cues which communicated understanding and rapport than were socially inadequate males. Peterson, Fischetti, Curran and Arland (1981) found similar results with female participants and a male confederate. However, the results were not as strong as the original ones. Testing undergraduate students, Carton *et al.* (1999) found that errors in decoding facial expressions and tone of voice were associated with less relationship well-being and greater depression.

A relationship between nonverbal decoding ability and professional efficiency has also been reported. DiMatteo (1979) explained that physicians' ability to interpret nonverbally communicated affect, as well as to express emotions nonverbally, seems to be related to their ability to satisfy patients' needs for the socioemotional aspects of care. She further suggested that nonverbal encoding and decoding skills may jointly play a large part of a

general ability to relate empathetically to people in a therapeutic relationship. Rosenthal *et al.* (1979) reported more specifically that in six studies of counsellors and psychotherapists, their performance in the body-only channel of the PONS was the best predictor of supervisors' ratings of their counselling effectiveness.

As has been described earlier, social skills of individuals are made up of interrelated, learned behaviours. It can be assumed, therefore, that social skills can be improved with further learning and improvements in one component can lead to improvements in social skills as a whole. Argyle (1969) regarded social skills as analogous to serial motor skills, and suggested six elements of the social skill model: (1) goals of skilled performance (2) selective perception of cues (3) translation process (4) motor responses (5) feedback which makes correction possible (6) timing. In examination of social skills, these elements have to be looked at so that training can be targeted at a specific element.

Social Skills Training (SST), which is now more commonly referred to as Communication Skills Training (CST), has been developed to equip people with social/communication skills necessary to achieve better social functioning. Ellis and Whittington (1981), based on the target population and the aim of the training, divided SST into three categories: remedial, developmental and specialised. Remedial SST is targeted at those whose repertoire of social behaviours is considered to be inadequate for everyday life. The aim of the training is to bring social behaviour of such people closer to an average level of competence. Programmes have been developed for such groups as psychiatric in- and out-patients (Falloon, Lindley, MacDonald & Marks, 1977; Matson & Stephens, 1978; Benassi, 1985; Honeycutt & Belcher, 1991), alcoholics and other addicts (Chaney, 1989; Van Hasselt, Hersen & Milliones, 1978), and aggressive individuals (Coleman, Pheiffer & Oakland, 1992, Goldstein, 1993). Developmental SST is aimed at helping to accelerate and facilitate slow or distorted development in social skills. Programmes have been set up for children who are thought to be at risk of mental illness or

behaviour disorder (Van Hasselt, Hersen, Whitehill & Bellack, 1979; Oden & Asher, 1977; Combs & Slaby, 1977). Others have been for more normal children who need help in more situation-specific behaviours such as those found in classrooms (Wright, 1976; Cartledge & Milburn, 1978). Specialised SST is targeted at a wide range of vocational groups, such as teachers (Ellis & Whittington, 1972; Jensen & Young, 1972), counsellors and therapists (Carkhuff, 1969; Ivey & Authier, 1978; Bouchard, Wright, Mathieu, Lalonde, Gergeron & Toupin, 1980) and managers (Argyris, 1976; Blake & Mouton, 1964, 1978; Latham & Saari, 1979). These professionals require training because of their particular vocational objectives which necessitate specialised forms of interaction.

In an examination of the results of various training programmes, Ellis and Whittington (1981) reported short-term improvements in trainees' social skills. Marzillier (1978) also summarised the remedial SST literature and concluded that although there is encouraging evidence for short-term gains with psychiatric in-patients, there is no evidence that these behavioural changes either lasted or helped patients to cope with real-life situations. However, they reported the positive results with out-patients, which was assessed by self-reporting and clinical measures up to six months after training (Argyle, Bryant & Trower, 1974; Marzillier, 1978; Marzillier, Lambert & Kellett, 1976).

The concept of SST/CST has extended to other areas such as training cross-cultural skills in multi-cultural societies and for host-sojourner relations (Bochner, 1986). This is based on the idea that cross-cultural competence is a special case of being socially skilled (Argyle, 1980). Bochner explained that when people from different cultures meet, they have difficulty in communicating with each other due to differences in their communication codes and their unawareness of the differences. In the training, appropriate communication styles are learned through various methods such as role-playing and modelling. Collett (1971) reported the results of an experiment

which showed that Arabs preferred Englishmen trained in Arab nonverbal communication styles (e.g., more mutual looking, positioning themselves closer, touching each other slightly during interaction, more smiling and handshaking) to a control group of Englishmen who were merely given information about the Arab world. Bochner stated that although most cross-cultural SST programmes tend to concentrate on teaching their clients the actual behaviour patterns which they lack, it would be desirable for the training to include more cognitive aspects such as teaching interpersonal rules and social values. Inter/cross-cultural skills and training programmes are examined in more detail in Chapter 3.

SST/CST programs differ in terms of their emphasis on various aspects of communication skills. In some of the training programs such as assertiveness training, the behavioural aspect of communication skills is emphasised (e.g., Eisler, Miller & Hersen, 1973). Others include more cognitive aspects of communication skills such as getting information, planning and problem solving (e.g., Trower *et al.*, 1978). Ellis and Wittington (1981) explained that as a reflection of the behaviourist origins of SST (in assertiveness training and microteaching), observational skills and other aspects of cognitive processing skills have received far less emphasis than initiating and responding skills.

Trower (1984), however, emphasised the importance of cognitive processes in SST/CST. He stated that there are no purely physical criteria for appropriate social behaviour because people set up criteria cognitively by creating social realities out of rules, and through them, norms. As a basis for training, he supported the agency approach, which regards cognition as playing the central generative role in people's behaviour, as opposed to the organism approach which focuses on physical/behavioural phenomena.

Although limited, some efforts have been made in training perceptual skills. Davitz (1964) reported a study on improving the perception of emotion from tone of voice. In this study, the experimental group were asked to

identify the emotions expressed in the letters of alphabet, and later to try to express the emotions themselves. Their improvement in perceptual accuracy from the pre- to post-training tests was significantly larger than that of the control group who did not go through the training. Jecker, Maccoby and Breitrose (1965) succeeded in training teachers to perceive more accurately whether or not pupils had understood what they were being taught. In the training a series of one-minute films of pupils being taught were shown to the teachers and their attention was drawn to the behavioural and facial cues. After the training, the teachers improved their scores on a new set of similar films of pupils. Rosenthal *et al.* (1979) also reported some tentative success in training adult populations to be more sensitive to the emotion messages portrayed in the PONS.

In the training of social skills, the first crucial step is to be aware of the problematic aspects of behaviour. Trower *et al.* (1978) explained the organisation of elements of social behaviour at two different levels. They stated (p. 14):

> *At the higher levels there is conscious monitoring according to a plan and the immediate feedback, and at lower levels whole chunks or units of behaviour are run off automatically. Faulty skills can occur at both these levels. At the lower levels elements may be combined in the wrong way or essential ones may be lacking, and because these habit patterns are usually overlearned and below the level of consciousness they are difficult to change.*

They analysed behaviours with the aid of videotapes by breaking them down into elements, bringing them to a conscious level and building them up again by training. Training for the higher level involved building effective plans and strategies, and also the reorganisation of behavioural units into a different sequence so that situationally appropriate behaviours can be promoted.

As behavioural skills are examined and trained by bringing behavioural units into the conscious level, perceptual processes can be examined to determine the causes for misperception. Hastorf *et al.* (1970, p. 25) emphasised the importance of examination of perceptual processes:

> *if the content of the conversation can influence the meaning of an eye glance, then context can influence the meaning of the shrug of a shoulder. The central issue must change from an expansion of the list of cues to a concern with the inference process by which those cues are added together to arrive at a perception. There must be factors that lead to the emphasizing of one cue or the discounting of another. The next important step, we think, will be more direct explanation of the processes by which cues are combined to form the total impression.*

This view was supported by Archer and Akert (1984), who developed the Social Interpretation Task (SIT; 1977) in order to study perceptual processes. Archer and Costanzo (1989) made improvements on the SIT and developed the Interpersonal Perception Task (IPT). They have examined various aspects of perceptual processes including the relative contributions of verbal and nonverbal cues (Archer & Akert, 1977), and the relationship between awareness and perceptual accuracy (Smith *et al.*, 1991). The IPT has also been used as a teaching technique for verbal and nonverbal communication (Costanzo, 1992; Costanzo & Archer, 1992). Social perception is a complex process, therefore an adequate assessment must take into account both the situational variability of perception skills and the specific nature of deficits observed in diverse situations (Morrison & Bellack, 1981); training has to be undertaken accordingly. Assessment tools for perceptual skills are reviewed in Chapter 2.

1.4. Summary

Perceptual skills as part of communication ability play an important part in people's social competence. Appropriate understanding of others entails accurate perception of communication cues in the light of the implications drawn from contextual information. Nonverbal communication conveys the social contexts in which interactions are carried out. It has been shown to be under the influence of cultural norms and values in the form of display and decoding rules. This, together with the selective and inferential nature of person perception, often results in misperception and miscommunication.

Developmental and cross-cultural studies have shown how individuals' perceptual styles are formed throughout their life affected by environmental requirements. Examination of perceptual processes, therefore, reveals the ways in which individuals relate to the environments and the history of their social learning. For improvement of perceptual skills, appropriate assessment of perceptual processes and training would be required. SST/CST which tends to be behaviourally oriented would have to include more of the cognitive aspect of communication skills, depending on the target population and its aims. Although limited, successful attempts to improve perceptual skills have been reported. Several assessment tools for examination of perceptual processes and accuracy have also been developed. It is hoped that future developments in the methods and measures of person perception would help to clarify our perceptual processes further and contribute to the improvements of SST/CST.

CHAPTER TWO

Measures of person perceptual ability

In this chapter, the measures developed for the assessment of person perceptual ability are examined. Standardised measures are divided into two kinds - performance and paper-and-pencil measures. Performance measures examine how accurately people can recognise or interpret affects or interpersonal relationships from communication cues presented in media such as film, slides and photographs. Paper-and-pencil measures contain written items which ask about perceived level of person perceptual ability. Except for some which only deal with the assessment of perceptual ability (e.g., Zuckerman & Larrance, 1979), other paper-and-pencil measures include perceptual ability as part of the higher construct of competence using terms such as social and interpersonal competence. These measures differ in their approach in distinguishing components of competence - whether they partition competence according to the types of interpersonal task domains such as emotional support and negative assertion or according to behavioural skills such as nonverbal sensitivity and expressivity (Buhrmester, Furman, Wittenberg & Reis, 1988). Although the second approach is more in line with the performance tests of perceptual ability, the measures of both approaches can be/have been used in parallel to test performance in the context of higher construct of social and interpersonal competence. Riggio (1986) reported positive but weak relationships between the scores for the subscales of his paper-and-pencil measure, the Social Skills Inventory and those for the PONS (Rosenthal *et al.*, 1979).

Performance measures differ in their use of media depending on the aims of the research and the experimental circumstances. Film has the advantage of being able to capture natural behavioural flow as opposed to the

static images shown in slides or photographs. Slides and photographs have been largely used to investigate the recognition or interpretation of facial expressions, while film has often been used to examine the recognition or interpretation of multiple communication cues.

Behavioural sources used in the performance measures can be divided into three types: (a) posed (b) induced and (c) naturalistic (Archer & Akert, 1984; Archer, Akert & Costanzo, 1993). Archer *et al.* explained that the most ideal behavioural sources are naturalistic, although posed behaviour has been most commonly used due to the control over the situations and affects captured in the media. They further explained that as posing involves deliberate efforts to transmit emotions, there has been a concern that posed emotions may be more conventional and exaggerated than spontaneously expressed emotions. In fact, Frijda (1969, in Archer & Akert, 1984) found that posed expressions were more typical and pronounced than spontaneous expressions. Davis and Gibson (2000), however, reported that paranoid schizophrenic patients were significantly more accurate in perceiving spontaneous facial expressions for surprise and negative emotions (sadness, anger, fear and disgust) than normal controls. On the other hand, normal controls were found to be significantly better in interpreting posed emotion expressions than the psychiatric patients. This would suggest there may be significant differences between posed and spontaneous expressions and, therefore, it is important to make a distinction between the two (Bull, 2002). Some studies (e.g., Buck, 1976) used induced behaviour by showing pleasant or disturbing pictures to encoders and recording their reactions. However, the use of induced behaviour has been limited, due partly to the ethical problems in inducing encoders to experience unpleasant feelings.

In the following sections, firstly, performance measures are summarised, followed by paper-and-pencil measures.

2.1. Performance Measures

2.1.1 The Interpersonal Perception Task (IPT; Archer & Costanzo, 1988; Costanzo & Archer, 1989)

The IPT was constructed with the aim of assessing the process of social perception. It is an improvement on the authors' previous task, the Social Interpretations Task (SIT; Archer & Akert, 1977).

The IPT is a 38-minute videotape task containing naturalistic full-channel (verbal and nonverbal) sequences of behaviour. It is made up of 30 interaction scenes which vary in length from 28 to 124 seconds. A total of 54 different encoders (26 male and 28 female US citizens, ranging in age from 18 months to 67 years) appear in the scenes. Their interactions are unscripted and spontaneous. For every scene, there is an objective criterion of accurate judgment. Viewers are asked to judge the interactions of people which are based on their actual relationships and circumstances. The five types of social interaction depicted are status, intimacy, kinship, competition and deception. Scenes from these five scene-types are presented randomly with six second blank interval on the video. Viewers are presented with one question (which also appear before each scene on the video) and two or three possible answers on answer sheets.

In a series of reliability and validation studies, Costanzo and Archer (1989) reported .52 for the internal consistency of the IPT (KR-20) with 438 undergraduate students, and .70 for test-retest correlation (over 5 weeks) with 46 undergraduate students. The IPT was found to be significantly ($r = .25$, $p = .05$) correlated with the Self-Monitoring Scale (SM; Snyder, 1974); out of the three factors constituting the SM (Briggs, Cheek & Buss, 1980), the IPT was found to be significantly correlated with the acting ability factor ($r = .28$, p

<.05) and the extroversion factor (r = .32, p < .01). Peer rating for social sensitivity was also significantly related to the IPT scores (r = .48, p < .05).

Unlike other tasks which aim at studying the recognition or interpretation of emotion expressions and behaviours, Costanzo and Archer regarded emotion expressions and behaviours as one of the vehicles of social interpretation. By so doing, they have overcome the inherent problems relating to emotion research, such as those of emotion labelling and accuracy criterion. Archer and Akert (1984) stated that "the use of emotion labels may not only introduce systematic error, it also seems unfaithful to the naturalistic processes by which emotions are recognized in real life" (p.118). They also stated that "there is no factual or unambiguous way to verify the accuracy of judgments about emotion *per se*" (pp.127-128), criticising the use of expert opinion or ratings (which are most often utilised) as not fully objective and potentially biased.

In spite of the improvements made on the previous tasks, the IPT still has limitations in measuring social perception (Costanzo & Archer, 1989). Firstly, while the IPT measures perceptual accuracy and processes in observation of unfamiliar people, our daily interaction often involves people with whom we have previously interacted. Secondly, in the video task, viewers are restricted to observing the channels contained in the video. In everyday interaction, we can observe various nonverbal cues expressed by the people with whom we are interacting, together with environmental cues to examine the congruency of cues. Although video is to date the best possible medium to convey everyday interaction scenes in an experimental setting, certain nonverbal and environmental cues are inevitably missed out in framed recording.

2.1.2 Matsumoto and Ekman's Japanese and Caucasian Facial Expressions of Emotion (JACFEE; Matsumoto & Ekman, 1988)

The JACFEE was designed to examine the cultural differences in the judgment of posed facial expressions by satisfying the requirements outlined by Matsumoto (1992): (1) cultures in comparison must view the same expressions (2) the expressions viewed must meet criteria for validity and reliably portraying the universal emotions (3) encoders must appear only once in the stimuli and (4) encoders have to be more than one race.

The task consists of 56 photos of different encoders including 28 Caucasian and 28 Japanese encoders. There are eight photos for each of seven universal emotions (anger, contempt, disgust, fear, happiness, sadness and surprise), with four photos each (two males and two females) of Caucasian and Japanese. All the photos chosen (from the thousands of photos taken) were coded using Ekman and Friesen's (1978) Facial Action Coding System (FACS). The stimulus faces portray emotion either in full face, partially or blended with other emotions. Viewers are presented with one stimulus face at a time for 10 seconds each in a random order and asked to select a single term from seven choices (anger, contempt, disgust, fear, happiness, sadness and surprise) that best describe the emotion portrayed. Binomial tests were carried out as a measure of reliability for viewers selecting the correct response; these were significant at the .0001 level (Biehl, Matsumoto, Ekman, Hearn, Heider, Kudoh & Ton, 1997). Internal consistency (coefficient alpha) was reported to be .94 (McIntire, Danforth & Schneider, 1999).

Studies using the JACFEE have shown that cultures differed in their accuracy in recognising emotion expressions, although the accuracy by various cultures was above chance level, indicating some level of universality in judgment of emotions (e.g., Biehl *et al.*, 1997). Matsumoto (1992) reported higher recognition accuracy of anger, disgust, fear and sadness for the Americans (cf. the Japanese), regardless of the race or gender of the encoder,

although no differences were observed with happy and surprise expressions. Matsumoto and Ekman (1989) also reported differences in the intensity rating of emotion expressions between the Americans and the Japanese, which were observed regardless of the race or gender of the encoder: the Japanese were found to give lower intensity ratings to the expressions of happiness, anger, sadness and surprise than the Americans.

Matsumoto, Consolacion, Yamada, Suzuki, Franklin, Paul, Ray and Uchida (2002), using the JACFEE expressions of different intensity levels, found that intensity ratings of external displays and internal experiences of the encoders differed between the Americans and Japanese. Using computer morphing technology, they created different intensity levels of emotions based on the neutral and full-faced expressions of same encoders. The participants undertook categorical judgements of the emotions and also rated the intensity of the external displays of the expressions and the subjective experiences of the encoders, using two 9-point scales (labelled *None*, 0 to *A Lot*, 8). With high intensity expressions, the Americans rated external displays significantly higher than internal experiences while there was no difference for the Japanese. However, with low intensity expressions, there was no difference between the two ratings for the Americans while the Japanese rated internal experiences higher than external displays.

This task overcame the shortcomings of the previous cross-cultural studies by providing both Caucasian and Japanese facial expressions in the stimulus slides. Due to the wide availability of US measures, cross-cultural studies have been conducted using mainly Caucasian encoders, and this has led to arguments that the previous findings were the artifacts of experimental design. However, Matsumoto and Ekman's method of creating universal facial expressions using the FACS was criticised by Elfenbein and Ambady (2002b). They stated the JACFEE Japanese facial expressions might not "represent authentic Japanese expressions" (p.246). They claimed that although research has demonstrated the universality of the recognition of seven

basic emotion expressions, it is still open to debate whether these emotions follow identical expressive norms in Japan. They also mentioned that the Japanese encoders were either Americans from families of Japanese ancestry or Japanese residents of the US, and therefore they are not indigenous Japanese encoders.

2.1.3 Matsumoto and Ekman's Japanese and Caucasian Brief Affect Recognition Test (JACBART; Matsumoto, LeRoux, Wilson-Cohn, Raroque, Kooken, Ekman, Yrizarry, Loewinger, Uchida, Yee, Amo, & Goh, 2000)

The JACBART was developed based on Matsumoto and Ekman's (1988) previous tasks - the JACFEE (reviewed above) and the Japanese and Caucasian Neutral Faces (JACNeuF). The JACBART scenes were created by embedding each of 56 JACFEE expressions (eight each of seven universal emotions - anger, contempt, disgust, fear, happiness, sadness and surprise for both Caucasians and Japanese) in the middle of a one-second presentation of the same encoder's neutral expression (taken from JACNeuF) on videotape. This presentation method was intended to eliminate after-images of the target JACFEE expression. The scenes are presented in a random order with three-second inter-stimulus intervals. However, the same emotion scenes are not presented consecutively. An orienting tone precedes the presentation number which is shown prior to the scene itself. The three versions of the test differ in the length of exposure of the JACFEE expression, with version 1 presenting the target at 1/15th of a second, version 2 at 2/15th of a second and version 3 at 1/5th of a second. These exposure times were selected based on the previous testing results with the Brief Affect Recognition Test (BART; Ekman & Friesen, 1974) which suggested that they reduce the agreement levels for each expression for maximum item discrimination. Judgements of emotion can be

made using a 9-point scale (0 = Not at All, 1 = A Little, 4 = Moderate, 8 = A lot) indicating the presence or absence of seven emotions - anger, contempt, disgust, fear, happiness, sadness, and surprise - in each scene. Alternatively, a forced-choice method can be used by asking viewers to select the term (out of the seven described above) which best represents the emotion portrayed.

Five reliability studies were carried out with 579 undergraduate students in total. The first study with the multi-scalar rating JACBART revealed internal consistency (Cronbach alphas) of .86 for total recognition scores of version 1, .87 for that of version 2, and .92 for that of version 3. Another four studies, using the forced choice JACBART, showed the internal consistency for version 3 ranged from .82 to .89, while for version 2 the value was .90. A test-retest reliability study with three to four weeks interval showed a Pearson correlation of .78 ($p < .001$, $N = 56$) for total scores of version 3. Practice effects were observed in the second scores in comparison with the first scores ($t(50) = 3.06, p < .01$ for total scores).

Concurrent validity of the JACBART was tested with standardised personality tasks: Big Five Inventory-54 (BFI; John, 1989) in four studies; the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1968) in one study; and the Revised Neo Personality Inventory (NeoPI-R; Costa & McCrae, 1992) in one study. The results showed that the test was positively correlated with Openness and Conscientiousness of the BFI and the NeoPI-R, and Extroversion of the EPI, while it was negatively correlated with Neuroticism of the EPI.

Comparisons between the three versions of the JACBART revealed that recognition scores for all emotions on version 2 were significantly higher than those on version 1. However, recognition scores for anger and sadness on version 3 were significantly higher than those on version 2. Female expressions were found to have higher recognition scores than males on version 1 and 3, but not on version 2. Comparisons among the seven emotions

revealed that in two studies, happiness had the highest accuracy followed by surprise, while contempt had the lowest.

This test is an improvement on the JACFEE in that emotion exposure length has been made shorter in order to optimise the discrimination of perceptual accuracy. This method of brief exposure (as also used in the BART) was described as approximating "usual interpersonal conditions, in which a single facial expression can easily be missed" (Ekman & Friesen, 1974, p. 221). Matsumoto *et al.* explained that the test had overcome the shortcomings of the BART, which does not balance facial physiognomy and encoder sex, and does not control the effects of afterimages on emotion judgements. BART contains 110 facial expressions of 6 males and 8 females, which are presented in black and white slides with an exposure ranging from 1/100th of a second to 1/25th of a second. Out of the three versions of the JACBART, Matsumoto *et al.* recommended the use of version 3 with multi-scalar ratings as they produced the best internal reliability statistics.

2.1.4 The Profile of Nonverbal Sensitivity (PONS; Rosenthal, Hall, DiMatteo, Rogers & Archer, 1979)

The PONS is a 45-minute black and white film test developed to assess the ability to decode nonverbal communication. Cues are presented in eleven channels (five pure channels and six mixed channels): (1) face alone, no voice (2) body from neck to knees, no voice (3) face to body down to thighs (figure), no voice (4) electrically content-filtered voice, no picture (5) randomised spliced voice, no picture (6) face plus randomised spliced voice (7) face plus electrically filtered voice (8) body plus randomised spliced voice (9) body plus electronically filtered voice (10) figure plus randomised spliced voice (11) figure plus electronically filtered voice. It is composed of 220 randomised segments from 20 different affective scenes portrayed by a young

woman. These scenes cover a wide range of affects which are categorised into four quadrants: positive-submissive (e.g., helping a customer); positive-dominant (e.g., expressing motherly love); negative-submissive (e.g., asking forgiveness); negative-dominant (e.g., threatening someone). The viewer's task is to look at the film and choose from two alternatives the label which correctly describes the scene portrayed in the segment.

Internal consistency (KR-20) with the norm group of 492 US high school students was .86. Median test-retest reliability of 6 samples, 293 college and high school students with an interval of 10 days to 10 weeks was .69. Females were found to score higher than males and this gender effect was relatively stable over time, at least cross-sectionally. A large linear increase in accuracy was observed which started to level off somewhere between 20 and 30 years of age. The cultures best able to decode the PONS were those rated as most similar to the US culture, although all the 20 different cultures tested performed significantly above chance. Validity studies using standardised personality tests, ratings by self and by others showed that participants who scored higher on the PONS were judged by acquaintances, clients, spouses, or supervisors as better adjusted, more interpersonally democratic and encouraging, less dogmatic, more extroverted, more likely to volunteer for and appear for behavioral research, more popular and more interpersonally sensitive.

The PONS has been the most widely used test academically and clinically to assess individual differences in nonverbal sensitivity. However, this test is not free from its own limitations which affect its ecological validity. In contrast to our everyday communication activity in which we have to judge different people in various contexts, the PONS asks the viewers to decode only one female encoder without contexts. It also presents her nonverbal channels in isolation. As with most other nonverbal perceptual tests, the PONS measures only the ability to recognise affects and emotions portrayed and does not measure the process of interpretation.

2.1.5 The Child and Adolescent Social Perception Measure (CASP; Magill-Evans, Koning, Cameron-Sadava & Manyk, 1995)

The CASP is designed for use in a clinical setting with children and adolescents who have mental health problems. It is based on a model of social interaction proposed by Doble and Magill-Evans (1992) and examines children's ability to attend to and infer emotional states from nonverbal cues.

It consists of 10 videotaped scenes, each of which lasts 19-40 seconds. There are two to four characters per scene who acted using their own dialogue without scripts being provided. Viewers are presented with facial expressions, tone of voice, gestures, postures and situational cues simultaneously which express a range of emotions (positive/negative/neutral) with a range of intensities. The test is administered individually and requires approximately 40 minutes (range 20-85), as the experimenter is required to write down the children's responses. After each scene is shown, children are asked to describe what happened in the scene, what each of the people is feeling, and how he/she could tell the person is feeling that way. These questions are asked according to the standardised protocol. Children's responses are categorised into: (1) the emotion score - identification of each character's feeling in each scene and (2) the nonverbal cue score - number of each nonverbal cue category correctly mentioned for each character in each scene.

Validation studies using 212 non-patient normal children in age from 6 to 15 years showed internal consistency (Cronbach alpha) of .88 for the total emotion score and .92 for the total nonverbal cues score. The test-retest correlation coefficient with 14 children aged from 7 to 13 years was .83 for the total emotion score and .87 for the total nonverbal cues score (average interval 51 days). Correlation coefficients for individual scenes ranged from .22 to .74 with the exception of one scene which had a correlation of -.02 for the emotion score. Total emotion scores and total nonverbal cue scores were significantly correlated with age (r = .82 and r = .73 respectively). Girls scored

significantly higher than boys across the age groups [$F(1, 192) = 11.4, p = .001$ for total emotion score, $F(1, 192) = 6.6$, $p = .011$ for total nonverbal cue score]. No significant relationships were observed between the CASP scores and children's expressive vocabulary.

Studies with children and adolescents with mental problems have shown that the CASP is useful to identify and follow up the children who need social skills training focused specifically on social perception abilities (Magill-Evans *et al.*, 1995). Magill-Evans *et al.* reported that the test was sensitive to change in children's perceptual skill when used as part of an intensive intervention programme.

The CASP is unique in that contextual information plays an important role in the interpretation of the scenes; the viewers are asked not just about the emotions expressed by the encoders but also the reasons for their responses. Clinical use has made this test very individually oriented and close examination of the process of person perception possible. Magill-Evans *et al.* (1995) explained one of the shortcomings of the CASP is that it contains primarily Caucasian encoders, which limits representativeness of the normative data. They also mentioned that the role of attention and short-term memory skills on the test has not been studied systematically, and suggested that the CASP should be used in combination with other measures in order to examine levels of patients' social functioning.

2.1.6 The Contextual and Affective Sensitivity Test (CAST; Trimboli & Walker, 1993)

The CAST was developed to measure a person's sensitivity to three aspects of communication process: (1) identification - the ability to identify both positive and negative affective states (2) nonverbal sensitivity - the ability to decode

nonverbal cues appropriately (3) contextual sensitivity - the ability to interpret ambiguous affective messages in light of the contextual cues.

The test consists of 32 audiovisual segments which were obtained from the recording of live television programmes shown in Australia. These recorded segments contain spontaneous interactions, as the programmes were not scripted. Out of 32 segments, 16 are to test the ability to identify the affect communicated in consistent messages (messages in which the verbal and nonverbal channels communicate the same affect). Eight segments are to test the ability to either attend to or disregard the nonverbal signal in inconsistent messages (messages in which the verbal and nonverbal channels communicate opposite affects). The remaining 8 segments are to test the ability to decode ambiguous affective messages when presented with various amount of contextual information. The test is presented on a TV screen and it takes about 15 minutes to complete. Viewers are asked to judge the affect being expressed in each segment from a set of five alternative answers given on a response sheet. The items are randomly presented with the exception of the context items. The context items are in two groups of four levels with the first level providing only inconsistent messages without context and the fourth level providing all the contextual messages available. These four levels of the same scenes were presented consecutively.

Examination of item difficulty with 99 Psychology undergraduate students revealed that some items were outside the preset criteria of 25% - 75% correct and were regarded as not discriminating viewers' ability reliably (5 out of 16 consistent messages were too easy and 2 out of 8 inconsistent messages were too difficult). Validity testing with other perception measurements was not conducted. A comparison of people with person-oriented jobs (counsellors, teachers, nurses and psychologists) and those with thing-oriented jobs (firemen, engineers and computer operators) revealed that the person-oriented group performed significantly better on the CAST than the thing-oriented group ($t(155) = 2.13, p < .05$)

Trimboli and Walker provided a new approach to the construction of perceptual tasks by emphasising the issues of consistency between verbal and nonverbal cues and the importance of communication contexts in the assessment of perceptual sensitivity. The CAST, therefore, would enable the assessment of perceptual sensitivity in more realistic conditions than some previously constructed tasks. However, it needs further improvements due to the problem with item difficulty levels and also needs more validation studies before its use can be fully evaluated.

2.2. Pencil-and-paper Measures

2.2.1 Decoding (and Encoding) Measures

2.2.1.1 The Perceived Encoding Ability (PEA) and Perceived Decoding Ability (PDA; Zuckerman & Larrance, 1979)

The PEA and PDA were constructed to examine: "(1) the relationship between perceived and actual nonverbal skills (2) the feasibility of replacing performance measures of nonverbal ability with paper-and-pencil measures and (3) the behavioral and attitudinal correlates of people's beliefs about their nonverbal skills" (p. 171).

The PEA consists of 49 written items and the PDA of 46 items which can be classified according to channel (i.e., general, facial, vocal) and affect (i.e., general or specific). General channel and/or affect indicates that the items do not mention either the channel or the emotion (e.g., "I never try very hard to conceal my feelings"). Specific channels mentioned in the items were only face and voice. Affects represented are: negative-dominant (angry, disliking and hostile); negative-submissive (afraid, sad and guilty); positive-dominant (approving, happy and confident); and positive-submissive (grateful,

impressed and pleasing) and other affects common to interpersonal interaction (nervousness, surprise and affection). In order to examine the level of agreement to the questionnaire items, a 7-point scale that runs from agree (+3) to disagree (-3) is provided for each.

Internal consistency (Armor's Theta) with 385 undergraduate students for the complete questionnaire was .89 for both the PEA and the PDA. Test-retest reliability with 63 undergraduate students for a period of two to three weeks was .81 for the PEA and .84 for the PDA. From a series of studies, Zuckerman and Larrance summarised the results as follows: (1) Females had higher scores on both the PEA and the PDA than males, and the magnitude of this females' superiority was in close agreement with their superiority in encoding and decoding ability. (2) Among males, perceived decoding ability was moderately correlated with social desirability and self-monitoring.
(3) Positive but generally low correlations were observed between the PEA and various encoding tasks and between the PDA and decoding tasks. (4) Both males and females felt that they were better encoders if their face communicated affect well and if their voice communicated deception well.

Zuckerman and Larrance suggested that the positive correlations found between perceived nonverbal ability and the results of a variety of performance tasks indicate that people do have some degree of insight into how good they are at encoding and decoding. Due to low magnitude of these correlations, however, they cautioned against the conclusion that paper-and-pencil scales can replace actual encoding and decoding measures.

2.2.2 Social Skill Measures

Among the large number of social skill measures developed to date, only a few are reviewed in this chapter. The inclusion criteria were based on the following four aspects of the measures: (1) self-reference measures as opposed to other-reference measures (2) encompassing various components of social skills as opposed to measuring specific social skills such as heterosocial skills (3) targeted at the normal adult population as opposed to more specific populations such as psychiatric patients (4) of high reliability and validity. Self-reference measures are the most common approach in measurement of social skills as they are useful in assessing global behavioural pattern of individuals. Spitzberg and Cupach (1989) explained that a person's awareness of how he/she behaves over time and across context is relatively comprehensive. However, they cautioned that the evaluation of one's own abilities is potentially biased by demand characteristics, evaluation apprehension, self-concept and the need for social approval.

Social skill self-reference scales have been developed mainly in the US but they have been translated and used for social skill measurement outside of the US, for example, in Spain, Italy, Germany, Japan and Brazil. However, the use of translated US scales in other cultural settings has been questioned (Takai & Ota, 1994). Takai and Ota stated that "appropriateness involves social norms and rules, which are culturally defined. What is considered polite and socially tactful in one culture may not be considered so in another" (p. 225); they developed their own social skill scale (the Japanese Interpersonal Competence Scale; JICS). They reported that the Japanese scales developed with cultural considerations had higher validity than the translated US scales in the Japanese cultural context. However, Japanese scales and translated US scales were found to correlate moderately with each other, suggesting that social skills entail both universal and culture-specific aspects as observed in our communication styles. The following sections

summarise two US social skill self-reference scales which have been used widely across cultures and two Japanese social skill scales.

2.2.2.1 The Interpersonal Competence Questionnaire (ICQ; Buhrmester, Furman, Wittenberg & Reis, 1988)

The ICQ was developed to assess five dimensions of interpersonal competence: initiating relationships, self-disclosure, asserting displeasure with others' actions, providing emotional support and managing interpersonal conflicts. This questionnaire examines competence according to interpersonal task domains based on the suggestions that behavioural skills may vary according to task domains (Dodge & Murphy, 1984; Goldfried & D'Zurilla, 1969; McFall, 1982).

It contains 40 items (8 items for each dimension). Each item of the ICQ describes a common interpersonal situation (e.g., telling a companion you don't like a certain way he or she has been treating you.). Levenson and Gottman's (1978) 5-point rating scale is used to indicate respondents' level of competence and comfort in handling each type of situation (1 = "I'm poor at this; I feel so uncomfortable and unable to handle this situation, I'd avoid it if possible"; 2 = "I'm only fair at this; I'd feel uncomfortable and would have lots of difficulty handling this situation"; 3 = "I'm OK at this; I'd feel somewhat uncomfortable and have some difficulty handling this situation"; 4 = "I'm good at this; I'd feel quite comfortable and able to handle this situation"; 5 = "I'm extremely good at this; I'd feel very comfortable and could handle this situation very well").

Reliability studies with 422 undergraduate students revealed that internal consistency (Cronbach alphas) ranged from .77 to .87, with a mean of .83. Scale scores were moderately correlated across the five domains, ranging from $r = .26$ to $r = .54$ with a mean of $r = .42$ (all $p < .01$). Four-week test-retest

reliability correlations for each of the 5 scales with 31 undergraduate students were: Initiation, r = .89; Negative Assertion, r = .79; Disclosure, r = .75; Emotional Support, r = .76; Conflict Management, r = .69.

Buhrmester *et al.* summarised reliability and validity data as follows: (1) Self-perception of competence varied as a function of sex of participants, sex of interaction partners, and competence domains. (2) There were moderate levels of agreements between ratings of competence by participants and those by their roommates. (3) Competence scores were related to participants' and roommates' reports of masculinity and femininity, social self-esteem, loneliness, and social desirability. (4) Relationship satisfaction among new acquaintances was predicted best by initiation competence, while satisfaction in friendships was most strongly related to emotional support competence. They concluded that the above findings provided evidence for the value of distinguishing among domains of interpersonal competence.

2.2.2.2 The Social Skills Inventory (SSI; Riggio, 1986)

The SSI examines social skills in terms of behavioural skills. This measure is derived from multidisciplinary research on social and interpersonal skills, but most directly from studies of individual differences in nonverbal communication skills.

The SSI is made up of 90 items and measures six basic dimensions of social skills, namely Emotional Expressivity (EE), Emotional Sensitivity (ES), Emotional Control (EC), Social Expressivity (SE), Social Sensitivity (SS) and Social Control (SC). Emotional Expressivity refers to "individuals' ability to express, spontaneously and accurately, felt emotional states as well as the ability to nonverbally express attitudes and cues of interpersonal orientation" (p. 651). Emotional Sensitivity relates to "a general skill in receiving and decoding the nonverbal communications of others". Emotional Control is "the

general ability to control and regulate emotional and nonverbal displays". Social Expressivity refers to "a general verbal speaking skill and an ability to engage others in social interaction". Social Sensitivity is "the ability to decode and understand verbal communication and general knowledge of the norms governing appropriate social behaviour". Social Control refers to "a general skill in social self-presentation". The response scale for each item is a 5-point Likert scale, ranging from *not at all like me* to *exactly like me*.

Coefficient alphas for the six SSI subscales with 149 undergraduate students ranged from .62 to .87. 2-week test-retest reliability with 40 undergraduate students ranged from .81 to .96. The SSI subscales were generally found to be positively inter-correlated. However, some were negatively correlated such as the EE and EC subscales, and the SS and SC subscales. The SSI demonstrated convergent and discriminant validity in relation to other measures of nonverbal social skills such as the Affective Communication Test (ACT; Friedman, Prince, Riggio & DiMatteo, 1980), the Self-Monitoring Scale (Snyder, 1974) and the PONS (Rosenthal *et al.*, 1979). It also demonstrated convergent and discriminant validity in relation to personality scales such as the short form of the 16 Personality Factor Test (16PF; Cattell, Eber & Tatsuoka, 1970), the Private and Public Self-Consciousness Scales (Buss, 1980; Fenigstein, Scheier & Buss, 1975) and the Marlowe Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1964).

In relation to self-report questionnaire of social behaviours, it was found that those who scored high on the SSI (particularly on the EC subscale) had more acting experiences, and those who scored high on the total SSI and the EC and SC subscales tended to feel more comfortable lecturing to a large group of people. In addition, those who scored high on the total SSI and the EE, SE, ES and SC subscales had more social ties in terms of close friends and number of daily school acquaintances. The SE, SC and the total SSI scores were also significantly correlated with the ratings of initial likability in a role-playing task.

From tests with Japanese undergraduate students, Kayano (1988) reported the reliability alphas of the SSI subscales as ranging from .60 to .87. These are slightly lower than the alphas with the original American students. However, validity testing with other scales yielded similar results to those reported by Riggio and summarised above. Kayano explained that the lower reliability of the scales in Japan might be attributable to the fact that the original American scales were directly translated without much consideration to the Japanese cultural context.

2.2.2.3 The Japanese Interpersonal Competence Scale (JICS; Takai & Ota, 1994)

The JICS was constructed to measure interpersonal competence specifically in the Japanese cultural context. The five dimensions of competence measured are: (1) Perceptive Ability (PA) - the ability to perceive subtle and indirect messages (2) Self-Restraint (SR) - the ability to conceal true feelings and withhold assertion in order to maintain interpersonal harmony (3) Hierarchical Relationship Management (HRM) - the ability to use proper behaviour and language in interaction with superiors (4) Interpersonal Sensitivity (IS) - the ability to manipulate sensitive messages (5) Tolerance for Ambiguity (TA) - the ability to deal with ambiguous stance.

The JICS contains 22 items in total, of which 6 are for PA, 7 for SR, and 3 each for HRM, IS and TA. Each item is accompanied by a 5-point Likert-type scale ranging from *agree* to *disagree*. Subjects are asked to rate themselves on their perceived ability to perform the act described in each item.

Reliability studies with 253 undergraduate students revealed the internal consistency (Cronbach alpha) of five dimensions of the JICS ranged from .80 to .64. Six-week test-retest reliability was .81 for the full scale and .75 for PA, .71 for SR, .70 for HRM, .71 for IS, and .64 for TA. The five dimensions were

generally positively inter-correlated, except for TA which had small negative correlations with PA, HRM and IS. Concurrent validity was examined both with other Japanese interpersonal scales and translated US scales. High positive correlations were observed with Horike's Social Skills Scale (Horike, 1987) (r = .66) and the test of Perceived Decoding Ability (Zuckerman & Larrance, translated by Nakamura & Masutani, 1991) (r = .55). Moderate positive correlations were observed with Kikuchi's Social Skill Scale (Kikuchi, 1988) (r = . 49), Wada's Nonverbal Skills Scale (Wada, 1991) (r = .45) and the Self-Monitoring Scale (Snyder, 1974, translated by Iwabuchi, Tanaka & Nakasato, 1982) (r = .36).

Validity studies that have used students and non-students (adults in or out of employment) and employed demographic variables showed that: (1) females scored higher in IS than males (2) those with a girlfriend/boyfriend scored higher in IS than those without one (3) social experiences after leaving school increased non-student participants' levels of SR, HRM and IS. The levels of HRM and IS were shown to increase between the ages of 10 and 60. From the above validation studies, Takai and Ota concluded that the JICS measures social competence unique to Japanese culture while covering elements of universal social competence.

2.2.2.4 Nonverbal skill scale and social skill scale (Wada, 1991)

These scales were constructed in Japan to measure two subconcepts of interpersonal competence - nonverbal and social skills. The nonverbal skill scale is the original scale developed by Wada which measures unique Japanese nonverbal skills - nonverbal non-expressivity and control, rather than expressivity. He explained that emotion control in public is highly regarded and an important aspect of interpersonal competence in Japan. He further stated that emotional expressivity, on the other hand, has much less weight in

nonverbal communication competence in Japanese culture than in Western cultures. The nonverbal skill scale is made up of 24 items which examine two dimensions - nonverbal non-expressivity and control, and nonverbal sensitivity. The social skill scale is based on the ICQ (Buhrmester *et al.*, 1988). It is composed of 29 items which involve three dimensions - initiation of new relationships, maintenance of intimate relationships and self-assertiveness. The ICQ was modified, so that it is more appropriate in a Japanese cultural context. Each item in both of the measures is rated on a 5-point scale.

Testing with 242 undergraduate students, reliability coefficients (Cronbach alphas) were found to be .80 for nonverbal non-expressivity and control, .72 for nonverbal sensitivity, and .85, .76, .61 for the initiation of new relationships, maintenance of intimate relationships and self-assertion respectively. Examination of correlations between dimensions showed that nonverbal non-expressivity and control was positively correlated with nonverbal sensitivity (r = .34, p < .001); nonverbal sensitivity was also positively correlated with social skill dimensions of initiation of new relationships (r = .25, p < .01) and maintenance of intimate relationships (r = .30, p < .001). Initiation of new relationships had a positive correlation with maintenance of intimate relationships (r = .20, p < .01).

Validation with other scales showed that maintenance of intimate relationships had a strong negative correlation (r = -.61, p < .001) with the UCLA loneliness scale (Russell, Peplau & Cutrona, 1980, translated by Kudo & Nishikawa, 1983). Initiation of new relationships was correlated positively with the Affective Communication Test (ACT: Friedman *et al.*, 1980, translated by Daibo, 1989) (r = .60, p < .001) and the Self-Monitoring Scale (Snyder, 1974, translated by Iwabuchi *et al.*, 1982) (r = .46, p < .001), and negatively with the loneliness scale (r = -.38, p < .001). The self-assertion dimension was correlated positively with the ACT (r = .65, p < .001) and negatively with the SM (r = -.44, p < .001) and the loneliness scale (r = -.22, p

< .001). Nonverbal non-expressivity and control was correlated negatively with the ACT (r = -.21, p < .001), while nonverbal sensitivity was correlated positively with the ACT (r = .28, p < .001).

In examination of students' personal backgrounds in relation to the scales, females were found to be better in maintenance of intimate relationships than males. Females' scores for initiation of new relationships were correlated with the number of their friends in and outside of the university environments. Students who have a boyfriend/girlfriend scored higher than those who do not have one in the three dimensions of the social skill scale and lower in nonverbal non-expressivity and control. Reduction in the scores of the loneliness scale during the period of 60 days (in the first year at the university) has shown to be related to the social skill dimensions of maintenance of close relationships and self-assertion.

2.3. Summary and Discussion

Perception and social skill measures reviewed in this chapter are only part of the measures developed to date. As described above, these measures reflect the aims of particular research, having their own merits and limitations. Social skill scales have been constructed based on research findings that nonverbal perceptual skill is important part of people's social competence. In examining correlations between components of the scales such as SSI and JICS, perceived perceptual skill was indeed found to be related to other components of social skill. Perceived perceptual skill was, in turn, found to be related to performance tests of perceptual sensitivity, although correlations reported were usually rather small.

Universality and cultural-specificity were observed in both perceptual sensitivity and social skill. Some performance tests such as JACFEE were constructed to clarify these aspects in nonverbal communication styles of

people. Scales such as JICS and Wada's scale, on the other hand, succeeded in factoring out social skill components which are unique to the Japanese cultural contexts.

Performance tests of perceptual sensitivity differed mainly in: (1) the use of media (2) behavioural source (3) the number and variation of encoders in terms of their sex, age, ethnic and social backgrounds (4) the number of communication channels included (4) inclusion/exclusion of speech contents (5) inclusion/exclusion of communication contexts.

In order to carry out the assessment of perceptual processes as they occur in their everyday life, multiple communication cues should be presented. Of several different media, film has the most advantage in presenting natural flow of interactions and making observations of various communication cues including contextual cues close to reality. Tasks such as the JACFEE which are based on photos and focus only on emotion recognition of people are restricted in terms of naturalistic perceptual assessment. However, these tasks which deal with limited number of cues and communication contents seem to have higher internal consistency reliability, compared with the IPT which contains multiple cues in different social contexts. Thus, there seems to be a trade-off between having naturalistic approach and unnatural control over presentation of cues with regard to psychometric properties of tasks.

In terms of the behavioural source of stimuli, the use of only posed expressions (as in the JACFEE and PONS) have to be treated with caution, as the previous research findings suggest differences in nature between posed and spontaneous expressions (Bull, 2002). Elfenbein and Ambady (2002b) also criticised the Japanese expressions in JACFEE stimuli as American imitations. They explained that these facial expressions were created by asking posers to move their muscles in a manner consistent with prototypical models for the basic emotions and then selected by American researchers. Elfenbein and Ambady stated that the use of these imitation facial musculature patterns served to "dampen cross-cultural differences between emotional expressions

by posers of Japanese and Caucasian backgrounds" (p.245). They emphasised the importance of using stimuli originated in particular cultures for cross-cultural research.

Regarding the number and variation of encoders, the PONS is limited as it contains only one female encoder. Females have been shown to be better encoders than males (Hall, 1979, 1984), and the task should contain balanced representation of both. For cross-cultural studies, balanced representation of relevant cultures is essential. Cross-cultural studies using only one cultural group (as in PONS studies) have failed to examine thoroughly the effects of culture on people's perception.

The aim of the present research was to examine cultural influences on the nonverbal perceptual processes of the British and Japanese. As reviewed, there are no tasks which utilise multiple spontaneous communication cues for cross-cultural research. Thus, in this study, a cross-cultural perception task - the British and Japanese Social Perception Task (BJSPT) - was devised. It was mainly based on the IPT by using a naturalistic approach in perceptual assessment. However, alterations and improvements were made while incorporating some aspects of other tasks reviewed in this chapter. The ideas used from previous tasks were: (1) presentation of filmed spontaneous interaction scenes (having multiple communication cues) in contexts and use of objective criteria as in the IPT (2) use of encoders of both nationalities (as in the JACFEE) (3) use of content-filtering in presentation of audio information (as in the PONS and the CASP). In the construction of the task, the use of communication contexts was regarded as one of the most important aspects as it facilitates the examination of how cultural expectations in contexts relate to people's perceptual processes. In order to make sure the stimuli originated in the UK and Japan, both filming and scene-selection testing were carried out using respective nationalities who reside in their own countries. It is hoped that the task would expand the cross-cultural studies

which have been mainly focused on emotion perception using limited number of posed nonverbal cues.

CHAPTER THREE

Intercultural Communication

This chapter examines intercultural communication in the contexts of intercultural communication competence, cultural theory and intercultural training. The first section explains the nature of intercultural communication and how communication competence has been defined in intercultural contexts. The second section examines cultural theories and communication characteristics relating to cultural dimensions in the theories. The third section summarises existing intercultural training methods and the final section looks into the importance of perception training as part of intercultural communication training.

3.1. Intercultural Communication and Intercultural Communication Competence

Samovar and Porter (1972) defined intercultural communication as communication between people with different experiential backgrounds with a long standing deposit of group experience, knowledge and values. Similarly, Stewart (1974) explained that intercultural communication occurs under conditions of cultural differences which include language, values, customs and habits. Kim and Gudykunst (1988) explained that intercultural communication is very different from intracultural communication as members of different cultural groups "do not share the same set of communication rules, symbols, and behaviours, nor the manners in which individuals explicitly or implicitly address relational concerns" (Kim, 1986, p. 92). However, they integrated the study of intercultural communication with that of intracultural communication and viewed them along a continuum from total strangeness to total familiarity.

Kim (1988) explained that "the degree of 'interculturalness' of a given communication encounter depends on the degree of heterogeneity between the experiential backgrounds of the individuals involved"(p. 13). Kitao and Kitao (1989) emphasised that intercultural communication is not necessarily communication between people of different nations but it can include communication between people who have the same nationality but different racial or ethnic backgrounds. Samovar and Porter (1972) included communication between different generations and genders as intercultural communication. These definitions stress the effects cultural differences have on every aspect of interaction between people, implying difficulties expected in intercultural encounters.

Studies on intercultural communication have examined various cross-cultural contexts such as sojourner adjustment process (e.g., Brein & David, 1971; Nishida, 1985), international business (e.g., Bogorya, 1985) and interracial workplace (e.g., Asante & Davis, 1989). Hammer, Gudykunst and Wiseman (1978) found that communication skills are one of the three dimensions which are important to individuals' effectiveness in a foreign culture (the other two are the ability to deal with psychological stress and the ability to establish interpersonal relations). Language fluency has been shown to be associated with increased interaction with members of the host culture (Gullahorn & Gullahorn, 1966), interactional effectiveness (Nishida, 1985) and decreased sociocultural adjustment problems (Sano, 1990; Ward & Kennedy, 1993). However, as can be assumed from the definitions of intercultural communication above and discussed later in this section, successful intercultural communication requires more than language skills.

A number of authors have examined the construct of intercultural communication competence (e.g., Chen & Starosta, 1996; Hammer, 1989; Ruben, 1976). Chen and Starosta, for example, defined intercultural communication competence as "the ability to negotiate cultural meanings and to execute appropriately effective communication behaviors that recognize the

interactants' multiple identities in a specific environment." They emphasised the negotiation aspect of communication and the importance of respect for other cultures in the negotiation process. Reviewing related literature, Chen and Starosta explained that although effectiveness and appropriateness are emphasised in intercultural communication competence as in communication competence in general, contextual factors are more emphasised in intercultural contexts. According to Wiemann and Backlund (1980), "appropriateness generally refers to the ability of an interactant to meet the basic contextual requirements of the situation"; hence, understanding contextual requirements of other cultures and their implications on behaviour is necessary for successful intercultural communication.

Koester, Wiseman and Sanders (1993) stated that there is an emerging agreement to view competence as a social judgment concerning self and others' communication performances and indicated that judgments of competence are relational outcomes. Spitzberg (1989) suggested that impressions of communication competence are largely determined by perceived "motivation to communicate, knowledge of the communicative process and context, and skill in implementing motives and knowledge given the constraint of the context" (p. 250). Spitzberg and Brunner (1991) emphasised the importance of contextual expectations in impressions of communication competence and suggested four contextual dimensions: *cultural contexts*, which are based on group membership such as nationality and ethnicity; *type*, which represents situational contexts such as task and society; *relationship*, which indicates the degree of intimacy; *function*, which involves goals of the interaction.

Concerning the skill component of social competence, Spitzberg and Cupach (1984) summarised previous interpersonal skill research into three levels of analysis: (1) overt molecular behaviours such as eye contact, gaze and gestures (e.g., Dillard & Spitzberg, 1984) (2) mid-range ability (molar) constructs such as social confirmation, social composure, and articulation

(e.g., Duran, 1983) (3) higher order cognitive and behavioural processes which involve decoding skills, decision skills and encoding skills (McFall, 1982) which are generative of lower order skills. They emphasised the importance of all the levels of skills and their interdependence.

Having examined the skill component of intercultural communication competence, a number of authors have identified dimensions of intercultural communication competence. Ruben (1976), for example, identified seven behavioural dimensions: (1) display of respect - "the ability to express respect and positive regard for another person" (Ruben & Kealey, 1979, p. 16)
(2) interaction posture - "the ability to respond to others in a descriptive, nonevaluative, nonjudgmental, and nonargumentative way" (p. 17)
(3) orientation to knowledge - the ability to understand what is true or right is likely to be different from their own in other cultures (4) empathy - "the capacity to put oneself in another's shoes" (p. 17) (5) role behaviour - "the capacity to perform flexibly in both task and socio-emotional roles while avoiding dysfunctional behaviours" (p. 18) (6) interaction management - the ability to effectively manage interaction through appropriate behavioural skills such as turn-taking (7) tolerance for ambiguity - "the ability to react to new and ambiguous situations with minimal discomfort" (p. 19).

These dimensions were used to measure communication competence of Canadian technical advisors and their spouses following a week-long pre-departure training programme. They were found to be related to the trainees' cross-cultural adaptation measured one year later in a host culture, Kenya (Ruben & Kealey, 1979). Koester and Olebe (1988) developed the Behavioral Assessment Scale for Intercultural Communication (BASIC) effectiveness which is based on Ruben's dimensions. They made modifications to the Ruben's original scales, so that the assessment can be done by interactants themselves unlike the original scales which were assessed by trained observers. They found that their 8 items loaded on one underlying dimension with US participants, and later (Olebe & Koester, 1989) showed that the scales

had a similar internal structure regardless of the participants' culture, and the items had the same meaning and were operationalised similarly regardless of the participants' culture.

Behavioural approaches to communication competence as discussed above have the advantage of making self, other, and third-party observation possible and, therefore, are in line with the notion of communication competence as a social judgment (Hammer, 1989). Additionally, Koester and Olebe (1988) stated that "the behavioural approach allows for the measurement of both the universal dimension and the culturally specific behaviours associated with it" (p. 237). However, in spite of their usefulness in intercultural communication research and training, behavioural approaches seem to be limited in explaining the "why" aspect of communication behaviour while focusing on the "what" and "how" aspects.

The importance of links between behavioural and cognitive processes was advocated by Triandis (1990b) in his idea of ecology-culture-social behaviour link, which explains that ecology is a determinant of culture and culture is an important determinant of social behaviour. He explained that "differences in subjective culture (characteristic ways of perceiving the social environment) are responsible for a good deal of intergroup conflict" (Triandis, 1972, p. 8). This seems to indicate that understanding perceptual characteristics of the self and others is essential for understanding behaviour of others and making appropriate responses to them.

From a cognitive-cultural approach to intercultural communication, Forgas (1988, p. 188) stated that "communication is based on culture specific cognitive representations about reality and the effectiveness of intercultural communication is directly related to the degree to which shared episode representations between the interactants are present". Redmond (2000) measured intercultural communication competence of international students in the US, using the 6 competence components described by Redmond and Bunyi (1991): communication effectiveness, adaptation, social integration, language

competence, knowledge of the host culture and social decentering. He found that those students whose cultures were closest to the host culture had higher intercultural communication competence than those furthest.

Chen and Starosta (1996) synthesised existing approaches to the study of intercultural communication competence and suggested a model of "interactive-multiculture building". This consisted of three processes: (1) affective - intercultural sensitivity (2) cognitive - intercultural awareness (3) behavioural - intercultural adroitness. The affective process relates to how one can project and receive positive emotional responses before, during and after intercultural encounters, which will in turn lead to acknowledgment of and respect for cultural differences. They explained that this process is based on four personal attributes: self-concept, open-mindedness, nonjudgmental attitudes and social relaxation. The cognitive process involves self-awareness and cultural-awareness which helps to reduce the level of situational ambiguity and uncertainty in intercultural interactions and to adapt to situational demands in new environments. The behavioural process refers to how to act effectively in intercultural interactions and corresponds to verbal and nonverbal communication skills. They include message skills (language skills), appropriate self-disclosure, behavioral flexibility, interaction management and social skills (e.g., empathy and identity maintenance). These three processes in Chen and Starosta's model correspond to the three targets (affect, cognition and behaviour) described for intercultural communication training by Brislin (1989). It seems important to examine communication competence in a broad perspective and recognise interdependence of these processes rather than simply focus on one process, if findings in intercultural communication research are to be applied effectively in intercultural communication training.

As mentioned in Chen and Starosta's model above, the importance of cultural awareness in intercultural communication has been emphasised by many authors (e.g., Brislin, 1990; Triandis, 1990b). Brislin stated that

"awareness of culture and cultural differences is extremely important in intervention into people's lives" faced with intercultural situations (p. 22). Paige (1996) also explained that intercultural learning involves learning about oneself as a cultural being, learning about one's own culture and learning about a target culture. Intercultural encounters provide people with opportunities to become aware of otherwise unrecognised cultural programming in their existence. Kim and Ruben (1988, p. 309) stated:

> *..Over time, individuals develop and internalize the cognitive, affective, and behavioural attributes that are commonly shared by people in the cultural milieu. Such attributes, in turn, serve as necessary means of communication in managing themselves and their environment.*
>
> *In this process, the individuals become cultural beings. Cultural attributes become a large part of their unconscious patterns of communication, particularly the cognitive patterns of categorizing and sorting information from the environment. As cultural persons, they are further conditioned by the collective ways of feeling and behaving. Humans, thus, have limited freedom in experiencing what is beyond the borders of their cultural consciousness.*

Referring to awareness competencies explained by Pedersen (1988), Brislin and Yoshida (1994) suggested that becoming aware of culture and cultural differences would help us to monitor our ethnocentrism and to respect and to be sensitive toward culturally different others and also to become comfortable with the differences.

"Mindfulness" is the term often emphasised in intercultural communication (e.g., Gudykunst, 1993; Ting-Toomey, 1999). Gudykunst explained the habitual nature of our behaviour, thought processes, and affect in our communication with familiar people, and suggested the importance of being mindful of our communication processes in intercultural encounters. He

stated that mindfulness is a moderating variable for the experiences of uncertainty and anxiety in achieving effective communication. Referring to Langer (1989, 1997), Ting-Toomey explained that mindfulness enables individuals to tune in to their habitual mental scripts and preconceived expectations. She further explained (p. 46):

> *Mindfulness means the readiness to shift one's frame of reference, the motivation to use new categories to understand cultural or ethnic differences, and the preparedness to experiment with creative avenues of decision making and problem solving.*

Mindfulness, therefore, means not only increased awareness of culture and cultural differences in intercultural communication but also the readiness to adopt unbiased and open attitudes, which are necessary to improve affective, cognitive and behavioural competencies in intercultural communication.

In pursuit of understanding culture and its influences on behaviour of people, several cultural dimensions have been advocated, such as Hofstede's (1980) four dimensions (power distance, uncertainty avoidance, individual-collectivism and masculinity-femininity) and Hall's (1976) high- and low-context communication dimensions. Gudykunst and Ting-Toomey (1988) explained the importance of linking cross-cultural differences to underlying dimensions of cultural variability in order for the differences to be theoretically explained. Bhawuk and Triandis (1996) stated that "knowledge acquisition and application takes place through the assimilation of principles and theories" (p. 18); they referred to Andersen (1990), who explained three stages of expertise development. According to Andersen, the first stage is the cognitive stage in which knowledge is acquired as "declarative" and people have to make efforts to recall the new knowledge in applying it. The second stage is the associative stage in which people convert declarative knowledge into efficient procedural representations through acquisition of appropriate

behavioural sequence. The third stage is the autonomous stage in which acquired behavioural skills become more automatic and people can apply a specific knowledge to different situations using broad principles to categorise and solve problems. Bhawuk and Triandis explained the theory of individualism and collectivism as having potential for the improvement of intercultural training. It can help to predict both daily social behaviours across cultures (Wheeler, Reis & Bond, 1989) and to explain such phenomena as cultural distance, concept of self, and perception of in-group versus out-group (Triandis, 1990a). In the following section, cultural dimensions are summarised and related cross-/intercultural communication research is reviewed.

3.2. Cultural Dimensions and Communication Characteristics

Hofstede (1980, p. 25) defined culture as "the collective programming of the mind which distinguishes the members of one human group from another". He further explained that societies are the most "complete" human groups that exist and, therefore, merit special consideration in the study of culture. Based on the questionnaire surveys with several thousand IBM employees in 40 countries, he introduced four cultural dimensions along which characteristics of national cultures were measured - power distance, uncertainty avoidance, individualism-collectivism and masculinity-femininity.

The first dimension - power distance - refers to "the extent to which less powerful members of institutions and organizations accept that power is distributed unequally" (Hofstede & Bond, 1984, p. 418). According to Hofstede, high power-distance cultures include Philippines, Mexico, Venezuela and India; low power-distance countries at the other extreme end of the dimension are New Zealand, Denmark, Israel and Austria.

The second dimension - uncertainty avoidance - refers to "the extent to which people feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid these" (Hofstede and Bond, 1984, p. 419). Countries at the high end of this dimension are Greece, Portugal, Belgium and Japan; those at the low end are Hong Kong, Sweden, Denmark and Singapore.

The third dimension - individualism-collectivism - refers to the extent to which individual or group goals have precedence over each other in terms of people's attitudes and social behaviour. Individualistic countries include the US, Australia, the UK and Canada, while collectivist countries include Peru, Pakistan, Colombia and Venezuela. This dimension has been reported by other authors across disciplines (e.g., Kluckhohn & Strodtbeck, 1961; Marsella, DeVos & Hsu, 1985; Triandis, 1986) and has been most often referred to in cross- and intercultural studies (e.g., Gudykunst & Ting-Toomey, 1988; Matsumoto, 1991, 1996; Triandis, 1989).

The fourth dimension - masculinity-femininity - refers to the extent to which a society endorses goals usually more popular among men, "success, money, and things", or among women, "caring for others and quality of life" (Hofstede & Bond, 1984, pp. 419-420). Countries high in masculinity include Japan, Austria, Venezuela and Italy, while those high in femininity include Denmark, Netherlands, Norway and Sweden.

The UK was shown to be higher than Japan on the individualism dimension and lower on the power distance, uncertainty avoidance and masculinity dimensions. Amongst the 40 countries studied, the UK was shown to be high on individualism and masculinity but low to medium on power distance and uncertainty avoidance. Japan was shown to be high on uncertainty avoidance and masculinity and medium on power distance and individualism.

These four dimensions have been referred to in explaining the affective, behavioural and cognitive characteristics of people in various cultures. Matsumoto (1991) found that members of high power-distance cultures were

more likely to display emotions that emphasise and preserve power and status differences while people from low power-distance cultures were more likely to display emotions that minimise power and status differences. Hecht *et al.* (1989) interpreted continuous smiles of many Orientals as a product of being reared in high power-distance cultures. They referred to Andersen and Bowman (1985) who stated that in power-discrepant circumstances subordinates show more bodily tension and smile more, trying to appease superiors and appear polite.

Hofstede (1979) explained that members of high uncertainty-avoidance cultures have less tolerance "for uncertainty and ambiguity, which expresses itself in higher levels of anxiety and energy release, greater need for formal rules and absolute truth, and less tolerance for people or groups with deviant ideas or behavior" (p. 395). Gudykunst, Nishida, and Morisaki (1992, in Gudykunst, 1993) argued that high uncertainty-avoidance cultures have clear rules for dealing with members of out-groups; hence, people in these cultures do not regard intercultural encounters as threatening as do people in low uncertainty-avoidance cultures. Similarly, Gudykunst and Ting-Toomey (1988) found that people in high uncertainty-avoidance cultures reported fewer novel situations when asked to report fear-eliciting situations. Concerning the recognition of emotion, Schimmack (1996) found that uncertainty avoidance was negatively related to the accuracy of recognition of sadness and fear expressed on face. This finding was in line with Matsumoto's speculation (1989) that due to the lower occurrence of fear-eliciting events, the frequency of public fear display should be lower in high uncertainty avoidance cultures.

Triandis, Bontempo and Villareal (1988) stated that people in collectivist cultures distinguish in-group and out-group clearly, 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.

In the study of attributional processes, Miller (1984) found that individuals in the US (individualistic culture) focused on dispositional factors in making attributions of others' behaviour, while individuals in India (collectivist culture) focused more on contextual factors. Similarly, Gudykunst (1993) explained that in individualistic cultures, people look for person-based information such as other's feelings and attitudes while in collectivist cultures, people seek out group-based information such as group membership and status in their communication. Gudykunst, Nishida and Schmidt (1988, in Gudykunst & Gumbs, 1989) observed higher attributional confidence in in-group than in out-group in collectivist cultures, while no differences were found in individualistic cultures.

Markus and Kitayama (1991) categorised individuals as either having "independent construal of the self" or "interdependent construal of the self", which seems to correspond to the individualism-collectivism cultural divide. Having independent construal of the self encourages persons to express their unique self, promote their own goals and realise their internal attributes. People with independent construal of the self are found to show more ego-focused emotions such as anger, frustration and pride more than people with interdependent construal of the self, who tend to show more other-focused emotions such as sympathy. Having interdependent construal of the self leads persons to pay attention to significant others so that they can fit in a proper place in a group, and engage in appropriate actions and contribute to group success. People with interdependent construal of the self tend to inhibit expressions of their internal attributes and regard emotion expression as a public instrumental action which may or may not relate to their inner feelings. The ability to adjust, restrain self and maintain harmony with social contexts is described as the basis of their self-esteem. Similarly, 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.

Gudykunst and Ting-Toomey (1988) reported that individualistic cultures place greater emphasis on verbal communication and directness of expression, while collectivist cultures often do not trust verbal communication and they prefer indirect communication methods. Hofstede (1984) explained that as relationships are not determined socially, people from individualistic cultures must express intimacy cues more than people from collectivist cultures. Similarly, Andersen (1988) explained that people from individualistic cultures are more nonverbally affiliative. As for proximity cues, however, people from individualistic cultures have been found to be more remote and distant (Hecht *et al.*, 1989) and place more importance on owning their own space (Altman, 1975) than people from collectivist cultures.

The masculinity-femininity dimension is related to the rigidity and definition of gender roles. Masculine cultures emphasise differentiated sex roles, performance, ambition and independence, whereas feminine cultures value fluid sex roles, quality of life, service and interdependence (Hecht *et al.*, 1989). Gudykunst and Nishida (1987) applied this dimension in the theories of interpersonal relationship development and predicted that opposite-sex relationships are more easily formed and develop in feminine cultures than in masculine cultures.

Together with Hofstede's four cultural dimensions, Hall's cultural dimension has often been referred to in explaining communication characteristics of different cultural groups. Hall (1976) developed his cultural framework based on the communication patterns of people, and proposed high- and low-context dimension. He stated (p. 79):

> *A high context (HC) communication or message is one in which most of the information is already in the person, while very little is in the coded,*

explicitly transmitted part of the message. A low context (LC) communication is just the opposite i.e., the mass of the information is vested in the explicit code.

Hall explained that in high-context cultures, such as in Japan, China and Korea, people are more homogeneous and share common experiences among them; hence, they do not require in-depth background information when communicating with each other. On the other hand, in low-context cultures such as the US, the UK and Canada, people are less homogeneous and need to provide detailed background information in their communication. Hall's dimension has been applied to various aspects of communication such as territorial spacing (Smith, 1981), conflicts across cultures (Ting-Toomey, 1985) and attributional confidence (Gudykunst & Nishida, 1986).

Porter and Samovar (1998) explained cultural differences in emotion expression, stating that in high-context cultures relatively little information is contained in verbal messages or facial expressions; in low-context cultures most of the information is contained in verbal messages or in facial or bodily expressions. Cultural differences in the relative importance of verbal and nonverbal communication methods are explained by Okabe (1983). He stated that the importance of verbal communication is more emphasised in low-context cultures than in high-context cultures where the role of nonverbal communication is more emphasised. Gudykunst and Nishida (1986) explained that this difference leads to attributional confidence in direct forms of communication in low-context cultures, and attributional confidence in indirect forms of communication in high-context cultures. From these findings, high-and low-context dimension seems to correspond to the individualism-collectivism dimension discussed previously. Ting-Toomey (1985) used both dimensions in explaining her face-negotiation theory and compared individualistic, low-context cultures and collectivist, high-context cultures. She explained that "while the individualism-collectivism dimension

points to the underlying values of different clusters of cultures, the LCC-HCC dimension points to communication style differences across a set of cultures" (p. 225).

On the basis of the two frameworks advocated by Hofstede and Hall and relevant communication research, the following points can be hypothesised: (1) the British, being high on individualism and a low context culture, would express wider variety of emotions (particularly ego-focused emotions) and intimacy cues more clearly in verbal and nonverbal cues than the Japanese who are medium on individualism and a high context culture (2) the British, being lower than the Japanese on power distance, would display more emotions that minimise power and status differences than the Japanese who would display more emotions that emphasise and preserve power and status differences (3) the importance of verbal communication cues would be more emphasised by the British than by the Japanese who would rely more on nonverbal cues which enable them to engage in more subtle and indirect forms of communication (4) the British would rely more on dispositional cues than contextual cues in the interpretation of communication cues, while the reverse would be the case with the Japanese (5) British and Japanese perceptual sensitivity to communication cues would differ, considering the different preferences they would have for the kinds of communication cues they exhibit overtly.

Although the above frameworks have been widely used in the past, their limitations have also been discussed by a number of researchers (Bem, 1993; Matsumoto, Kudoh & Takeuchi 1996; Pribyl, 2000; Stephan, Setphan, Saito & Barnett, 1998). One limitation is that these frameworks were based on research carried out more than 30 years ago, which might be outdated today. Stephen *et al.* (1998) found Japanese university students were more individualistic than American university students on the subscales of the individualism-collectivism scale (Triandis *et al.*, 1988): the Japanese showed less concern for in-group members and were higher on self-

reliance/competition than the Americans. This result is contrary to the original categorisation that Japanese is more collectivistic than Americans, suggesting possible cultural change and the dynamic nature of culture. Similarly, Matsumoto *et al.* (1996) found that Japanese college students were less collectivistic than older working adults, particularly with respect to the family.

The second limitation concerns Hall and Hofstede's methods of study. Hall's high- and low-context dimension was based on anthropological studies, and therefore lacks experimental foundations. On the other hand, Hofstede's dimensions were based on questionnaire surveys with a specific group of people: a male middle management group in the IBM (Pribyl, 2000). This bias in the sample limits the generalization of the results to national populations.

The third limitation relates to the recent theoretical arguments that "collectivism is not a monolithic syndrome in opposition to individualism" (Stephan *et al.*, 1998, p. 744). A number of researchers found inconsistent findings relating to the individualism-collectivism dimension (Kagitcibasi, 1994; Matsumoto *et al.* , 1996; Setphan *et al.* 1998; Schwartz, 1994). Based on these findings, Stephan *et al.* explained that the individualism-collectivism is not a comprehensive dimension but rather a syndrome made up of a loose collection of different cultural characteristics. Similar arguments were put forward by Bem (1993), who claimed that masculinity and femininity are not the opposite end of the dimension and have independent dimensions themselves.

In spite of the limitations discussed above, culture theory and communication characteristics discussed in this section would still be instrumental in increasing people's awareness of culture and cultural differences. At the same time, cultural theory would provide people with a framework to learn communication skills required in specific cultures. Triandis (1989) explained that although there are elements common to all the individualistic or collectivist cultures, "there are also culture-specific collectivist and culture-specific individualist elements"(p. 510).

Examination of culture-theory-based communication research shows that the majority comprise comparative studies between various cultures; a limited number of studies have examined interaction processes between them. Elfenbein and Ambady (2003b) studied the relationship between Hofstede's cultural dimensions (power distance, uncertainty avoidance and individualism-collectivism) and previous emotion recognition studies. They proposed that a distance perspective (which examines the discrepancy between the cultural profiles of the emotional expressors and perceiver groups) will predict a greater gap in recognition accuracy than a static perspective (which examines the fixed attributes of the group perceiving emotions). Their correlation analyses between static measures of culture and recognition accuracy showed no evidence that groups in these studies differed systematically in accuracy across emotions. In contrast, they found significant correlations between expressor-perceiver cultural differences along each dimension and a greater discrepancy in emotion recognition accuracy. Based on this and other studies (Elfenbein and Ambady, 2002a, 2002b, 2003a), they emphasised the importance of paying attention to cultural characteristics of both emotion expressors and perceivers and their interactions.

These studies which examine interaction processes between cultures provide useful information particularly for intercultural communication training. Gudykunst and Gumbs (1989) regarded intercultural communication as a special kind of intergroup communication and discussed it by referring to social cognitive processes which involve social categorisation, social schemata and social attribution. Similarly, Cargile and Giles (1996) explained the role of trainees' attitudes toward other cultures and stereotypes in intercultural communication training. They explained that these factors have often been ignored in the training, which has limited its outcomes. Gudykunst (1993, 1995), on the other hand, looked into the role of anxiety - affective experiences of interactants caused due to uncertainty surrounding intercultural encounters.

In the next section, intercultural communication training is examined, firstly in terms of its goal, and secondly its methods and effectiveness.

3.3. Intercultural Communication Training

Various cross- and intercultural training programmes have been set up in order to equip people with necessary cultural knowledge and communication skills (e.g., Fiedler, Mitchell & Triandis, 1971; Brislin & Pedersen, 1976). Pruegger and Rogers (1994) described intercultural training as being "concerned with increasing our ability to communicate with culturally diverse people and monitoring and adjusting our behavior to deal effectively with those of different cultures"(p. 370). Although the terms "intercultural training" (e.g., Gudykunst, Guzley & Hammer, 1996; Paige & Martin, 1996) and "cross-cultural training" (e.g., Black & Mendenhall, 1989; York, 1994) are often used interchangeably and both regard improving "interaction" skills as an important aspect of training, the term "intercultural training" is used here with particular attention to intercultural communication training.

Referring to Brislin (1989), the goal of intercultural training can be summarised into three areas: affect, behaviour and cognition. The affective goal includes greater enjoyments in intercultural interactions. The behavioural goal includes accomplishment of interaction goals such as building good working relations and accomplishment of a task. The cognitive goal includes greater understanding of people from other cultures by taking into consideration their point of view. In order to achieve these goals, Bhawuk (1990) explained three immediate goals of training: (1) to teach trainees how to learn (2) to enable trainees to make isomorphic attributions (3) to enable trainees to deal with disconfirmed expectations. The importance of learning how to learn has been emphasised by other authors (e.g., Brislin & Pedersen, 1976) as it is this learning which enables trainees to apply the knowledge

acquired in the training in real intercultural interactions. Bhawuk cited the experiential learning cycle described by Kolb (1987) which consists of four processes: (1) experiencing something concrete (2) reflecting on the experience, which leads to knowledge (3) conceptualising abstract concepts from the experience, which leads to understanding (4) experimenting with the abstract concepts in new situations. Becoming aware of "the essence of a learning process" (Bhawuk, p. 329) and having active learning attitudes in intercultural interactions will benefit trainees not only during the training but also after the training by helping them to sustain and improve intercultural skills. Bhawuk also explained that learning to make isomorphic attributions enables trainees to take the same viewpoints as the people from other cultures and to avoid making fundamental attribution errors (Ross, 1977). Learning how to handle disconfirmed expectations prevents trainees from developing a negative stereotype that would interfere with their future intercultural interactions. These three immediate goals of training seem to relate mainly to cognitive processes and partly to affective processes; therefore, it can be assumed that cognitive learning would be the basis of affective and behavioural learning although these three processes are interrelated.

There are several methods used for intercultural training. Landis and Brislin (1983) categorised training programmes into six types: (1) information-oriented training - based on cognitive learning through lectures, video tapes, and reading materials (2) attribution training - aims at teaching perspectives of events from another culture's point of view (3) cultural awareness training - characterised by a focus on one's own culture and nature of cultural differences in order to develop understanding of other cultures (4) cognitive-behavioural training - aims at teaching trainees reward/punishment structure that operates in the target culture (5) interactive training - aims at familiarising trainees with the target culture by having experienced sojourners or target culture representatives to interact with trainees through discussions or role plays (6) experiential training - involves some form of participant-oriented

activities such as field trips, cultural simulations and role plays to enable trainees experience the nature of life in another culture.

Information-oriented training which is also referred to as the university model (e.g., Bhawuk, 1990) or intellectual model (e.g., Bennett, 1986) is said to be the simplest to introduce, as staffing of this kind of programme is easy and also this model matches most of trainees' previous educational experiences (Bennett, 1986). Trainers lecture on different aspects of another culture based on the idea that cognitive understanding is essential in intercultural communication. Harrison and Hopkins (1967) criticised this model, stating five arguments against it. Firstly, in the university model, trainees are passive in collecting information while in real intercultural situations they have to be proactive in gathering information by themselves. Secondly, they argued that this model does not help trainees to develop problem solving skills, given that in the classroom situations the emphasis is on solving well-defined problems by well-developed methods. Thirdly, this model does not teach trainees how to deal with emotions in stressful intercultural interactions, as the training is conducted in rational classroom situations. Fourthly, in this model, training assessment is often conducted on paper, whereas in real social situations, interaction outcomes are what count. Lastly, in this model, trainees cannot improve all aspects of communication skills, as written and to a lesser extent oral skills are required in classrooms and the importance of nonverbal communication skills is often ignored. In spite of these criticisms, this model has often been incorporated in training programmes, given that increasing knowledge about other cultures is important for intercultural interactions by providing behavioural guidelines and at the same time preventing anxiety which might be experienced in unfamiliar situations.

Attribution training aims at helping trainees to make isomorphic attributions. The importance of examining attribution processes in intercultural communication was explained by Albert (1983). Referring to

Heider (1958), he stated that different assumptions and interpretations of particular behaviours can be examined in terms of attributions people make. According to Heider, we constantly try to explain observed behaviours by attributing causes and motives to those who perform them so that we can make our world more predictable and understandable. The material often used for the training is the "culture assimilator" (e.g., Brislin, Cushner, Cherrie & Young, 1986; Cushner & Brislin, 1996) which is also called the "intercultural sensitizer". There are culture-specific and culture-general assimilators and both can be used for self-study, lectures, discussions and role plays. Culture-specific assimilators contain episodes of problematic intercultural situations in a specific culture, while culture-general assimilators contain episodes involving many different cultures. Trainees read episodes and examine four different interpretations of the situation. While in the culture-specific assimilators, explanations would be based on the characteristics of a particular culture, in the culture-general assimilators, explanations would be related to the broader concept of culture and cultural differences (e.g., individualism-collectivism difference).

Culture assimilators are the most well researched of all the intercultural communication training materials and their effectiveness on people's affective, behavioral and cognitive processes have been shown (e.g., Fiedler *et al.*, 1971; Weldon, Carston, Rissman, Slobodin & Triandis, 1975; Cushner, 1989). Fiedler *et al.*, for example, reported that the Americans who received culture-specific assimilator training before going to Honduras were better adjusted and worked more productively there than untrained Americans. Weldon *et al.* found that whites trained with assimilators which aim at improving white-black interactions made attributions more similar to the members of the target culture. Concerning culture-general assimilators, Cushner reported that adolescent exchange students who received preparatory assimilator training before living in New Zealand were more familiar than untrained students with the concepts of intercultural interaction and could apply the concepts to their

personal cross-cultural misunderstandings. Trained students were also found to be better adjusted after 6 months of their stay in New Zealand, as measured on one of the four scales (Perceived Control of the Environment) of the Culture Shock Adjustment Inventory (CSAI; Juffer, 1982, in Cushner). Examining positive outcomes of culture assimilators, Cushner and Landis (1996) stated that culture assimilators, by assisting people in expanding their knowledge about unfamiliar intercultural situations, reduce anxiety which often interferes with interactions. They explained that the assimilators may encourage "behavioural training rehearsal" (Brislin, Landis & Brandt, 1983) in which trainees cognitively practise correct behaviours before an actual interaction takes place. Based on this assumption, they suggested that time and practice is essential for assimilator training as without appropriate cognitive learning taking place, anxiety may be experienced in real interactions and training effects will not be observed.

Cultural awareness training involves educating individuals to recognise their own cultural values, analysing the differences with other cultures and applying the insights gained to real interactions (Bennett, 1986). An example of the model is Kraemer's Cultural Self-Awareness Model (1973, 1974; in Bhawuk, 1990 and Bennett, 1986). Kraemer developed a set of videotapes which contain 138 episodes on 21 themes. Trainees can gain cultural insights while watching the episodes and working on the themes and also through group discussions. A case-study and role-play based method is the Contrast American Model (in Bennett, 1986) used in the US military. It aims at comparing US culture with others in the scripts containing problems encountered in intercultural interactions. Another approach to cultural awareness training is the Intercultural Communication Workshop (ICW; Hoopes, 1975), which focuses on the communication which results in the contexts of value differences. The workshop involves discussions in a group of individuals from at least two different cultures and trained facilitators. The goals of the workshop include recognition of cultural differences and the

effects of culture on communication patterns, appreciation of the differences, and better intercultural interactions based on the understanding and appreciation. Bennett explained that the strength of this model includes extensive theoretical base such as culture theory and communication theory. As learning takes place in actual interactions such as role plays and face-to-face discussions, it can have behavioural and affective effects in addition to cognitive effects.

Self-awareness training is similar but more focused on self-understanding without introducing the concept of culture and cultural differences. It is based on the idea that understanding oneself is the prerequisite to understanding one's own and others' culture and being effective in intercultural interaction (Gudykunst, Hammer & Wiseman, 1977). It is carried out in T-groups or role plays and aims at making participants aware of their feelings, emotions and unconscious responses in unstructured activities, which were designed to promote changes in their self-perception, attitudes and behaviour (Bonnet, 1986). As the training is focused on human relations, it is considered to be effective in learning one's own behavioural implications in interactions. However, Bonnet summarised a number of shortcomings of this model. First of all, the concept of T-group is based on the US value of openness, equality, individuality and directness and, therefore, it is doubtful whether it can be as effective with individuals in other cultures. Secondly, she stated that there is a danger of a group developing its own membership-based idiosyncrasies, which leads to acquisition of inappropriate behaviours if expressed outside of the training group. Thirdly, the training does not provide participants with the conceptual frameworks in which they can analyse their future interactions. This model seems to focus on affective and behavioural aspects of training.

Cognitive-behavioural learning is based on Bandura's theory of social learning (Bandura, 1977). According to Bandura, learning takes place both by the effects of reinforcements from the environments and by imitating or

modelling the behaviours of others and vicariously making associations of the behaviours and outcomes without actual experiences. Trainers teach trainees reward and punishment systems of another culture by helping trainees to interpret culturally different others and respond to them appropriately, using such methods as modelling and role plays (York, 1994). This training model is often preferred for various purposes such as training business people (e.g., Black & Mendenhall, 1989) and teachers (Cordova, Jaramillo & Trujillo, 1974). It seems that as this model offers concrete behavioural training, it might be useful for those trainees who have specific purposes such as taking part in intercultural business meetings. York explained that an advantage of this model is that it enables trainees to learn appropriate communication skills and to learn about culture, without risking negative responses from others which can threaten trainees in real social interactions and might interfere with learning process. However, one of the shortcomings is that the skills learned in the training do not fully equip trainees to interact appropriately in various social situations.

Interactive training is conducted by veteran sojourners or target culture representatives. The merit of having sojourners or target culture representatives is that they can speak from their own experiences and, therefore, can be stimulating for the trainees (York, 1994). Training can be in the form of informal discussions and role plays. In case of having target culture representatives, training sessions provide trainees with good opportunities to learn communication characteristics of other cultures from observation of and interaction with the trainers. Mestenhauser (1983) explained the advantages of having foreign students teach US students in classroom settings, such that US students can develop flexibility, adjustability, openness, acceptance of others, ability to communicate cross-culturally and creativity. York explained that this training model is particularly useful in addressing problems arising out of cultural contact. This model enables trainees to learn to deal with disconfirmed expectations in intercultural

interactions. Problems can be discussed face to face with target culture individuals or experienced sojourners, while affective, behavioural and cognitive solutions can be addressed in the training sessions. However, shortcomings of this model are that sojourners might be biased on their opinions about the target culture and culture representatives might not be appropriate people who have little knowledge of their own culture (York, 1994).

Experiential training is trainee participation-oriented. It involves such activities as role plays, games and actual experiences in a particular culture. The aim of the training is affective and behavioural, in that trainees, by experiencing various intercultural situations, have to acquire appropriate behaviours and attitudes and deal with emotions associated with the process (Bhawuk, 1990). Cognitive learning is, therefore, regarded as a by-product of the experiences (York, 1994). Wight (1970) summarised the advantages of the model as: (1) it is trainee-centred as opposed to trainer-centred (2) trainees are responsible for the learning process (3) it is based on acquiring problem-solving skills as opposed to acquiring information (4) trainees can learn how to learn. An example of experiential training is the Area Simulation Model, in which trainees experience the environments of a simulated target culture (Trifonovitch, 1973). Another example is the simulation game such as BAFA-BAFA (Shirts, 1973) in which participants are divided into two groups (e.g., a masculine, collectivist culture vs. a feminine individualistic culture) and learn the behaviours of a respective culture. By interacting with each other, two groups come to experience emotions (which intercultural interactions bring out) and to acquire behavioural skills necessary to deal with cultural differences. Shortcomings of this model are that it is difficult to simulate training situations completely to the environments of a target culture and that trainees might acquire wrong skills and attitudes without having proper instructions (Bennett, 1986).

In order to evaluate various training methods, several authors (e.g., Bennett, 1986; Bhawuk, 1990; Brislin, 1989; Gudykunst & Hammer, 1983) have classified them according to components of interaction (cognitive, behavioural and affective), contents of training (culture specific vs. culture general), methods of training (didactic vs. experiential) and the levels of trainee/trainer involvement.

The issue of culture-general and culture-specific approaches to training has been extensively discussed (e.g., Bhawuk, 1990; Gudykunst *et al.*, 1996). The culture-general approach claims that it can equip people with larger cultural frameworks, from which they can improve necessary communication skills for different intercultural situations. On the other hand, the culture-specific approach regards learning about a particular target culture one at a time is the effective way for people to learn necessary intercultural communication skills. Bhawuk identified three dimensions in which culture-general training is better than culture-specific training: (1) culture-general training prepares trainees to learn "how to learn" (p. 338) (2) it provides wider experiences (3) it is easier to move from culture-general training to culture-specific training than move in the opposite direction. It seems that the culture-general approach such as teaching about the concept of culture and cultural differences would be effective, if introduced prior to teaching culture-specific communication skills.

Didactic and experiential training differs in the levels of trainee/trainer involvement (Bhawuk, 1990). In didactic methods such as lectures, trainers' involvement in training is high while that of trainees is low. In experiential training such as role plays and simulations, involvement of both trainers and trainees is high. It can be assumed that the higher trainees' involvement, the more affective and behavioural learning takes place. In designing a programme, trainers would have to take into consideration the needs of trainees, how much trainees are prepared to experience emotion arousing experiences for the training, and time allowed for the training.

As explained so far, there are advantages and disadvantages in using different methods, for example, cognitive learning does not necessarily lead to appropriate behavioural skills and the effects of experiential training are rather short-lived. Many authors advocate the use of combinations of different types of training (e.g., Triandis, 1977). Brislin and Yoshida (1994) suggested a programme made up of four phases: awareness, knowledge, emotional challenges and behavioural skills. At the awareness phase, the concepts of culture and cultural differences are introduced in a discussion by covering such topics as the individualism-collectivism cultural dimension. At the knowledge phase, once trainees have become aware of how culture influences their behaviour, knowledge useful for intercultural interaction and adjustment is taught, using such materials as culture-general assimilators. At the emotional challenge phase, trainees learn about their own emotional experiences in intercultural interactions through role plays involving critical incidents. By focusing their discussions on emotions, they learn how to cope with it. At the behavioural skill phase, trainees learn specific behavioural skills necessary in a particular culture. Their programme emphasises didactic culture-general and culture-specific techniques and also incorporates experiential culture-specific training (Gudykunst *et al.*, 1996). This gradual shift from didactic to experiential techniques will allow trainees time to get used to the training environments and, therefore, can be less stressful than some other programmes which require high trainee involvement from the beginning of the programmes.

Gudykunst, Guzley and Hammer (1996) suggested a training programme based on the Anxiety/Uncertainty Management theory (AUM; Gudykunst, 1995). The AUM theory is "based on the assumption that managing uncertainty and anxiety is necessary for effective intergroup communication and intercultural adjustment" (p. 73). The training starts with culture-general simulation such as the BAFA BAFA game, with the aim of helping trainees understand how their uncertainty and anxiety affect their ability to function in new cultural environments. Debriefings follow and discussions focus on

trainees' ethnocentric interpretations or judgments which undermine their ability to predict the behaviours of members of other cultures. The next session focuses on how to become "mindful", by including lectures on the importance of being open to new information and being aware of alternative perspectives. The third session deals with how to manage anxiety by helping trainees learn specific techniques and also by explaining other influencing factors such as rigid attitudes toward host nationals and negative stereotypes. The fourth session focuses on managing uncertainty by helping trainees learn how to make accurate predictions of behaviours of people from other cultures. Major dimensions of cultural variability (e.g., individualism-collectivism) are introduced at this stage; other influencing factors, such as the importance of positive expectations, are also addressed. The fifth session gives trainees opportunities to apply the knowledge they have acquired so far in interaction with host nationals or culture-specific role plays. Trainees are reminded of the importance of appropriately perceiving and interpreting information in order to make accurate predictions of others. The sixth session is focused on giving essential survival skills in the new culture, such as how to use public telephones and how to order food in a restaurant. Finally, there is a wrapping-up session allowing trainees to summarise the training and to clarify any questions they may have. Gudykunst, Guzley and Hammer's programme is based on the theories of intergroup communication, intercultural adjustment and cultural variability. This training programme is superior to others in that it is a theory-based training programme. It also targets the three aspects of communication (affect, behaviour and cognition) by incorporating both didactic and experiential methods and by using both culture-general and culture-specific content.

As described above, various methods can be combined together in order to maximise the effectiveness of training. Careful examination of individual training methods in terms of affective, behavioural and cognitive aspects of communication, however, reveals that they need further improvements. These

training methods, for example, tend to emphasise certain communication processes (such as attributions), whilst others (such as perception) receive less attention. It is speculated that this difference in emphasis is not due to the difference in the importance among communication processes but rather, it relates to the amount of research findings and the difficulty with which training materials and methods can be developed. In the next section, the role of social perception skills in intercultural communication is discussed and suggestions for its training are made.

3.4. Social Perception and Intercultural Communication Training

Referring back to Livesley and Bromley (1973) in Chapter 1, person perception involves four temporal phases - cue selection phase, interpretative inference phase, extended inference phase and anticipatory set phase or verbal report phase. Culture extends its influence throughout all phases, firstly, by controlling incoming information to our perceptual systems and, secondly, by affecting interpretation of information such as value judgments and attribution processes. This results in people from different cultural backgrounds understanding the same person and situation differently. Examination of different phases of perceptual processes will help to examine how culture influences individuals' perceptual styles and to work out ways of adjusting the styles so that they can be more appropriate in intercultural interactions. Ting-Toomey (1999, p. 156) summarised six principles of intergroup perception:

> *(1) Perception is a largely subjective phenomenon - we generally construct the reality of what we want to perceive, and this is basically a biased process (2) Perception is categorical - we use social or linguistic categories to guide our expectations in actual intergroup interactions*

(3) Perception is selective - we select information that fits our expectancy categories and ignore other incoming stimuli in our information-loaded environment (4) Perceptual patterns tend to be consistent - once we see something a certain way, we tend to continue to see the same pattern despite contradictory evidence (5) Perception is largely a learned process - to a great extent, it is learned through our cultural socialization (6) Intergroup perception accentuates differences between identity groups.

The importance of perceptual acuity in intercultural communication is stipulated by Kelly and Meyers (1992a, in Brislin & Yoshida, 1994) in their Cross-Cultural Adaptability Inventory. It was developed for assessment of trainees' skills and for setting up the goals and strategies of their training. The four dimensions examined in the inventory are emotional resilience, flexibility and openness, perceptual acuity and personal autonomy. Brislin and Yoshida explained that the perceptual acuity dimension is based on the assumption that although meanings of behaviours differ across cultures, if a person is sensitive to others' behaviours in one's own culture, then it is more likely that he/she can understand the different meanings attached to the behaviours of culturally different people. They further stated that people who are accurate in perceiving the communication cues of others are the ones who are sensitive to emotions of others and the consequences of their own actions. Their assumption of relating intracultural and intercultural perceptual acuity is reasonable; however, as cultural differences complicate perceptual processes for intercultural communication, the relationship between intra- and intercultural perceptual acuity might not be as straightforward as assumed. There is also a risk in relying solely on self-report inventories for assessment of perceptual acuity. A rather small relationship has been observed between objectively assessed perceptual acuity and self-assessed perceptual acuity

(Rosenthal *et al.*, 1979).

There are, unfortunately, no tools available for the objective assessment and training of intercultural perceptual skills. Some materials such as culture assimilators focus on one's inferential ability and do not particularly deal with how one's perceptual ability at the early stage of cognitive processes affects later inferential stages. In addition, culture assimilators provide critical incidents in written scripts; therefore, trainees' oral or nonverbal (expressive and perceptual) skills are not trained unless they are used for role plays. The ICW (a kind of culture awareness training) focuses on natural face-to-face interaction between individuals from different cultural backgrounds. It necessitates examination of one's perceptual and behavioural styles in the contexts of cultural differences. However, as in culture assimilator training, the ICW deals with cultural influences on the inferential stages of communication activity more than those on the perceptual stage. In addition, the medium of communication examined is mainly verbal. The aim of cultural awareness training (including ICW) is to make trainees aware of ethnocentrism in their interpretation of people and events, and learn to understand the perspectives taken by individuals from other cultures.

In intracultural communication research, perceptual ability has been shown to be related to individuals' social skills as described in Chapter 1. It can, therefore, be assumed that intercultural perceptual ability is related to intercultural communication skills. Intercultural perceptual ability seems to be based on: (1) language understanding (2) nonverbal sensitivity and (3) cultural awareness. The importance of language acquisition is emphasised for intercultural effectiveness and adjustment as discussed earlier in this chapter. In intercultural communication when language understanding is limited, the role of nonverbal communication seems to become more prominent than in intracultural communication. Because of the universal nature of nonverbal communication, nonverbal cues expressed by people from other cultures can be easily perceived, whether accurately or inaccurately. The causes of

inaccuracy would be observed in cultural-specificity in conjunction with communication contexts. For example, appropriate kinds and levels of emotion expression in contexts differ depending on, for example, whether individuals come from individualistic or collectivist cultures. The problems, therefore, with cross-cultural perception of nonverbal communication cues are that, firstly, nonverbal cues which are more likely to be taken in by individuals in certain contexts might differ across cultures. Secondly, interpretation of the same cues perceived in certain contexts might differ across cultures. The perceptual processes are often out of awareness just as culture exists in people out of awareness. The important step toward improving perceptual ability seems to be to become aware of one's own perceptual style and cultural influence on it. Cultural awareness training is carried out by having trainees observe or experience different cultural expectations. Similarly, in intercultural perception training, trainees can be made to perceive communication cues of individuals from other cultures in comparison with theirs, so that they can become more aware of their cultural perceptual styles.

3.5. Summary

In this chapter, studies on cross- and intercultural communication were reviewed in order to examine the components of intercultural communication competence and how they can be trained for successful intercultural interactions.

Intercultural communication is described as communication between people with different cultural backgrounds. Culture, "the collective programming of the mind" as described by Hofstede (1984, p. 25), is reflected in our communication rules, symbols and behaviour. Successful intercultural communication, therefore, seems to depend on: (1) understanding the concepts of culture and cultural differences, and their influence on communication

styles of people (2) acquisition of communication skills such as encoding, decoding and decision skills and (3) having the motivation to communicate and to understand others.

Intercultural communication training has been developed to help people with respect to affective, behavioural, and cognitive goals, as identified by Brislin (1989). For the affective goal, training should focus on how to deal with anxiety which is associated with unfamiliar situations or communication styles of others, and encourage trainees to enjoy intercultural interactions. For the cognitive goal, training should inform trainees concerning cultural theory, communication characteristics relating to cultural dimensions and intergroup communication theory, such as the role of stereotyping and in-group/out-group distinction. It would be important to emphasise how our social perception is affected by all of these factors, which in turn determine our behaviour toward others. For the behavioural or skill goal, training should aim at improving such skills as language, nonverbal encoding and decoding skills. In order to improve skills, culture-specific knowledge has to be acquired, such as expected behaviour in business meetings.

Intercultural training methods developed so far have had success in improving various aspects of people's intercultural communication skills. However, they need further improvements based on the past effectiveness results and new research findings. Examination of the focus of existing training methods revealed that some communication aspects, such as inferential processes and overt behaviours, are more emphasised than other aspects, such as perceptual processes. Considering the influence perceptual processes have on inferential and behavioural outcomes of individuals, training methods which deal with this aspect have to be introduced. Effectiveness of training methods seems to lie in their combined use, which covers affective, cognitive and behavioural aspects of communication skills by taking into consideration the needs of trainees.

In this research, intercultural perceptual assessment and training was undertaken, using the British and Japanese Social Perception Task (BJSPT). The training was based on the BJSPT cross-cultural research findings which were obtained at the earlier stage of the research, and the methods and theories employed in other intercultural communication training programmes such as culture awareness training. It is anticipated that the results of this experimental perception training would help to expand and develop the content of future intercultural communication training programmes.

CHAPTER FOUR

Construction of the British and Japanese Social Perception Task (BJSPT)

In this chapter, the construction of a British and Japanese nonverbal perception task entitled "the British and Japanese Social Perception Task (BJSPT)" is reported. As pointed out in previous chapters, there are no tools available for the objective assessment and training of intercultural perceptual skills. The aim of the task is to examine perceptual processes of British and Japanese people - how they take in information and interpret it in various social contexts - and how these processes relate to their social rules and their perceptual accuracy in within- and cross-cultural communication.

The format of the task is based on the IPT (Archer & Costanzo, 1988; Costanzo & Archer, 1989) which contains 30 naturalistic interaction scenes of people in five relationship types - competition, deception, intimacy, kinship and status. These relationship types were adopted for the filming of the scenes for the BJSPT, which was carried out both in the UK and Japan. These British and Japanese scenes were then viewed by the respective nationalities, and the scenes which satisfied the selection criteria were compiled into the BJSPT. In the following sections, the filming, editing, and scene selection processes are described in turn. In the final section, the construction of the BJSPT and the use of the task are discussed.

4.1. Filming of the BJSPT

4.1.1 British Participants

Filming of the British scenes was undertaken by the researcher between January 1999 and July 2000. 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. The search for participants was based on the plan which took into consideration the relationships depicted in the IPT and the modifications pursued in the BJSPT. It was intended that the British and Japanese scenes would become equivalent in depicting relationships to facilitate cross-cultural comparisons. However, some compromises had to be made due to the availability of people within the time limit set in recruiting them. Consent rate for participation from those who were contacted by letter or telephone was about 5%, although those who were asked for participation through personal connections mostly (about 90%) agreed to participate. Filming was conducted mainly in the Yorkshire area; however, participants were from various parts of the UK, including Scotland and the south. Efforts were made to reflect the diversity of UK culture by including people of different socioeconomic status and of different ethnic origins. The age range of participants filmed was from 1.5 to 53 years, with the majority being in their 20s, 30s and 40s.

4.1.2 Japanese Participants

Filming for the Japanese scenes was undertaken by the researcher between January 1999 and December 1999. Several scenes were of Japanese people who were temporarily staying in York, UK, either for studying or for a holiday between January and September; however, most of the scenes were recorded in

Japan between October and December 1999. 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. People's response to the recruitment process for the filming was good; about 80% of those who were contacted readily cooperated, although cooperation rates differed depending on the types of scenes recorded. Filming was mainly conducted in the western part (Kobe area) of Japan; however, efforts were made to include people of various socioeconomic and geographical backgrounds, so that the BJSPT could reflect the diversity of Japanese people. The age range of participants filmed is from 1.5 to 56 years, with the majority being in their 20s, 30s and 40s.

4.1.3 Filming procedure

The researcher explained to the participants that they were going to be filmed for a cross-cultural study intended to compare the British and the Japanese in their ways of communication. They were asked to interact with each other as naturally as possible without worrying about the presence of the video-camera. They were not given any scripts to follow and were left to themselves to develop the conversation, although when required, conversation topics were suggested to them to help them start the interaction. In order to avoid the participants becoming too conscious of their own nonverbal communication, detailed explanations were given only at the end of the filming. In the post-filming explanations, the participants were told that their interaction scenes would be edited into the cross-cultural perception task which would be used to examine nonverbal perceptual processes of British and Japanese people at a later stage in the research. It was also pointed out that the probable length of each scene used for the task would be approximately one minute. All or parts of their own recorded interactions were shown to them unless they declined to

watch them. No participants disagreed to the use of their own interaction scene in the BJSPT.

A Sony Handycam Vision (videoHi8XR) video camera was used for filming of all the scenes. Filming sessions took place in various locations both indoors and outdoors, such as in the living room of the researcher or participants' homes, in a seminar room at a university, in a training room or outside court at sports clubs, in an office at a company, in a café and in a park. As the interactions of people were filmed in as natural a setting as possible, background noise was inevitable. Noise levels differed depending on the settings, the home environments having the lowest, and the public environments (such as a training room at sports clubs) having the highest. In order to improve sound quality, a clip-microphone was attached to the interactants' clothes or to the objects (furniture, etc.) which were closest to them. However, at the early stage of the filming, a hand-held microphone positioned near the interactants or an internal microphone of the video-camera was used, and as a result, these scenes turned out to have lower voice level.

A tripod was used as often as possible with the video-camera to record stable views of the interactions. However, when its use created an intimidating atmosphere, for example, when children were being filmed at home or for other customers in cafés, the camera was held by hand. The areas of interactants' bodies filmed differed depending on the settings as dictated by various factors, such as the number of interactants, available space for filming and the arrangement of furniture in the location itself. However, as a minimum, the faces and upper bodies of interactants were recorded in every scene filmed. Filming was undertaken only once for each scene except for two, one in which the sound was completely missing from the recording because of the oversight of the clip-microphone not having been switched on, making re-filming necessary. On another occasion, two filming sessions with the same interactants were conducted in different settings for comparison, although only one was used for the BJSPT.

Filming sessions lasted between 7 and 26 minutes (average 16 minutes). This depended on various reasons, including the length of time participants could and were willing to spend being filmed. The first 5 minutes of each scene were usually regarded as the warming-up period for interactants to get used to the presence of the camera and to reduce reactivity to it. Therefore, it had been planned not to include recorded interactions from the first 5 minutes in the editing process of each scene for the BJSPT. However, in competition scenes, winners and losers reacted most naturally to the result of the game at the beginning of their interaction. Furthermore, in most cases it was difficult for them to continue their conversation about the result for more than 7 or 8 minutes and consequently this scene type ended up having shorter interaction times than the other scene types. As such, the first 5 minutes of each of these scenes were included in the editing process.

4.1.4 Description of the Five Scene Types Filmed

Among the five IPT scene types described previously, the deception scene type was replaced by an age scene type, as the deception scenes filmed in the IPT were lacking in spontaneity. This was partly because people would not have had adequate motivation to tell false stories about themselves in front of a camera as they would in everyday life out of a genuine need to succeed in deception. On the other hand, genuine deception scenes are difficult to film because of ethical problems. Age scenes which depict interactions of people with age differences were, therefore, chosen as an alternative, since it was hypothesised that relative age might be one of the factors which influences interactants' behaviour toward each other. Six British and six Japanese scenes were filmed for each scene type, totalling 30 British and 30 Japanese scenes. The five scene types filmed for the BJSPT are described below.

Age

This scene type involves interactions between people with age differences or with no age differences. Most of the interactants knew each other before the filming but with different levels of acquaintanceship. The scenes were taken within home settings, in a university seminar room, or in an office. All the scenes show only one interactant in shot, two of which are compound scenes (only one compound scenes for the Japanese), in which the same person is interacting with two people of different ages in turn.

Competition

This scene type involves interactions between the winner and the loser of a game. All the scenes were filmed immediately after the games at or near the locations where the games were played. All the scenes show two players talking about the results of the game to the researcher, except two Japanese scenes in which two players are talking to their coach, and one British scene in which two players are talking to their father or father-in-law.

Intimacy

This scene type involves interactions between opposite-sex couples, between same/opposite-sex friends and between new acquaintances. Most scenes were filmed in home environments, except two which were filmed in an office or at a university. In two scenes, only a male or female interactant is shown in shot in two separate scenes. These compound scenes were filmed so that the same person could be compared in his/her interactions with two people of different levels of intimacy with him/her. In other scenes, all (two or three) interactants are shown together in shot.

Kinship

This scene type involves interactions between family members such as between a parent(s) and a child(ren) or between a brother and a sister. All the

scenes were taken within home settings. In two scenes, only a daughter or son is shown in shot, but in all other scenes, all (two or three) participants involved in the interactions are shown.

Status

This scene type involves interactions between those who have different/same occupational status in the same work-place. Two scenes between teachers, three scenes between office workers and one scene between a university lecturer and a student were filmed, mostly in their work-places except two which were taken in a park or in a café. In two scenes, one male interactant is shown in shot and in one scene, a female is shown in shot in two separate scenes, interacting with two people of different occupational status in turn. In the other three scenes, all (two) interactants are shown in shot together.

4.2. Editing for Scene Selection Testing

Editing of the Japanese scenes for scene selection testing was carried out in the audiovisual centre at the University of York in June, 2000, and that of the British scenes was carried out at a private editing company in September 2000, due to unavailability of the editing facility at the university audiovisual centre. 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 shown in the video. As explained previously, the first five minutes of each film were regarded as a "warming-up" period for the participants to get

used to the video-camera and, therefore, no parts were selected from this period except for the sports scenes.

During the editing process, the voice level of the interactants was adjusted so that all the scenes have similar audio level in the task. At the same time, brightness was added to some scenes which were rather dark and interactants' facial expressions were not clearly observable in detail.

Based on the actual relationships of the interactants, a multiple-choice question for each scene was created. The question was then added onto 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). It transpired that the length of all three versions of the British and Japanese tasks ended up being 22 minutes long.

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. By this process voices of interactants became as though they were heard through a closed door, making the verbal contents unintelligible, although they still retained variations in pitch, rate and loudness. 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).

4.3. Scene Selection Testing

Scene selection testing with British and Japanese participants was conducted in order to examine the usability of British and Japanese video-clips in the

BJSPT. The criteria set for scene selection were: (1) the clips should have a significant above-chance but below-perfect accuracy rate so that the clips can reliably discriminate perceptual sensitivity (2) the participants' accuracy for the clips (correct/incorrect) should correlate significantly with their scene-type total scores so that scenes become homogeneous within the scene types (3) British and Japanese clips have to be equivalent in terms of their accuracy rates and scene settings for the same scene type so that cross-cultural comparisons are possible.

4.3.1 Decoders

British participants were recruited at the University of York, UK during October and November, 2000. 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 in July and August when they came to study English in summer English courses held in York, Leeds and Leeds Metropolitan universities. They (non-Psychology undergraduates and postgraduates) took the task in groups between or after their English lessons. 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.

4.3.2 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 (Appendix A). For the Japanese, oral instructions and a questionnaire (Appendix B) 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.

4.3.3 Results

In order to examine the scenes for the first phase of the selection procedure results are reported, firstly, on overall accuracy levels for the three versions of the British and Japanese tasks, secondly, on accuracy levels according to the five British and Japanese scene types, and thirdly, on accuracy levels of all of the individual scenes in the tasks. Fourthly, the results of correlation analyses between participants' performance on the individual scenes and their scene-type total scores are examined as the second phase of scene selection. Finally, a summary of the British and Japanese video-clips which were matched in

their difficulty levels and settings for each scene type is presented as the BJSPT scenes.

4.3.3.1 Overall accuracy levels for three versions of the British and Japanese tasks

In order to examine how accurately the British and Japanese tasks were interpreted as a whole, overall accuracy rate (mean percentage of the participants getting the scenes correct) for 30 scenes in each of the three versions of British and Japanese tasks was examined; comparisons were made between the two nationalities and between the genders within each nationality. The results for the British and Japanese tasks are reported in Table 4.1 and Table 4.2 separately.

Table 4.1 *Mean accuracy percentage and standard deviation for three versions of the British task*

	male			female			total	
	N	*M*	SD	*N*	*M*	SD	*M*	SD
version 1	10	44.3	7.2	13	42.3	12.2	43.3	9.7
version 2	10	40.7	9.1	13	40.8	7.1	40.8	8.1
version 3	10	41.3	6.3	14	44.0	8.8	42.7	7.6
total	30	42.1	7.5	40	42.4	9.4	42.2	8.5

Table 4.2 *Mean accuracy percentage and standard deviation for three versions of the Japanese task*

	male			female			total	
	N	*M*	SD	*N*	*M*	SD	*M*	SD
version 1	12	43.9	6.9	17	48.0	9.3	46.0	8.1
version 2	14	41.4	11.3	16	41.0	8.8	41.2	10.1
version 3	11	43.0	7.5	16	46.9	9.3	45.0	8.4
total	37	42.8	8.6	49	45.3	9.1	44.0	8.9

Although females' overall accuracy was slightly higher than males' for both nationalities, differences were found to be nonsignificant. The Japanese tasks received higher overall accuracy than the British tasks but the difference was found to be nonsignificant.

4.3.3.2 Accuracy levels for five scene types of the British and Japanese tasks

Mean accuracy rates for five scene types of the British and Japanese scenes across three versions are summarised in Table 4.3.

Table 4.3 *Mean accuracy percentage for five scene types of the British and Japanese tasks*

scene types	British tasks			Japanese tasks		
	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 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 Japanese males were found to be nonsignificantly more accurate than Japanese females in the interpretation of competition scenes, British females were significantly more accurate than British males on the same scene type ($F(1,69) = 9.72$, $p < .01$).

4.3.3.3 Accuracy levels for individual scenes of the British and Japanese tasks

At the first phase of the scene selection procedure, accuracy rates for all the individual scenes in three versions of the British and Japanese tasks were examined. 15 British scenes and 18 Japanese scenes contained at least one video-clip which had a significantly above-chance and below-perfect accuracy rate. The results are shown in Table 4.4 and 4.5 for the British and Japanese tasks respectively.

Table 4.4 *Accuracy percentage for all the individual scenes in three versions of the British task*

age scene no.	**6**	**7**	**12**	**14**	**26**	**28**
version 1	52.2	17.4	4.3	52.2	30.4	13.0
version 2	43.5	39.1	13.0	34.8	8.7	13.0
version 3	45.8	41.7	16.7	33.3	8.3	4.2
competition scene no.	**13**	**18**	**21**	**24**	**25**	**30**
version 1	52.2	21.7	43.5	43.5	**69.6**	8.7
version 2	47.8	26.1	**69.6**	8.7	**65.2**	17.4
version 3	45.8	8.3	29.2	33.3	**58.3**	29.2
intimacy scene no.	**2**	**3**	**5**	**8**	**17**	**20**
version 1	**69.6**	**78.3**	**82.6**	**60.9**	**73.9**	39.1
version 2	**60.9**	47.8	**60.9**	**56.5**	**60.9**	**56.5**
version 3	**79.2**	***95.8***	**79.2**	33.3	**54.2**	**62.5**
kinship scene no.	**11**	**15**	**16**	**22**	**23**	**29**
version 1	34.8	**60.9**	13.0	**69.6**	52.2	43.5
version 2	17.4	**69.6**	30.4	**65.2**	39.1	47.8
version 3	8.3	**66.7**	45.8	**66.7**	29.2	**54.2**
status scene no.	**1**	**4**	**9**	**10**	**19**	**27**
version 1	30.4	**65.2**	8.7	**56.5**	39.1	8.7
version 2	21.7	**60.9**	39.1	13.0	**56.5**	26.1
version 3	**54.2**	**83.3**	33.3	8.3	**54.2**	25.0

Note: Bold non-italic figures indicate significantly above-chance and below-perfect accuracy. Bold italic figures indicate significantly above-chance but nonsignificantly below-perfect accuracy.

Table 4.5 *Accuracy percentage for all the individual scenes in three versions of the Japanese task*

age scene no.	**1**	**7**	**14**	**25**	**28**	**30**
version 1	27.6	24.1	**51.7**	**79.3**	41.4	20.7
version 2	10.0	26.7	46.7	**50.0**	43.3	30.0
version 3	14.8	37.0	22.2	**63.0**	40.7	18.5
competition scene no.	**6**	**8**	**13**	**20**	**23**	**27**
version 1	41.4	**72.4**	**55.2**	37.9	31.0	31.0
version 2	**50.0**	**66.7**	26.7	30.0	20.0	26.7
version 3	**63.0**	**51.9**	44.4	**63.0**	**51.9**	40.7
intimacy scene no.	**4**	**5**	**15**	**17**	**22**	**26**
version 1	44.8	13.8	**79.3**	3.4	**82.8**	34.5
version 2	36.7	40.0	33.3	13.3	**63.3**	43.3
version 3	37.0	18.5	37.0	7.4	**55.6**	**55.6**
kinship scene no.	**2**	**10**	**18**	**19**	**21**	**24**
version 1	**62.1**	**55.2**	**62.1**	48.3	44.8	**58.6**
version 2	**66.7**	36.7	**70.0**	26.7	30.0	**50.0**
version 3	33.3	**51.9**	**55.6**	**51.9**	40.7	***88.9***
status scene no.	**3**	**9**	**11**	**12**	**16**	**29**
version 1	13.8	**62.1**	**65.5**	27.6	17.2	***96.6***
version 2	**50.0**	33.3	**73.3**	26.7	23.3	***100.0***
version 3	**66.7**	18.5	**85.2**	22.2	18.5	***100.0***

Note: Bold non-italic figures indicate significantly above-chance and below-perfect accuracy. Bold italic figures indicate significantly above-chance but nonsignificantly below-perfect accuracy.

4.3.3.4 Correlations between participants' individual scene performance and the scene-type total score

At the second phase of the scene selection procedure, correlations between participants' performance (correct/incorrect) on the individual scenes and their scene-type total scores were examined. Point-Biserial correlation coefficients were used for the analyses. The majority of the above-chance and below-perfect accuracy clips of British and Japanese scenes had a significant correlation with the scene-type total score. The results are summarised in Table 4.6 for the British scenes and in Table 4.7 for the Japanese scenes.

Table 4.6 *Correlations between British participants' performance on individual British scenes and their scene-type total scores*

age scene no.	**6**	**7**	**12**	**14**	**26**	**28**
version 1	**0.50**	**0.42**	0.06	**0.73**	**0.50**	**0.44**
version 2	**0.54**	**0.67**	0.05	**0.65**	-0.01	**0.52**
version 3	**0.60**	**0.49**	**0.43**	**0.59**	0.29	-0.10
competition scene no.	**13**	**18**	**21**	**24**	**25**	**30**
version 1	0.30	**0.44**	0.28	**0.55**	0.27	0.35
version 2	0.36	**0.58**	**0.51**	**0.51**	0.25	0.18
version 3	**0.65**	0.26	0.39	0.22	**0.49**	0.39
intimacy scene no.	**2**	**3**	**5**	**8**	**17**	**20**
version 1	**0.60**	**0.67**	0.37	**0.64**	**0.48**	0.18
version 2	**0.54**	0.27	**0.46**	0.35	0.32	**0.54**
version 3	0.21	0.39	0.30	**0.46**	**0.64**	**0.58**
kinship scene no.	**11**	**15**	**16**	**22**	**23**	**29**
version 1	**0.69**	**0.47**	0.22	0.19	0.34	0.38
version 2	0.28	**0.49**	**0.44**	**0.66**	**0.45**	**0.55**
version 3	0.33	**0.58**	**0.44**	0.35	0.39	**0.49**
status scene no.	**1**	**4**	**9**	**10**	**19**	**27**
version 1	**0.57**	**0.49**	0.12	**0.73**	0.19	0.27
version 2	**0.45**	**0.56**	**0.62**	**0.48**	0.27	0.33
version 3	**0.61**	**0.62**	**0.41**	0.11	**0.47**	0.38

Note: Bold figures indicate significant correlations. Shaded areas indicate significantly above-chance and below-perfect accuracy.

Table 4.7 *Correlations between Japanese participants' performance on individual Japanese scenes and their scene-type total scores*

age scene no.	**1**	**7**	**14**	**25**	**28**	**30**
version 1	**0.46**	**0.55**	0.36	0.26	**0.44**	**0.53**
version 2	0.36	**0.53**	**0.49**	**0.52**	**0.45**	**0.63**
version 3	0.00	**0.62**	**0.47**	**0.69**	0.32	0.32
competition scene no.	**6**	**8**	**13**	**20**	**23**	**27**
version 1	0.34	0.02	**0.63**	0.18	**0.61**	0.29
version 2	0.30	0.26	**0.51**	**0.44**	**0.38**	**0.60**
version 3	**0.49**	0.09	**0.61**	**0.39**	**0.58**	0.12
intimacy scene no.	**4**	**5**	**15**	**17**	**22**	**26**
version 1	0.20	-0.17	0.24	0.37	**0.63**	**0.55**
version 2	0.32	**0.56**	0.03	0.35	**0.41**	**0.55**
version 3	**0.60**	0.32	0.12	0.05	0.22	**0.55**
kinship scene no.	**2**	**10**	**18**	**19**	**21**	**24**
version 1	**0.55**	**0.47**	**0.59**	**0.39**	0.16	**0.43**
version 2	**0.68**	**0.41**	**0.48**	**0.49**	**0.38**	0.23
version 3	0.18	0.36	0.32	0.35	0.29	**0.55**
status scene no.	**3**	**9**	**11**	**12**	**16**	**29**
version 1	0.36	**0.55**	0.36	0.33	0.21	-0.04
version 2	**0.40**	**0.46**	0.18	**0.38**	**0.49**	0.22
version 3	**0.53**	**0.49**	0.33	**0.68**	**0.54**	..

Note: Bold figures indicate significant correlations. Shaded areas indicate significantly above-chance and below-perfect accuracy.

4.3.3.5 Scene selection for the BJSPT

From the video-clips which satisfied the previous two criteria for scene selection, British and Japanese clips which had similar accuracy rates and scene settings for each scene type were selected. As both British and Japanese age scenes generally had poor accuracy and correlation results, this scene type was dropped from the task. The video-clips selected for the BJSPT are summarised in Table 4.8, 4.9, 4.10 and 4.11 according to the remaining four scene types.

Table 4.8 *British and Japanese video-clips selected for the BJSPT competition scene type*

	British 1	British 2	mean
video-clip no.	21 (version 2)	25 (version 3)	
scene setting	2 male players talking after a squash game	A male and a female players talking after a tennis game	
accuracy rate	69.6%	58.3%	64.0%
	Japanese 1	Japanese 2	mean
video-clip no.	6 (version 3)	13 (version 1)	
scene setting	2 female players talking after a tennis game	2 male players talking after a tennis game	
accuracy rate	63.0%	55.2%	59.1%

Note: Accuracy rate indicates the proportion of British or Japanese participants who perceived the scene correctly.

Table 4.9 *British and Japanese video-clips selected for the BJSPT intimacy scene type*

	British 1	British 2	mean
video-clip no.	2 (version 2)	8 (version 1)	
scene setting	2 opposite-sex friends talking at home	A married couple and their female friend talking at home	
accuracy rate	60.9%	60.9%	60.9%
	Japanese 1	Japanese 2	mean
video-clip no.	22 (version 2)	26 (version 3)	
scene setting	2 opposite-sex friends talking at home	A married couple and their female friend talking at home	
accuracy rate	63.3%	55.6%	59.5%

Table 4.10 *British and Japanese video-clips selected for the BJSPT kinship scene type*

	British 1	British 2	mean
video-clip no.	22 (version 2)	29 (version 3)	
scene setting	A brother and a sister talking at home	A mother, her daughter and mother's female friend talking at home	
accuracy rate	65.2%	54.2%	59.7%
	Japanese 1	Japanese 2	mean
video-clip no.	18 (version 1)	24 (version 1)	
scene setting	A bother and a sister talking at home	A mother, her daughter and mother's female friend talking at home	
accuracy rate	62.1%	58.6%	60.4%

Table 4.11 *British and Japanese video-clips selected for the BJSPT status scene type*

	British 1	British 2	mean
video-clip no.	4 (version 2)	19 (version 3)	
scene setting	A female student talking (with (1) a course-mate (2) a lecturer) at the university	A man talking (with his secretary) at work	
accuracy rate	60.9%	54.2%	57.6%
	Japanese 1	Japanese 2	mean
video-clip no.	3 (version 2)	11 (version 1)	
scene setting	A man talking (with his subordinate) at work	A man talking (with his boss) in a café	
accuracy rate	50%	65.5%	57.8%

Note: A person described in a parenthesis is not shown in the film.

Although some differences were observed in scene settings, British and Japanese scenes in each scene type became similar. Mean accuracy rate for overall British scenes turned out to be 60.5%, while that for overall Japanese scenes was 59.2%. The difference was found to be nonsignificant.

These 8 British and 8 Japanese scenes selected from 4 scene types were mixed together and edited in a random order as the BJSPT. Editing was

conducted at the University of York using the similar methods as described previously at the scene selection stage. Thus, the BJSPT was edited with English captions for British viewers and with Japanese captions for Japanese viewers. A questionnaire was first produced in English and then translated into Japanese using the back-translation method with help from another Japanese researcher (Appendix C for the English version of the questionnaire and Appendix D for the Japanese version). A scenario for each scene of the BJSPT is also described in Appendix E.

4.4. Discussion

The BJSPT was developed adopting the principles used in the IPT. Interaction scenes contained in the BJSPT are, therefore, meant to be similar to those in the IPT. In spite of the alterations made during the development process such as the removal of deception scenes, the BJSPT still retains the original formula of the IPT by presenting spontaneous and naturalistic interaction scenes and using objective criteria for perception accuracy. As emphasised by Archer and Akert (1984), it is essential to utilise naturally occurring interactions to ensure that perceptual assessment is as close to reality as possible. In spite of the importance of their use, communication cues exchanged in natural interactions have rarely been adopted in perception assessment tools and there are no such cross-cultural assessment tools available. The aim of producing a cross-cultural perception task necessitated two major alterations to the original formula of the IPT. Firstly, speech content had to be removed from the BJSPT so that language ability would not affect the perceptual accuracy of British and Japanese viewers. The audio filtering technique, however, enabled the retention of paralinguistic cues which play an important role in nonverbal communication. Secondly, the task had to include interactions of both British

and Japanese people, so that viewers can have equivalent British and Japanese scenes to observe.

Filming was conducted in various places in the UK and in Japan. In spite of efforts to reflect the diversity of each national culture by including various people from different socioeconomic and geographical backgrounds, the limited number of scenes filmed restricted variation in people. For example, the majority of British interactants in the scenes filmed for the BJSPT were white British citizens and the final BJSPT task turned out to contain only white citizens. In spite of such biases, people in the British and Japanese scenes can still be seen as representative of their own culture, as the scenes included were those on which viewers from each culture concurred in their interpretations to a satisfactory level.

The scenes are natural in a sense that interactants had no scripts to follow and were filmed in their everyday activity. It has to be admitted, however, that the existence of a video-camera affected interactants to a degree and it was unavoidable. Due to ethical and practical reasons, use of a hidden camera was not considered and the interactants were all those who consented to filming beforehand. Arguing against the effects of camera exposure, Archer and Akert (1984) reported that self-consciousness and reactivity to recording gradually diminish with exposure to the camera and this was what was observed in the recording with British and Japanese people. Recording, therefore, took much longer than the required length of the scenes for the BJSPT, with the longest session lasting more than 25 minutes. Where possible, the first 5 minutes was removed from the editing process.

The editing format was also based on that of the IPT with a caption (a question) appearing before each scene. Generally, scenes in the BJSPT ended up as shorter than those in the IPT simply because it was difficult for some scenes to be edited out for longer periods due to various reasons; for example, interactants mentioned their relationship in their conversation which would be a direct answer to a question asked in the task, or background noise became

too loud in a public place. Although speech content was made unintelligible by audio filtering, in order to avoid the possibility that viewers could lip-read, the parts which included obvious verbal cues were avoided in the scene selection process.

Concerning the filming and editing quality, it has to be acknowledged that the quality could have been made better, especially given that digital filming and editing facility has become more common in recent years. For the BJSPT, filming was conducted with a 8mm analogue video-camera and editing was carried out on a traditional editing machine because this was all that was available. However, it is doubtful that the picture quality of the BJSPT in any ways affected the perceptual accuracy of viewers as it was sufficiently clear to identify communication cues. It has to be remembered, however, that as people are becoming more and more used to high quality pictures in their everyday life, their expectations for picture quality of this kind of video task are becoming higher.

In the IPT, questions are accompanied by two or three possible answers but in the BJSPT all questions have three possible answers; this makes accuracy comparisons between the scenes more straight-forward. It also leads to higher difficulty level of the task itself. In addition, the BJSPT does not provide speech content as a clue for interpretation of the scenes as in the IPT. The 30 British and 30 Japanese scenes originally filmed had the mean accuracy levels of 42% and 44% respectively when viewed by respective nationals as contrast to the accuracy level of 55% when the US norm group (N = 438) viewed the IPT (Costanzo & Archer, 1989).

Significant differences observed in scene-type accuracy rates for 30 British and 30 Japanese scenes revealed different communication styles between the two nationalities. While British people seem to communicate intimacy cues among themselves more clearly than Japanese people, Japanese people seem to communicate status and age difference cues more clearly among themselves than British people. At the same time, Japanese people

were found to be better at distinguishing the behaviour of winners and losers of their own nationality. At this stage, it is not clear whether these differences are due to their different levels of expressivity or perceptual sensitivity. The relationship between expressivity and perceptual sensitivity is examined through cross-cultural comparisons in BJSPT accuracy as reported in Chapter 5, along with micro-analysis of the BJSPT scenes in Chapter 6.

Scene selection for the BJSPT was carried out, firstly, by examining accuracy rates of individual video-clips so that selected clips are in a range which can discriminate nonverbal perceptual sensitivity of people reliably. Secondly, homogeneity of the scenes within the scene-type was pursued by looking at the correlations between viewers' performance on individual clips and their scene-type total scores in the task. Correlations between the individual clips and the grand total score for the task were also examined; however, as they were rather low and a lot of clips had nonsignificant correlations with the task total score, these data were not selected for the final task. Considering the diversity of scenes based on four scene types, it seemed more reasonable to make scenes homogeneous in their own scene types and, therefore, only video-clips which had significant correlations with the scene-type total scores were selected as satisfactory. Finally, among the scenes which satisfied the previous two criteria, British and Japanese scenes with equivalent scene settings and accuracy rates for each scene type were selected for the BJSPT. Having equivalent levels of difficulty for British and Japanese scenes makes it possible to systematically compare the relative nonverbal sensitivity of British and Japanese people. Similarly, having equivalent scene settings makes comparisons of their nonverbal expressivity easy to undertake and also helps to clarify the relationships between their communication styles, cultural norms and values in the four scene types.

In the selection process, age scenes were removed from the task due to their low accuracy rates and low correlations with scene-type total scores. It can be speculated that relative age might not be a strong factor affecting

interpersonal behaviour which might be more influenced by other factors, such as the levels of acquaintanceship and liking. The finding that Japanese accuracy rates for age scenes were significantly higher than those for British scenes seems to indicate that age is relatively more important in Japanese than in British interpersonal communication. This finding, however, would need to be validated with observations which controlled for other interpersonal factors between the two nationalities.

In conclusion, the BJSPT can be described as a task composed of different sets of tasks based on four scene types - competition, intimacy, kinship and status - both for British and Japanese scenes. This task permits, first of all, examination of nonverbal perceptual sensitivity and perceptual processes of British and Japanese people. Secondly, it would help to clarify the relationship between nonverbal expressivity and perceptual sensitivity of people and also their cultural norms and values in interpersonal communication. Thirdly, it might be a useful tool for intercultural communication assessment and training. The BJSPT can be used to examine how individuals' perceptual sensitivity within a culture affect their cross-cultural perception. In the following chapters, these aspects are examined using the BJSPT.

CHAPTER FIVE

BJSPT cross-cultural testing with the British and Japanese

This chapter summarises the results of the BJSPT cross-cultural testings which were carried out in the UK and Japan. The results are presented in the order of: (1) cross-cultural accuracy comparisons (2) item-analysis and internal consistency results (3) test-retest results (4) comparisons of visual-cue-only BJSPT and visual-plus-audio-cue BJSPT. In the final section, the implications of these findings are discussed.

5.1. BJSPT Cross-cultural Accuracy Comparison

In this section, the results of cross-cultural comparisons in the BJSPT accuracy between British and Japanese university undergraduate students are reported.

5.1.1 Method

Participants

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 BJSPT 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 BJSPT testing either at Osaka

University or Kansai University in Japan. They were tested during a Social Psychology lecture at their respective universities.

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 BJSPT, written instructions, questions and multiple-choice answers on the answer sheets and oral explanations for the British participants were all provided in English; those for the Japanese participants were all provided in Japanese. It was explained that their data would be used for cross-cultural comparisons in perceptual styles of the British and the Japanese. They were asked to view 8 British and 8 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 video, the participants were asked to write down their age and gender on the answer sheet. The participants did not receive any feedback as to their performance. No participation fees were offered to them.

5.1.2 Results

5.1.2.1 Accuracy comparison results according to British and Japanese four scene types

Their mean accuracy levels for the overall BJSPT and 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 5.1. The results of ANOVAs for the comparison of each of British and Japanese four scene types are also reported in the table. In addition, their performance according to the scene types is depicted in Figure 5.1.

Table 5.1 *Comparisons of BJSPT mean accuracy percentage between British and Japanese participants according to four scene types*

scene types	British $N = 91$	Japanese $N = 102$	$F(1,189)$	p
BT competition	66.5	49.5	5.18	<.05
BT intimacy	54.9	56.4	0.56	*ns*
BT kinship	51.7	29.9	12.95	<.01
BT status	65.4	50.0	6.42	<.05
BT total	59.6	46.4	20.04	<.01
JP competition	46.2	66.7	11.02	<.01
JP intimacy	50.6	70.1	11.55	<.01
JP kinship	48.9	52.5	0.45	*ns*
JP status	66.5	57.4	1.53	*ns*
JP total	53.0	61.6	7.17	<.01
BJSPT total	56.3	54.0	1.68	*ns*

Note: BT = British scenes, JP = Japanese scenes

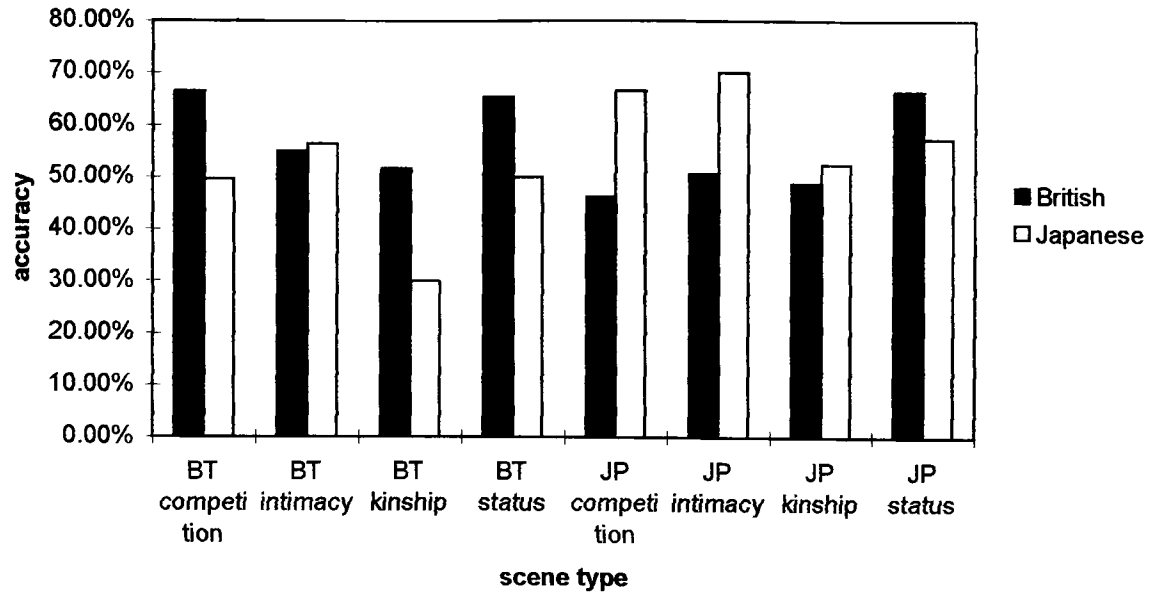

Figure 5.1 *Comparisons of BJSPT mean accuracy between British and Japanese participants according to four scene types*

As can be observed from the above table and figure, the British and Japanese participants' accuracy for the overall BJSPT turned out to be similar. However, 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 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 ($t = -4.53$, $p < .01$).

5.1.2.2 Individual scene accuracy comparison results

In order to examine scene accuracy in more detail, accuracy level for each scene was compared between the two nationalities. The results are summarised in Table 5.2.

Table 5.2 *Comparisons of individual scene accuracy percentage between British and Japanese participants*

scene no.	1	2	3	4	5	6	7	8
scene type	JP/int	BT/comp	BT/int	BT/kin	JP/int	BT/kin	JP/stat	BT/int
British	27.5	75.8	90.1	50.6	73.6	52.8	58.2	19.8
Japanese	52.9	54.9	84.3	22.6	87.3	37.3	56.9	28.4
scene no.	9	10	11	12	13	14	15	16
scene type	JP/stat	BT/stat	BT/stat	JP/comp	JP/kin	JP/comp	BT/comp	JP/kin
British	74.7	48.4	82.4	35.2	28.6	57.1	57.1	69.2
Japanese	57.8	41.2	58.8	55.9	26.5	77.5	44.1	78.4

Note: BT = British scene, JP = Japanese scene
comp = competition, int = intimacy, kin = kinship, stat = status

As can be seen from the table, accuracy for each scene varied from scene to scene. Some scenes were perceived at high levels of accuracy by both nationalities (e.g., scene 3 - British intimacy scene) and others at very low levels of accuracy by both nationalities, which were below the chance level (e.g., scene 8 - British intimacy scene and 13 - Japanese kinship scene). Scene

8 is a British friendship scene but the male and female friends were often mistaken as a dating couple. Similarly, scene 13 is a Japanese brother and sister scene but they were often mistaken as a dating couple. These low levels of accuracy were observed in spite of the scene selection procedure which selected the scenes with significantly above-chance accuracy for respective nationalities.

5.1.3 Discussion

British and Japanese participants' mean accuracy in the overall BJSPT was 56.3% and 54.0% respectively, indicating similar levels of nonverbal perceptual accuracy. Both the British and Japanese participants performed significantly better in their own nationality scenes than in the cross-cultural scenes. The British participants' mean accuracy for British scenes was 59.6% and the Japanese participants' mean accuracy for Japanese scenes was 61.6%. These accuracy levels were the levels expected from the scene-selection testing results reported in Chapter 4.

Examination of the participants' individual scene performance revealed that the scene difficulty levels varied from scene to scene. Most scenes attained the levels expected from the scene-selection testing. However, two scenes - one British intimacy scene and one Japanese kinship scene had below-chance accuracy for both the British and Japanese participants. This has to be taken into consideration in the following accuracy comparisons between the British and Japanese participants.

In terms of the scene types, the results yielded several significant differences. Firstly, it was found that the British participants performed significantly better than the Japanese participants in status scenes. This seems to suggest that British people might be more sensitive to status cues than Japanese people. It has been reported that Japanese people are very expressive in terms of interpersonal attitudes, particularly in expression of hierarchical

relationships (Argyle, 1975; Brosnahan, 1998; Kowner & Wiseman, 2003; Morsbach, 1988). On the other hand, British people are assumed to be less expressive in the use of status difference cues as their culture is, according to the cultural dimensions discussed in Chapter 3, lower on the power-distance dimension than Japanese culture. Examination of all of the original video scenes filmed and used in the scene-selection testing revealed that the Japanese participants' accuracy for Japanese status scenes was significantly better than the British participants' accuracy for British status scenes. In fact, one Japanese status scene was perceived correctly by almost all of the Japanese participants and, therefore, had to be removed from scene selection. Although relative nonverbal expressivity of British and Japanese people has to be examined by micro-analysing all of the filmed interaction scenes, the present results seem to suggest that there might be a negative relationship between nonverbal expressivity of people and their nonverbal perceptual sensitivity.

Similar conclusions can be reached from the finding that the Japanese participants were better than the British participants in intimacy scenes, although this result was mainly due to their better performance in Japanese intimacy scenes. The results of British intimacy scenes have to be treated with caution as one of the scenes had below-chance accuracy for both nationalities. Scene-selection testing results showed that the British participants' accuracy for British intimacy scenes was significantly higher than the Japanese participants' accuracy for Japanese intimacy scenes. Among the five scene types used in the scene-selection testing, intimacy scene type was found to be the easiest for the British participants, while that was one of the most difficult scene types for the Japanese participants. Considering the Japanese participants' high accuracy in the selected BJSPT intimacy scenes, the low accuracy level observed in the scene-selection testing seems to be due to unclear or lack of intimacy cues in some of the original Japanese intimacy scenes. Thus, the present cross-cultural comparison results seem to suggest

that the Japanese participants were better than the British participants in the selected Japanese intimacy scenes which contain relatively clear intimacy cues for Japanese people.

The Japanese participants' accuracy for British kinship scenes was very low and lower than the chance level. Examination of the explanations participants wrote for their choice of answers (which was obtained in the BJSPT re-testing session and summarised in Chapter 6) revealed that the Japanese participants relied on appearance cues such as assumed age and facial similarity of the interactants more than the British participants. These physical cues in British kinship scenes seem to have been very confusing for them. This seems to have contributed to their significantly lower accuracy than the British participants in kinship scenes as a whole.

There are limited number of cross-cultural studies conducted on nonverbal behaviours exchanged in kinship relationships. Caudill and Weinstein (1969), for example, reported that Japanese mothers have more bodily contact with their infants but vocalise less than American mothers. Assuming British culture is similar to American culture according to the cultural dimensions described earlier, then it might be the case that Japanese people might show clearer proximity or bodily contact cues than British people in kinship relationships, particularly with young children. Because of this expressivity difference, the Japanese participants might have had problems understanding British kinship scenes. This is only speculation and has to be examined by actual behavioural comparisons of British and Japanese people.

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. Behavioural scripts for winners and losers in competition contexts might be different between the two nationalities. It has been proposed that in

collectivist cultures such as in Japan, group harmony is emphasised and, therefore, negative emotion expression is discouraged in public (Matsumoto, 1996). Similarly, it might be the case that obvious display of pride and joy after winning a competition can affect harmonious relationships between players and, therefore, these expressions are to be suppressed. Suppression of pride and joy after competition, however, is also in the behavioural script of individualistic cultures. Archer (1980), in the US setting, explained that after competition, the loser is supposed to complement the winner while concealing their disappointment and the winner, on the other hand, has to conceal their pride and joy. The difference between British and Japanese people might be observed in the level of emotion suppression and substitution they engage in. One of the most confusing cues for the British participants might have been the smiles the 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 occur simply due to embarrassment. In fact, the Japanese losers' smiles were often interpreted as showing confidence and joy by some British participants. On the other hand, the British losers looked confident for some Japanese participants because of their length of speech and clear gestures. It might be the case that in cross-cultural perception, cues which are not expected in certain contexts in one's own culture tend to stand out and become significant clues for interpretation, which might unfortunately lead to a wrong conclusion.

5.2. Item analysis and internal consistency of the BJSPT

Item analysis and the examination of internal consistency of the BJSPT were carried out based on the cross-cultural testing results reported in the previous section.

5.2.1 Item analysis and internal consistency results

The correlations between 91 British and 102 Japanese participants' (all the participants described in 5.1.1) performance on each scene (correct/incorrect) and their total scores were examined. The analysis was carried out on British and Japanese scenes separately, using the point-biserial correlation. The results are shown in Table 5.3.

Table 5.3 *Scene-total correlations for BJSPT British and Japanese scenes*

scene types	competition		intimacy		kinship		status	
British scenes								
scene no.	2	15	3	8	4	6	10	11
correlations	.18*	.05	.04	-.08	.17*	-.01	-.01	.12
Japanese scenes								
scene no.	12	14	1	5	13	16	7	9
correlations	.04	.10	-.01	-.02	-.23*	.14	.05	.09

Note: * = significant at the .05 level (2 tailed).

The results suggest very low correlations between individual BJSPT scenes and British or Japanese scene total scores. Internal consistency for British scenes turned out to be .14 and that for Japanese scenes was .06. The internal consistency for the total BJSPT scenes was -.09.

5.2.2 Discussion

The scene-total correlations and internal consistency turned out to be very low for BJSPT British and Japanese scenes. These results suggest heterogeneous contents of the BJSPT as it contains scenes filmed in four different social contexts. These results might also have been affected by the small number of scenes contained in the task as internal consistency reliability is related to test

length (Kline, 2000). McIntire, Danforth and Schneider (1999) reported the internal consistency of .09 for the IPT-15 which contains 15 scenes, although Costanzo and Archer (1993) reported higher internal consistency of .38. The original 30 scene IPT was reported to have the internal consistency of .52 (Costanzo & Archer, 1989). It can be speculated that as the tasks such as BJSPT and IPT contain multiple cues which communicate various aspects of interpersonal relationships in different contexts, they are more prone to low internal consistency than the tasks which deal with limited aspects of communication contents such as emotion.

5.3. Test-retest of the BJSPT

Retest was carried out in order to examine reliability of the scenes and whether practice effects exist in this kind of task. Due to situational constraints, composition of participants and testing conditions turned out to be different between the British and Japanese testings and, therefore, their results are reported separately.

5.3.1 Test-retest with British Participants

5.3.1.1 Method

Participants

The participants were 18 British Psychology undergraduate students - 4 males (mean age 19.0 years, SD 0.82) and 14 females (mean age 18.7 years, SD 0.73) and 12 non-Psychology undergraduate students - 3 males (mean age 18.7 years, SD 1.15) and 9 females (mean age 18.2 years, SD 0.44) at the University of York, UK. All the Psychology students took the first testing in the cross-

cultural testing reported in the previous section. All the non-Psychology students were recruited specifically for the test-retest sessions.

Procedure

Non-Psychology students took the BJSPT first testing in small groups. Due to room availability, some groups viewed the task on a large screen in a lecture theatre while others viewed it on a TV monitor in a seminar room. However, they were given the same instructions as the Psychology participants (see the previous section 5.1.1).

Both the Psychology and non-Psychology students were re-tested with the BJSPT in small groups outside of class two months after their first testing. Video-viewing conditions for the first and second testings were matched for each participant (e.g., the use of a large screen in a lecture theatre or a TV monitor in a seminar room). The re-testing session was divided into two parts. In the first part, the participants completed the BJSPT as they did in the first testing. As in the first testing, they were encouraged to answer all the questions. In the second part, they were instructed to write the reasons (by specifying the nonverbal cues they used) for the choice of answers they made in the first part while viewing the task again. They were asked not to change the answers while writing the reasons for them in the second part. After the second session, no feedback as to their BJSPT performance was given. A course credit was given to the Psychology students for their second testing and the participation fee of £6 was offered to the non-Psychology students for the two testing sessions.

5.3.1.2 Results

Test-retest accuracy results are reported here whilst the participants' explanations for their choice of answers are summarised in Chapter 6, together with the scene analyses of the BJSPT.

Test-retest correlations were calculated using the Pearson correlation coefficient. The results are summarised in Table 5.4 for the overall BJSPT and for the British and Japanese four scene-types.

Table 5.4 *BJSPT test-retest correlation results with British participants*

scene types	correlations	*p*
BT competition	.20	*ns*
BT intimacy	-.02	*ns*
BT kinship	.63	<.01
BT status	.16	*ns*
BT total	.23	*ns*
JP competition	.49	<.01
JP intimacy	.35	*ns*
JP kinship	.16	*ns*
JP status	.49	<.01
JP total	.27	*ns*
BJSPT total	.12	*ns*

As can be observed from the above table, test-retest reliability of the BJSPT is very low (r = .12). The highest significant correlation was observed in British kinship scenes (r = .63), followed by Japanese competition scenes (r = .49) and Japanese status scenes (r = .49). The lowest correlation was observed in British intimacy scenes (r = -.02)

The participants' accuracy levels in the first and second testing sessions were compared according to British and Japanese four scene types and the differences were tested using the matched sample t-test. The results are shown in Table 5.5.

Table 5.5 *Comparisons of British participants' BJSPT mean accuracy percentage in the first and second testing sessions*

scene types	1st testing	2nd testing	$t(29)$	p
BT competition	65.0	50.0	2.19	<.05
BT intimacy	58.3	51.7	0.94	*ns*
BT kinship	48.3	48.3	0.00	*ns*
BT status	60.0	71.7	-1.37	*ns*
BT total	57.9	55.4	0.69	*ns*
JP competition	45.0	45.0	0.00	*ns*
JP intimacy	45.0	56.7	-1.65	*ns*
JP kinship	46.7	48.3	-0.22	*ns*
JP status	73.3	66.7	1.16	*ns*
JP total	52.5	54.2	-0.49	*ns*
BJSPT total	55.2	54.8	0.16	*ns*

British participants' accuracy results revealed that their overall mean accuracy was similar between the first and second testings (55.2% and 54.8% respectively). Their mean accuracy for overall British and Japanese scenes remained similar over the two testings. However, a significant accuracy decline was observed in British competition scenes in which their accuracy dropped from 65% to 50% ($t = 2.19$, $p < .05$). Examination of high-scoring (above the median score of 9 in the first testing) and low-scoring (below the median) participants' performance revealed that low-scoring participants improved their scores slightly in their second testing, particularly in Japanese scenes ($t = -1.94$, *ns*). On the other hand, high-scoring participants' performance declined in the second testing, particularly in British scenes ($t = 2.90$, $p < .05$).

5.3.2 Test-retest with Japanese Participants

5.3.2.1 Method

Participants

The participants were 57 Japanese Psychology undergraduate students - 21 males (mean age 21.2 years, SD 0.77) and 36 females (mean age 20.8 years, SD 0.61) at Kansai University in Japan. All of them took the first testing in the cross-cultural testing reported in the previous section.

Procedure

Re-testing was conducted at the end of a Social Psychology lecture 6 months after the first testing. Participants were shown the BJSPT in the same condition as in the first testing: they viewed the task on a large screen which was installed at the front of the lecture theatre. As in the first testing, they took the task in rather large groups (more than 20 in one group) and were encouraged to answer all the questions. However, this time they were also instructed to write the reasons (by specifying the nonverbal cues they used) for their choice of answers while answering the multiple-choice questions in the BJSPT. After the second session, no feedback as to their BJSPT performance was given to the participants. No participation fees were offered.

5.3.2.2 Results

Test-retest correlations were calculated using the Pearson correlation coefficient. The results are summarised in table 5.6 for the overall BJSPT and for the British and Japanese four scene-types.

Table 5.6 *BJSPT test-retest correlation results with Japanese participants*

scene types	correlations	*p*
BT competition	.17	*ns*
BT intimacy	.25	*ns*
BT kinship	.39	<.01
BT status	.02	*ns*
BT total	.24	*ns*
JP competition	.16	*ns*
JP intimacy	.13	*ns*
JP kinship	.50	<.01
JP status	.51	<.01
JP total	.27	<.05
BJSPT total	.27	*ns*

The results revealed low correlations between the first and second testings. The overall test-retest correlation was similar to that obtained from the British participants, although the correlation for each scene-type did not match clearly between the British and Japanese results. The highest significant correlation was observed in Japanese status scenes (r = .51), followed by Japanese kinship scenes (r = .50). The lowest correlation was observed in British status scenes (r = .02).

Participants' accuracy levels in the first and second testings were compared according to British and Japanese four scene types and the differences were tested with the matched sample t-test. The results are listed in Table 5.7.

Table 5.7 *Comparisons of Japanese participants' BJSPT mean accuracy percentage in the first and second testing sessions*

scene types	1st testing	2nd testing	$t(56)$	p
BT competition	47.4	55.3	-1.35	*ns*
BT intimacy	54.4	50.0	1.00	*ns*
BT kinship	28.9	48.2	-3.89	<.01
BT status	51.8	63.2	-1.75	*ns*
BT total	45.6	54.2	-3.34	<.01
JP competition	70.1	64.0	1.15	*ns*
JP intimacy	69.3	50.9	3.51	<.01
JP kinship	52.6	59.7	-1.83	*ns*
JP status	56.1	63.2	-1.43	*ns*
JP total	62.1	59.4	0.95	*ns*
BJSPT total	53.8	56.8	-1.63	*ns*

The results show that the overall BJSPT accuracy improved slightly but did not reach statistical significance. However, accuracy for the overall British scenes improved significantly (t = -3.34, p < .01) due mainly to accuracy improvements in kinship (t = -3.89, p < .01) scenes. On the other hand, accuracy for the overall Japanese scenes remained similar, although a significant accuracy decline was observed in Japanese intimacy scenes (t = 3.51, p < .01).

Differences in accuracy between British and Japanese scenes were also examined. The results revealed that in the first testing, the Japanese participants perceived Japanese scenes significantly better than British scenes (t = 4.84, p < .01). In the second testing, however, due to their accuracy improvements in British scenes, the accuracy differences between British and Japanese scenes became nonsignificant and similar, except in the kinship scene type (t = 2.04, p < .05).

Examination of high-scoring (above the median score of 9 in the first testing) and low-scoring (below the median of 9) participants' performance revealed that low-scoring participants improved their scores in the second testing, particularly in British scenes (t = -4.16, p < .01). On the other hand,

high-scoring participants' performance declined in the second testing, particularly in Japanese scenes ($t = 2.28, p < .05$).

5.3.3 Discussion

Retesting of the BJSPT was conducted in different conditions between the British and Japanese participants because of various external constraints, therefore, their results have to be interpreted accordingly. For test-retest reliability, the British results have to be used, as the Japanese results were based on the testing conducted under different conditions from those of the first testing. In the second testing, the Japanese participants had to carry out an additional task of writing reasons for their answers while they undertook the same task as in the first testing - answering multiple-choice questions. Their results are, therefore, examined to see the effects of the participants paying attention to their own perceptual processes while making a decision about each scene.

The test-retest correlations of the British participants were low, although they varied from scene type to scene type. The Japanese test-retest correlation analyses yielded similar results, which suggests that an additional task included in the Japanese second testing did not have clear effects on the overall test-retest correlation results. Comparisons of accuracy levels between the first and second testings, however, revealed that in contrast to the British participants who gained similar overall accuracy in the two testings, the Japanese participants showed accuracy improvements in their second testing, particularly in British scenes. This suggests that paying a particular attention to nonverbal cues contained in the task and also to their own process of perception might help people to improve perceptual accuracy, particularly of unfamiliar people (as in cross-cultural perception).

Both the British and Japanese high-scoring participants' accuracy declined in the second testing, while that of the low-scoring participants

improved. However, the magnitude of accuracy declines for British high-scoring participants was larger than that for their Japanese counterparts, while the magnitude of accuracy improvements for Japanese low-scoring participants was larger than that for their British counterparts. These accuracy changes seem to have contributed to the low test-retest correlation.

Improvements made by the British and Japanese low-scoring participants can be attributed to practice effects, although Japanese participants profited further by the examination of their own nonverbal perception process. According to some participants, they could still remember some scenes after the interval of 2 or 6 months between the two testings, even though they could not remember their previous answers. It might be the case that having performed rather poorly in the first testing, particularly in the cross-cultural scenes, the low-scoring participants might have had more potential for accuracy improvements, which can be expected through the repeated exposure to the scenes.

On the other hand, accuracy declines by the British and Japanese high-scoring participants suggest that re-thinking might have had a confusing influence on participants' previous good performance, supposing they could remember the task scenes from the first testing. The overall decline was smaller for the Japanese participants, who could still improve their performance in some of the scene types in which their performance was relatively low in the first testing, possibly helped by the additional task. It also has to be mentioned that results on the BJSPT contains below-chance accuracy scenes (as explained in the previous section), and this might have contributed to the poor test-retest results. Certain scene types such as British intimacy and status scenes attained very low correlations both in the British and Japanese results and these would have to be taken into consideration in the interpretation of other testing results.

5.4. Comparisons of Visual-cue-only BJSPT and Visual-plus-audio cue BJSPT

In order to examine the effectiveness of having content filtered speech in the BJSPT, the BJSPT was shown to a group of Japanese university students without content filtered speech (with visual cues only).

5.4.1 Method

Participants

The participants were 87 Japanese Psychology undergraduate students - 28 males (mean age 19.3 years, SD 1.24) and 59 females (mean age 19.3 years, SD 2.18) who took part in the BJSPT testing at Osaka Kyoiku University in Japan.

Procedure

The participants viewed the BJSPT during an Introductory Psychology lecture. The BJSPT was shown without the audio part on the large screen which was installed at the front of the lecture theatre. It was explained that the testing was part of the cross-cultural comparisons in perceptual styles of the British and Japanese. The participants were asked to view 8 British and 8 Japanese scenes, which appear randomly, and 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. After viewing the task no feedback as to the participants' BJSPT performance was provided. No participation fees were offered to the participants.

5.4.2 Results

Their results were compared with those of 102 Japanese Psychology undergraduate students who viewed the BJSPT with the presentation of visual and audio cues in the previous cross-cultural testing (see 5.1). The accuracy comparison results are summarised in Table 5.8 below according to British and Japanese four scene types. The differences were examined with a 2 (task presentation methods - visual cues only and visual plus audio cues) x 2 (gender) x 4 (scene-types) MANOVA. There was a significant main effect of task presentation methods (F (4,182) = 3.50, $p < .01$). No significant main effect of gender was found and, therefore, the accuracy rates for males and females are reported together in the table. ANOVAs for individual group differences for 4 British and Japanese scene types were also reported in the table.

Table 5.8 *Comparisons of mean accuracy percentage for visual-cue-only BJSPT and visual-plus-audio-cue BJSPT with Japanese participants*

Scene types	Osaka Kyoiku Univ. (visual cues only)	Osaka & Kanto Univs. (visual plus audio cues)	F(1,185)	p
BT competition	42.0	49.5	2.36	*ns*
JP competition	58.0	66.7	3.65	*ns*
Competition total	50.0	58.1	5.92	< .05
BT intimacy	54.0	56.4	0.38	*ns*
JP intimacy	66.1	70.1	0.39	*ns*
Intimacy total	60.1	63.2	1.01	*ns*
BT kinship	36.8	29.9	1.32	*ns*
JP kinship	55.7	52.5	0.96	*ns*
Kinship total	46.3	41.2	2.77	*ns*
BT status	58.0	50.0	2.40	*ns*
JP status	60.9	57.4	0.39	*ns*
Status total	59.5	53.7	2.79	*ns*
Grand total	54.0	54.0	0.14	*ns*

Overall, BJSPT accuracy for the two Japanese university groups turned out to be the same. However, when accuracy was examined according to the four scene types, competition scenes were found to be perceived significantly more accurately by the visual-plus-audio-cue group than the visual-cue-only group ($F(1,185) = 5.92, p < .05$).

5.4.3 Discussion

The overall accuracy of the BJSPT was found to be the same between the two groups and it appears as if the presence of content filtered speech had no effects on the perceptual accuracy of the participants. However, the examination of scene-type accuracy revealed that it had significant effects on the participants' interpretations of competition scenes.

Competition scenes were perceived significantly more accurately with audio cues than without. This suggests the importance of nonverbal vocal cues for the interpretation of winner-loser interactions, probably as they can provide important cues of the emotions experienced by winners and losers. It has been found that vocal cues, particularly tone of voice, are less controllable in comparison with other nonverbal cues and that they tend to be more revealing of people's emotions (DePaulo, Zuckerman & Rosenthal, 1980). It can be assumed, therefore, that nonverbal vocal cues are least affected by cultural display rules. As described previously, spontaneous emotion expressions tend to be suppressed in competition scenes due to display rules. Thus, in this context it would be helpful for viewers to tune into vocal cues rather than those cues which can be manipulated more easily, such as facial expressions. According to the reasons the Japanese participants wrote for their choice of answers, speech cues were used by some in the interpretation of competition scenes. However, most of them were not sure which specific speech cues they had utilised. It might be the case that people tend to be less aware of their

perceptual process of vocal nonverbal cues in comparison with that of visual cues which were often described explicitly as the clues for their answers.

5.5. General Discussion

Cross-cultural similarities and differences observed between British and Japanese people in BJSPT testing revealed the relationship between their perceptual sensitivity and the social environments in which they live. Although British and Japanese people were found to be similar in their accuracy for the overall BJSPT, they differed in their accuracy for the four scene types of the task. While British people were found to be more sensitive to status-difference cues than Japanese people, Japanese people were more sensitive to intimacy cues than British people. As summarised in Chapter 3, Japanese society was described as more hierarchical than British society (Hofstede, 1980, 1984) and Japanese people were in fact observed to be expressive of status-difference cues (Argyle, 1975; Brosnahan, 1998; Morsbach 1988). On the other hand, British culture, as an individualistic culture, is described as expressive of intimacy cues as opposed to collectivist cultures, such as that of the Japanese (Hofstede, 1984). Based on these previous cross-cultural studies and the results of the present study, it could appear that there is a negative relationship between nonverbal expressivity and perceptual sensitivity.

The BJSPT was found to have very low internal consistency reliability, even when British and Japanese scenes were examined separately. This might be due partly to the fact that the task is made up of four different scene types. The BJSPT four scene types examine the perceptual accuracy of people in various aspects of nonverbal communication. While status scenes require viewers to focus on the dominant-submissive dimension of interpersonal attitudes (see Argyle, 1975 for interpersonal attitude dimensions), kinship

scenes ask for the interpretation of both the dominant-submissive and affiliative dimensions. Intimacy scenes, on the other hand, require viewers to pay particular attention to the affiliative aspect of communication cues. In competition scenes, viewers would be helped if they focus on emotion cues rather than interpersonal attitude cues, as the social relationship between the interactants can be misleading in interpreting the result of a game. Costanzo and Archer (1989), in explaining the diversity of the IPT scenes, stated that "there are multiple paths to the correct answer and information from different channels may be consistent or contradictory" (p. 238).

The examination of the role of content-filtered speech in the BJSPT revealed differences between visual and audio nonverbal cues by showing how they are utilised to express and interpret emotions and interpersonal relationships in various social contexts. Vocal cues seem to be vital in the interpretation of spontaneous emotions, particularly when display rules function to mask these emotion expressions in other nonverbal channels. On the other hand, it can be speculated that visual cues such as facial expressions are more affected by socially constructed display rules and, therefore, tend to reveal the "social" relationships of people.

The BJSPT test-retest revealed low correlations between the first and second testing of the task, although correlations differed depending on the scene types of the task. This is one of the shortcomings of the task which would affect the reliability of the present study findings and the usefulness of the task beyond the scope of this thesis. The task would need further improvements in terms of its reliability by increasing the number of scenes and examining their stability over time.

The results of the test-retest also showed practice-effects, particularly for Japanese participants, who were asked to pay attention to their perceptual process in the second testing. This suggests that if viewers are properly informed of cross-cultural similarities and differences in communication styles of people, they might improve their perceptual accuracy further.

In conclusion, it can be stated that the BJSPT is a short task which facilitates easy administration and examination of cross-cultural perceptual accuracy and perceptual processes. However, the length of the task and the nature of the scenes which contain multiple communication cues in four social contexts seem to have led to low reliability results. This, unfortunately would limit the usefulness of the task until this task is improved further. However, in spite of these shortcomings, reliability of the most of individual scenes based on their significant above-chance accuracy still enables meaningful interpretation of the present study results. Significant cross-cultural differences were observed according to the four scene types of the task. This shows that perceptual sensitivity is contextually bound, which indicates that appropriate assessment of nonverbal sensitivity has to be carried out while taking into consideration the contexts in which nonverbal cues are presented. The present findings revealed that expressive environment relates negatively to the development of perceptual sensitivity. However, in order to validate this finding, the extent to which differences in expressiveness relate to differences in perceptual sensitivity will be examined in chapter 6 through microanalysis of all the British and Japanese scenes filmed for the BJSPT.

Chapter SIX

Micro-analysis of the BJSPT scenes and examination of perceptual processes of British and Japanese people

The aim of this chapter is to examine the similarities and differences in nonverbal expressivity and perceptual processes of British and Japanese people. Firstly, the nonverbal cues observed in all the scenes filmed for the BJSPT were analysed and the results compared between the British and Japanese scenes, according to the four scene types used in the task. Secondly, perceptual processes in the form of nonverbal cue selection and cue interpretation reported by British and Japanese participants in the previous cross-cultural testing are examined according to the four scene types. Finally, the above two results are examined together with the accuracy results reported in Chapter 5 in order to study the relationship between nonverbal expressivity, perceptual processes and perceptual sensitivity.

6.1. Micro-analysis of the Scenes Filmed for the BJSPT

An analysis was conducted of the 24 (x 3 video-clips) British and 24 (x 3 video-clips) Japanese interaction scenes in four scene types (competition, intimacy, kinship and status), which were filmed for the BJSPT and used for scene-selection testing. Nonverbal cues contained in the clips were classified according to the four scene types and compared between the British and Japanese scenes. Nonverbal cues were examined in terms of 7 categories:
(1) posture (2) proximity (3) gestures and body movements (4) facial expressions (5) gaze (6) appearance and (7) speech. The results are reported below according to the four scene types. Additionally, in order to examine the

relaxation levels of interactants, all the individual video-clips were rated by the author and another Japanese psychologist. The rating results are also summarised for each scene type.

Ratings were based on the balance between relaxation cues such as open posture (open legs and arms), relaxed trunk, animated gestures and laughter, and tension cues such as closed posture, rigid trunk and fidgeting. These cues were based on the previous research findings on nonverbal communication (Argyle, 1975; Bull, 1987; Efron, 1941; Knapp & Hall, 2002; Kudoh & Matsumoto, 1985; Mehrabian, 1969). The author and the other Japanese psychologist, who was familiar with nonverbal communication studies and was not informed of correct answers to the video-clips, viewed each clip and rated it on a 7-point scale (*-3 = very tense* to *3 = very relaxed*) independently. The overall inter-rater correlation for the four scene types was .77. Mean ratings of the two raters were used to compare the relaxation levels of British and Japanese interactants in the four scene types.

6.1.1 Competition scene analysis

All the competition scenes contain two interactants; however, their settings can be divided into two: (1) scenes in which both interactants are in a standing position and (2) scenes in which both interactants are in a sitting position. Comparisons of nonverbal cues in posture, gesture and body movement categories are, therefore, made separately for these two settings. Posture, gestures and body movements in standing positions for British and Japanese scenes are summarised in Table 6.1, and those in sitting positions are summarised in Table 6.2. Facial expressions, gaze and speech cues are summarised in Table 6.3 for both standing and sitting positions. Duration of smiles, gaze and speech of winners and losers was measured for each video-clip and the mean duration across clips is shown in the table. The differences

in the duration between British and Japanese winners and losers were tested with the independent sample t-test and the significant result is described in the following text. Finally, relaxation levels of winners and losers are summarised in Table 6.4.

Table 6.1 *Summary of posture, gesture and body movement cues of winners and losers in standing positions in British and Japanese competition scenes*

	posture		gestures & body movements	
	winners	losers	winners	losers
British (2 scenes)	stand with legs apart (2/2)	stand with legs less apart (2/2)	more stationary (1/2)	keep shifting and fidgeting (1/2)
	relaxed trunk/lean to one side (2/2)	rigid trunk (2/2)	move/swing racket (1/2)	move/swing racket (2/2)
	arms folded (1/2)	arms hung down (2/2)	self-touch (2/2)	self-touch (2/2)
	a hand in pocket (1/2)			shake head (1/2)
	hold racket (2/2)	hold racket (2/2)		demonstrate tennis moves (1/2)
Japanese (4 scenes)	stand with legs apart (1/4)	stand with legs apart (1/4)	more stationary (3/4)	keep shifting and fidgeting (3/4)
	rigid trunk (4/4)	rigid trunk (3/4)	swing racket (1/4)	move/swing racket (2/4)
		arms folded (1/4)	tap racket (1/4)	tap racket (2/4)
	arms akimbo (1/4)	arms akimbo (1/4)	gestures (2/4)	gestures (2/4)
			demonstrate game moves (1/4)	demonstrate game moves (2/4)
	hold racket (4/4)	hold racket (4/4)	self -touch (1/4)	self-touch (2/4)
			nod a lot (2/4)	shake head (2/4)

Note: Figures in parentheses are the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.2 *Summary of posture, gesture and body movement cues of winners and losers in sitting positions in British and Japanese competition scenes*

	posture		gestures & body movements	
	winners	losers	winners	losers
British (4 scenes)	sit deep in a chair (3/4) lean forward (3/4) relaxed trunk/lean to one side (2/4) legs open (1/4) arms on the arms' rest of a chair (3/4) hands on lap (1/4)	sit deep in a chair (3/4) lean back (3/4) straight trunk (3/4) legs crossed (1/4) arms on the arms' rest of a chair (2/4) hands on lap (2/4) arms folded (1/4)	gestures (3/4) demonstrate game moves (2/4) self-touch (2/4) finger-fidgeting (3/4) trunk movements (3/4)	gestures (2/4) demonstrate game moves (1/4) self-touch (2/4) finger-fidgeting (1/4) trunk movements (1/4)
Japanese (2 scenes)	sit deep in a chair (2/2) lean forward (1/2) relaxed trunk/lean to one side (2/2) legs open (2/2) hands on lap (2/2)	sit deep in a chair (2/2) trunk straight (2/2) legs less open (2/2) hands on lap (2/2)	gestures (2/2) self-touch (2/2) trunk movements (2/2)	gestures (1/2) swing racket (1/2) self-touch (1/2)

Table 6.3 *Summary of facial expression, gaze and speech cues of winners and losers in standing and sitting positions in British and Japanese competition scenes*

	facial expression		gaze		speech	
	winners	losers	winners	losers	winners	losers
British (6 scenes)	smiles 13.2%	smiles 12.2%	winner looks at loser 30.4%	loser looks at winner 41.3%	50.1%	48.4%
	laughter (2/6)	laughter (2/6)	look at camera direction 26.5%	look at camera direction 8.9%		
		make face (1/6)	look down 17.3%	look down 24.7%		
Japanese (6 scenes)	smiles 33.2%	smiles 26.7%	winner looks at loser 30.5%	loser looks at winner 21.6%	46.6%	47.3%
	laughter (5/6)	laughter (4/6)	look at camera direction 26.7%	look at camera direction 22.7%		
		serious face (2/6)	look down 10.5%	look down 12.7%		

Note: Percentage figures indicate the mean duration of smile, gaze and speech out of total scene duration. Non-percentage figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.4 *Mean relaxation ratings for winners and losers in British and Japanese competition scenes*

		standing positions	sitting positions
British	winners	1.9 (*relaxed*)	1.7 (*relaxed*)
	losers	-1.1 (*mildly nervous*)	0.6 (*mildly relaxed*)
Japanese	winners	0.4 (*neutral*)	1.9 (*relaxed*)
	losers	0.2 (*neutral*)	-0.2 (*neutral*)

As shown in Table 6.1 and 6.2, relaxation cues such as an open posture and an asymmetrical trunk generally distinguished between winners and losers. In standing positions, British winners exhibit more relaxed postural cues than Japanese winners who show little of these cues. This is reflected on the clear difference in their mean relaxation ratings (British 1.9, *relaxed* and Japanese 0.4, *neutral*) in Table 6.4. However, British and Japanese losers show similar

postural cues, although relaxation ratings turned out to be slightly higher for Japanese losers (British -1.1, *mildly nervous* and Japanese 0.2, *neutral*). In sitting positions, British and Japanese winners show similar relaxation cues such as asymmetrical trunks and open legs (British rating 1.7, *relaxed* and Japanese 1.9, *relaxed*). British and Japanese losers were observed to have a more rigid trunk and less open legs than winners, although British losers were found to have more relaxation cues than their Japanese counterparts (British rating 0.6, *mildly relaxed* and Japanese -0.2, *neutral*). In this position, winners tend to lean forward to speak while losers sit straight or backward when speaking.

In standing positions, both British and Japanese winners tend to be more stationary than losers who keep moving their body and sports instruments. Some losers also shake their head when speaking. In sitting positions, however, British and Japanese winners exhibit bigger gestures and more trunk movements than losers, who tend to be more stationary.

Table 6.3 shows that British and Japanese winners show more smiles and laughter than losers. However, Japanese winners and losers exhibit more smiles and laughter than their British counterparts. Particularly Japanese winners were found to smile significantly more (in terms of duration) than British winners ($t\,(10) = 3.10, p < .05$).

Concerning gaze cues, British and Japanese winners look toward the camera more than losers, while losers look down more often. Generally, British winners and losers look down more than their Japanese counterparts. Japanese winners look at losers more than losers look at winners. On the other hand, British losers look at winners more than winners look at losers. In terms of speech length, winners and losers were found to be similar both in British and Japanese scenes.

6.1.2 Intimacy scene analysis

Intimacy relationships depicted are: (1) couple (dating and married) (2) same-sex friends (3) opposite-sex friends (4) new acquaintances. Examination of nonverbal cues was made according to these four relationship categories, although for some nonverbal cues two or three categories were combined together in order to make nonverbal comparisons clearer. For postural cues, all of the four relationship categories were compared, but for gestures and body movement cues, three relationship categories - couple, friends (same-sex and opposite-sex) and new acquaintances - were compared. For proximity, facial expressions and gaze cues, two relationship categories - couple and non-couple (same- and opposite-sex friends and new acquaintances) - were used for comparisons. The results for posture cues are summarised in Table 6.5 and those for proximity, gestures and body movement cues are in Table 6.6. Facial expressions and gaze cue results are shown in Table 6.7. Finally, relaxation levels of interactants in four different relationships are summarised in Table 6.8.

Table 6.5 *Summary of posture cues of couples, same- and opposite-sex friends and new acquaintances in British and Japanese intimacy scenes*

	Posture			
	couples (3 scenes)	same-sex friends (2 scenes)	opposite-sex friends (1 scene)	new acquaintances (1 British, 2 Japanese scenes)
British	lean back in a chair (2/3)	lean back in a chair (1/2)	lean back in a chair - man & woman (1/1)	
	lean forward/ toward partner (2/3)	lean forward (1/2)	lean forward - woman (1/1)	lean forward (1/1)
	legs open - man (1/3)		legs open - man & woman (1/1)	
	legs crossed - woman (1/3)	legs crossed (1/2)		
	relaxed trunk (3/3)	relaxed trunk (2/2)	relaxed trunk - man & woman (1/1)	stiff trunk (1/1)
	arms crossed - man (1/3)	rest elbows on the table - woman (1/2)	rest elbows on the table - woman (1/1)	rest elbows on the table - woman (1/1)
Japanese	lean back in a chair (2/3)	lean back in a chair (1/2)	lean back in a chair - man (1/1)	lean forward in a chair (2/2)
	lean forward - woman (2/3)	lean sideways (1/2)	lean away - woman (1/1)	lean sideways (1/2)
	legs slightly open (2/3)		lean forward -woman (1/1)	
	legs crossed - woman (1/3)	legs crossed (2/2)	legs closed without crossing - man & woman (1/1)	legs crossed (1/2)
	relaxed trunk (2/3)	relaxed trunk (2/2)	stiff trunk - man (1/1)	stiff trunk (2/2)
	rest elbows on the table - woman (1/3)	arm on arms' rest of a chair (2/2)	arms folded - woman (1/1)	hands on lap (2/2)
			rest elbows on the table - woman (1/1)	

Note: Figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes). One of the two British same-sex friend scenes and a British new acquaintance scene are from the same compound scene. All of the two Japanese same-sex friend scenes and new acquaintance scenes are from the same two compound scenes.

Table 6.6 *Summary of proximity cues of couples and non-couples, and gesture and body movement cues of couples, friends and new acquaintances in British and Japanese intimacy scenes*

	proximity		gestures & body movements		
	couples (3 scenes)	friends/ acquaintances (4 British, 5 Japanese scenes)	couples (3 scenes)	friends (3 scenes)	acquaintances (1 British, 2 Japanese scenes)
British	body contact (2/3) close distance (3/3)	close distance (only at the leg) (1/4)	gestures (1/3) self-touch (3/3) move legs, shift body (2/3) finger-fidgeting (1/3)	big gestures (3/3) self-touch (1/3)	gestures (1/1) self-touch (1/1)
Japanese	body contact (0/3) close distance (1/3)	close distance (0/5)	gestures (3/3) self-touch (2/3) finger-fidgeting (1/3) a lot of nodding (2/3)	gestures (some big) (3/3) self-touch (2/3) finger-fidgeting (1/3) a lot of nodding (1/3)	gestures (2/2) self-touch (1/2) trunk movements (1/2) a lot of nodding (1/2)

Table 6.7 *Summary of facial expression and gaze cues of couples and non-couples in British and Japanese intimacy scenes*

	facial expressions		gaze	
	couples (3 scenes)	friends/ acquaintances (4 British, 5 Japanese scenes)	couples (3 scenes)	friends/ acquaintances (4 British, 5 Japanese scenes)
British	smiles *man 28.7%* *woman 26.0%*	smiles *male friend 28.1%* *female friend 24.5%* *female acquaintance 18.3%*	couple only *man 71.1%* *woman 47.7%* *eye contact 38.4%*	*male with male friend 74.9%* *male with female friend 96.8%* *female with female friend 61.3%* *female with male friend 89.3%* *female with female acquaintance 68.4%*
	laughter (2/3)	laughter (with friend only) (2/4)	couple with a female guest *man 45.7%* *woman 61.4%* *eye contact 33.5%*	
Japanese	smiles *man 23.3%* *woman 25.8%*	smile *male friend 14.8%* *female friend 26.9%* *male acquaintance 28.2%* *female acquaintance 44.9%*	couple only *man 78.6%* *woman 91.7%* *eye contact 70.7%*	*male with male friend 77.5%* *male with female friend 31.6%* *male with female acquaintance 21.3%* *female with female friend 82.9%* *female with male friend 70.3%* *female with female acquaintance 71.0%*
	laughter (1/3)	laughter (more with friend) (5/5)	couple with a female guest *man 16.0%* *woman 12.1%* *eye contact 2.1%*	look down often with a new acquaintance (1/2)

Note: Percentage figures indicate the mean duration of smile and gaze out of total scene duration. Non-percentage figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.8 *Mean relaxation ratings for the interactants in four levels of intimacy relationships in British and Japanese intimacy scenes*

		male	female
British	couples	1.6 *(relaxed)*	1.4 *(mildly relaxed)*
	same-sex friends	2.4 *(relaxed)*	2.0 *(relaxed)*
	opposite-sex friends	1.9 *(relaxed)*	1.7 *(relaxed)*
	new acquaintances	-	*-0.4 (neutral)*
Japanese	couples	0.7 *(mildly relaxed)*	0.6 *(mildly relaxed)*
	same-sex friends	2.2 *(relaxed)*	1.0 *(mildly relaxed)*
	opposite-sex friends	-0.8 *(mildly nervous)*	-1.2 *(mildly nervous)*
	new acquaintances	0.2 *(neutral)*	-0.8 *(mildly nervous)*

As observed in Table 6.5, British interactants show similar postural cues to a dating/married partner, a same-sex friend and an opposite-sex friend. These comprise relaxation cues, such as a relaxed trunk and open posture, and affiliation cues, such as leaning toward the other. Only with a new acquaintance, British interactants show some tension in their trunk posture which is distinguishable from the behaviour they exhibit in the company of people with closer relationships. This is reflected on the mean relaxation ratings shown in Table 6.8. While in other relationships, British interactants had ratings between 1.4 (*mildly relaxed*) to 2.4 (*relaxed*), in new acquaintance relationship, their behaviour was rated -0.4 (*neutral*) even in combination with other relaxation cues such as big gestures and smiles they exhibited.

Japanese interactants show fewer relaxation cues than British interactants, as indicated in generally lower relaxation ratings. Particularly, in opposite-sex friend and new acquaintance interactions, they exhibit a lot of tension in their posture as observed in their stiff trunk, closed posture and nervous hand movements (Table 6.5 and 6.6). Their relaxation levels in these interactions were rated between 0.2 (*neutral*) and -1.2 (*mildly nervous*).

Most similar behaviour between British and Japanese interactants is observed in same-sex friend interactions. They both exhibit similar levels of postural relaxation, clear gestures and a lot of laughter (British rating 2.4 *relaxed* and Japanese rating 2.2 *relaxed*).

As Table 6.6 suggests, proximity cues distinguished between British and Japanese couple scenes. While Japanese scenes lack body contact and close distance between couples, all the British couple scenes contain these cues. For example, one Japanese couple maintained quite a distance between themselves by sitting on the opposite ends of a three-seater sofa. Another difference observed is that British couples show little gestures and a lot of self-touch behaviour, and Japanese couples, on the other hand, show more gestures and a lot of nodding between them.

Table 6.7 shows that British and Japanese males and females exhibit similar amount of smiles to their partners and friends. However, British female interactants smile and laugh more with their friends than when they are with new acquaintances. Japanese male and female interactants, on the other hand, smile less with familiar friends than with new acquaintances but laugh more with friends.

When couples are interacting on their own, gaze duration toward each other is longer for Japanese couples than British couples. However, when they are with a guest, while the amount of mutual gaze of a British couple remain similar to that when they are on their own, a Japanese couple's mutual gaze becomes very small, about 2% of the total scene duration. British and Japanese females show long duration of gaze toward their same-sex and opposite-sex friends and new acquaintances (between 61% to 89% of total scene duration). On the other hand, while British males' gaze toward their opposite-sex friends is longer than that toward their same-sex friends, Japanese males' gaze toward their opposite sex-friends is less than half of that toward their same-sex friends. Japanese males' gaze toward new female acquaintances is still less than that toward their female friends.

6.1.3 Kinship scene analysis

Kinship scenes depict two kinds of interactions: (1) interactions between a child and a parent and (2) interactions between a brother and a sister. Interactions between a child and a parent are also divided into those with and without a guest (a friend of the parent or a friend of the child). These further distinctions are used only for gaze and speech cue analysis results. Posture and proximity cues are summarised in Table 6.9, and gestures, body movements and facial expressions are in Table 6.10. Gaze and speech cues are shown in Table 6.11. Relaxation ratings for parents and children, brothers and sisters are summarised in Table 6.12.

Table 6.9 *Summary of posture and proximity cues of children and parents, brothers and sisters in British and Japanese kinship scenes*

	posture		proximity	
	children & parents (5 scenes)	brothers & sisters (1 scene)	children & parents (5 scenes)	brothers & sisters (1 scene)
British	CHILDREN sit back in a chair (1/5) lean toward parent (1/5) relaxed trunk (3/5) body faces parent's friend rather than parent (1/2) PARENTS lean forward/ toward child (2/3) sit back in a chair (1/3)	sit back in a chair (1/1) legs crossed (1/1) arm on arms' rest of a chair (1/1)	body contact (mother touches child) (2/3) close distance (3/3)	no contact (1/1) not close to each other (1/1)
Japanese	CHILDREN sit back in a chair (1/5) lean toward parent (1/3) sit straight (2/5) relaxed trunk (3/5) child and mother in a similar posture (1/3) PARENTS lean forward/ toward child (3/3) legs open (2/3)	sit leaning forward (1/1) arms folded - brother (1/1) hands on lap - sister (1/1)	body contact (3/3) close distance (3/3)	no contact (1/1) not close to each other (1/1)

Note: Figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.10 *Summary of gesture, body movement and facial expression cues of children and parents, brothers and sisters in British and Japanese kinship scenes*

	gestures & body movements		facial expressions	
	children & parents (5 scenes)	brothers & sisters (1 scene)	children & parents (5 scenes)	brothers & sisters (1 scene)
British	CHILDREN big gestures (3/5) play with toys - young child (1/1) finger-fidgeting (1/5) PARENTS no gestures/body movements (2/3) play with a young child (1/1)	gestures (1/1) move legs/feet (1/1) finger-fidgeting - brother (1/1)	CHILDREN smiles (some big smiles) 22.1% laughter (1/5) stick tongue out at parent (1/5) PARENTS smiles 23.4% laughter (2/3)	smiles brother 9.4% sister 2.8% little laughter - sister (1/1)
Japanese	CHILDREN big gestures (3/5) imitate parent's gestures (2/5) move trunk/legs (3/5) play with toys - young child (1/1) PARENTS big gestures (3/3) play with young child (1/1) nod a lot to child (1/3)	gestures (brother & sister show similar gestures) (1/1) self-touch - brother (1/1) finger-fidgeting - sister (1/1)	CHILDREN smiles (some big smiles) 18.6% laughter (3/5) sulky expression (1/5) PARENTS smiles 23.9% a lot of laughter (3/3)	smiles brother 11.3% sister 23.4% some laughter - sister (1/1)

Note: Percentage figures indicate the mean duration of smile out of total scene duration. Non-percentage figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.11 *Summary of gaze and speech cues of children and parents, brothers and sisters in British and Japanese kinship scenes*

	gaze		speech	
	children & parents (5 scenes)	brothers & sisters (1 scene)	children & parents (5 scenes)	brothers & sisters (1 scene)
British	ONE TO ONE WITH A PARENT child looks at parent *young child 48.7%* *grown-up 69.8%* WITH A PARENT & A GUEST child looks at parent 14.6% child looks at guest 71.3% glance at parent between talks or while pointing at something 8.7% parent keeps looking at child 53.5% with a child guest parent looks at own child 9.6% parent looks at child guest 14.5%	brother looks at sister 24.5% sister looks at brother 66.4%	ONE TO ONE WITH A PARENT child keeps talking to parent 100% WITH A PARENT & A GUEST child talks to parent 5.4% child talks to adult guest 13.5% parent talks to own child 5.5% parent talks to child guest 19.4%	brother 32.3% sister 59.1%
Japanese	ONE TO ONE WITH A PARENT child looks at parent *young child 94.6%* *grown-up 41.8%* WITH A PARENT & A GUEST child looks at parent 13.4% child looks at guest 30.4% parent keeps looking at child 51.5%	brother looks at sister 19.0% sister looks at brother 56.5%	ONE TO ONE WITH A PARENT child talks to parent 70.1% WITH A PARENT & A GUEST child talks to parent 1.3% child talks to adult guest 24.5% parent talks to child 6.1%	brother 49.8% sister 28.3%

Note: Percentage figures indicate the mean duration of gaze and speech out of total scene duration.

Table 6.12 *Mean relaxation ratings for parents, children, brothers and sisters in British and Japanese kinship scenes*

		mean rating
British	parents	0.7 (*mildly relaxed*)
	children	1.4 (*mildly relaxed*)
	brother	1.4 (*mildly relaxed*)
	sister	1.8 (*relaxed*)
Japanese	parents	1.7 (*relaxed*)
	children	1.3 (mildly *relaxed*)
	brother	1.0 (*mildly relaxed*)
	sister	0.5 (*mildly relaxed*)

Among the four scene types, kinship scenes contained most similar nonverbal cues between British and Japanese interactants. As observed in Table 6.9, 6.10 and 6.11, brother and sister interactions are particularly similar between the two nationalities. In both British and Japanese scenes, brothers and sisters showed similar nonverbal cues, such as both sitting back in a chair, both leaning forward, or using similar kinds and amount of gestures. They seem to show similar levels of relaxation and animation in their interaction. Table 6.12 shows that the British brother's mean relaxation rating was 1.4 (*mildly relaxed*) and the sister's 1.8 (*relaxed*), and both the Japanese brother and sister were rated as *mildly relaxed* (mean ratings 1 and 0.5 respectively).

As for child and parent interactions, British and Japanese scenes are similar in posture cues, both containing equal levels of relaxation and affiliation cues. As Table 6.9 illustrates, nonverbal cues observed among children were relaxed trunk, leaning forward and backward. Parents tend to lean toward their child and have open postures. As for gesture and body movement cues which are shown in Table 6.10, some British and Japanese children exhibit large gestures, as if illustrating some ideas. Japanese parents also use a lot of clear gestures and nod a lot to their child, showing high levels of animation and involvement. They also laugh more than their British counterparts. These behaviour was reflected on the mean relaxation rating in Table 6.12. British parents were rated as *mildly relaxed* (0.7) and Japanese

parents as *relaxed* (1.7). Both British and Japanese children were rated as *mildly relaxed* (mean ratings 1.4 and 1.3 respectively).

As for proximity cues, both British and Japanese scenes show close distance between parents and their child, but Japanese scenes had slightly more body contact between them than British scenes. Mothers were usually observed to initiate body contact with their children, for example, by tapping a child's lap.

Table 6.11 shows that in one-to-one interaction with a parent, a young Japanese child looks at his parent about twice the duration percentage of his British counterpart. On the other hand, a Japanese woman looks at her father less than her British counterpart. In interactions involving an adult guest, children tend to look at and talk to the guest more than their parent as the guest tend to initiate a conversation with them. Parents, particularly mothers, keep looking at their child while their child is talking with a guest. However, when they have their child's friend as a guest, parents tend to initiate a conversation with the guest and pay more attention to the guest than to their own child.

In both British and Japanese brother-sister interactions, sisters were observed to look at their brothers more than brothers look at their sisters.

6.1.4 Status scene analysis

Status scenes contain interactions of bosses, subordinates, or colleagues of equal status at occupational settings. Scenes show either contrast of two people with a different/equal status or only one person who is interacting with his/her boss, subordinate or colleague of equal status (who is not included in shot). Behaviour exhibited by people with three different occupational status is compared in the analysis. Posture, gesture and body movement cues are summarised in Table 6.13. Facial expression and gaze cues are illustrated in Table 6.14, and appearance and speech cues are in Table 6.15. Ratings for

relaxation levels of bosses, subordinates and colleagues of equal status are summarised in Table 6.16.

Table 6.13 *Summary of posture, gesture and body movement cues of bosses, subordinates and colleagues of equal status in British and Japanese status scenes*

	posture			gestures and body movements		
	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)
British	sit back in a chair (2/3)	sit back in a chair (2/4)	sit back in a chair (1/2)	some gestures (3/3)	some gestures (4/4)	few gestures (1/2)
	lean forward (1/3)	lean forward (2/4)	lean forward (1/2)		upper body, leg movements (3/4)	
	trunk straight (3/3)	trunk lean to one side (2/4)	flexible trunk (2/2)	self-touch (3/3)	self-touch (3/4)	
	legs crossed (2/3)	legs crossed (3/4)	legs crossed (1/2)	nod a lot (1/3)	nod a lot (1/4)	
	arms on arms' rest of a chair (1/3)	arms on arms' rest of a chair (2/4)	arms on arms' rest of a chair (1/2)		finger-fidgeting (2/4)	
		rest elbow on arms' rest of a chair (1/4)	rest elbow on the table (1/2)			
Japanese	sit back in a chair (3/3)	sit back in a chair (1/4)	sit straight on a bench (2/2)	big gestures (3/3)	small gestures (3/4)	a lot of big gestures (2/2)
	lean forward (2/3)	lean forward (3/4)	lean forward (2/2)	trunk movements (1/3)	trunk movements (2/4)	
	lean to one side (2/3)	lean to one side (2/4)			lean head (1/4)	
		sit upright/ stiff shoulders (2/4)		self-touch (2/3)	self-touch (1/4)	self-touch (2/2)
	arms on arms' rest of a chair (3/3)	arms on arms' rest of a chair (2/4)		nod a lot (1/3)	nod a lot (2/4)	
	rest elbow on arms' rest of a chair (1/3)	rest elbow on the table (1/4)			finger-fidgeting (1/4)	

Note: Figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.14 *Summary of facial expression and gaze cues of bosses, subordinates and colleagues of equal status in British and Japanese status scenes*

	facial expressions			gaze		
	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)
British	smiles 8.6% laughter (2/3)	smiles 22.5% laughter (3/4)	smiles 24.3% laughter (2/2) expressive (1/2)	look at subordinate 64.2%	look at boss 87.6%	look at colleague 61.9%
Japanese	smiles 9.7% laughter (1/3)	smiles 13.3% laughter (1/4)	smiles 0.6%	look at subordinate 76.4%	look at boss 53.3% look down 33.7%	look at colleague 53.0%

Note: Percentage figures indicate the mean duration of smile and gaze out of total scene duration. Non-percentage figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.15 *Summary of appearance and speech cues of bosses, subordinates and colleagues of equal status in British and Japanese status scenes*

	appearance			speech		
	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)	bosses (3 scenes)	subordinates (4 scenes)	equals (2 scenes)
British	above 30 years old (2/3)	below 30 years old (2/4)	look similar in age (0/2)	57.1%	40.0%	female colleague talks more (76.6%) than male colleague (36.3%)
	wear formal clothes (2/3)	wear formal clothes (2/4)				
Japanese	above 30 years old (2/3)	below 30 years old (2/4)	look similar in age (1/1)	61.5%	40.1%	two female colleagues talk similar amount 46.9%
	wear formal clothes (2/3)	wear formal clothes (2/4)				

Note: Percentage figures indicate the mean duration percentage of speech out of total scene duration. Non-percentage figures in parentheses indicate the number of scenes which contained the nonverbal cues shown (/out of the relevant scenes).

Table 6.16 *Mean relaxation ratings for bosses, subordinates and colleagues in British and Japanese status scenes*

		mean rating
British	bosses	0.4 (*neutral*)
	subordinates	0.5 (*mildly relaxed*)
	colleagues	1.6 (*relaxed*)
Japanese	bosses	1.7 (*relaxed*)
	subordinates	0.1 (*neutral*)
	colleagues	-0.1 (*neutral*)

In the use of posture and gesture cues, which are shown in Table 6.13, British bosses, subordinates and colleagues of equal status are similar. They all exhibit such cues as sit back in a chair, legs crossed, arms on arms' rest of a chair. However, subordinates and colleagues of equal status look slightly more

relaxed than bosses in their trunk posture, as it tends to be more flexible and asymmetrical. They all use similar amount of gestures and the only differences observed were that subordinates move their upper body and legs more and tend to fidget fingers.

Clearer differences were observed among Japanese bosses, subordinates and colleagues of equal status. Japanese bosses look more relaxed than their subordinates as they sit back in a chair more and have a more asymmetrical trunk posture. Young subordinates tend to have stiffer trunk postures than their bosses, particularly in the company of male bosses. However, a young female subordinate exhibits a lot of relaxation cues such as a flexible trunk and resting elbow on the table with her female boss. Japanese bosses generally use bigger gestures than their subordinates who tend to use weaker and fewer gestures and nod a lot. Colleagues of equal status, on the other hand, use a lot of big gestures. Generally, two colleagues in interaction use similar levels of relaxation and animation cues, which is a common feature found between British and Japanese scenes.

As Table 6.14 shows, British and Japanese bosses are similar in the amount of smiles; however, British subordinates tend to show more smiles and laughter than Japanese subordinates. British colleagues also show more smiles and laughter than Japanese colleagues.

As for gaze, while Japanese bosses look at their subordinate more than British bosses, British subordinates look at their boss more than their Japanese counterparts. Japanese subordinates look down often between their talks. Between colleagues, British interactants were found to look at each other more than their Japanese counterparts.

Table 6.15 shows that British and Japanese interactants in status scenes were equivalent in terms of their estimated age and formality in clothes. Concerning the amount of speech, both British and Japanese bosses spoke more than their subordinates in the clips. Japanese female colleagues spoke an

equal amount between them; however, a British female colleague was found to speak more than her male colleague.

The above behavioural differences were reflected on the relaxation ratings of interactants, as shown in Table 6.16. Among British interactants, colleagues of equal status were rated as most relaxed (mean rating 1.6, *relaxed*), followed by subordinates (0.5, *mildly relaxed*) and bosses (0.4, *neutral*). On the other hand, among Japanese interactants, bosses were rated as most relaxed (mean rating 1.7, *relaxed*), followed by subordinates (0.1, neutral), and lastly by colleagues (-0.1, *neutral*). Although the overall rating was *neutral* for Japanese subordinates, the mean rating only for young male and female subordinates who are interacting with a male boss was -1.7 (*nervous*). In contrast, the mean rating for an older female subordinate with a similar aged male boss and a young female subordinate with a female boss was 1.75 (relaxed).

6.1.5 Discussion

British interactants expressed more relaxation cues than Japanese interactants, particularly in competition and intimacy scene types. In other words, Japanese interactants showed more tension or nervousness in these scene types. In competition scenes this was observed when winners and losers were in standing positions, as Japanese winners tended to have a straight trunk posture which did not look as flexible or relaxed as that of British winners. Japanese losers, on the other hand, showed restless hand and body movements which were rather similar to those expressed by British losers. As has been described, preservation of harmony among in-group members is very much emphasised in Japan (Matsumoto, 1996). It might be the case that as people try to comply with social rules by hiding their genuine emotions about the results of games, they might become more tense than British people who have

relatively less stringent rules. In spite of their tense body cues, Japanese winners and losers exhibited a lot of smiles and laughter which were observed more than among their British counterparts. This high amount of laughter might be understood as a sign of their tension and their efforts to hide true emotions, which was also evident in Japanese losers' smaller amount of gaze toward winners than British losers.

In intimacy scenes, particularly in the interactions of opposite-sex friends and of new acquaintances, Japanese people exhibited more tension than British people. This suggests that Japanese people tend to become more tense in talking to people who are not very familiar to them. This is in accordance with the aspect of Japanese culture examined in previous cultural studies. Japanese culture was described as high on uncertainty avoidance (Hofstede, 1980), while British culture was low on this cultural dimension. Unfamiliar people can bring in uncertainty in interactions and, therefore, these interactions can cause tension and nervousness, particularly in Japanese people who tend to be more cautious of uncertain situations. In addition, they seem to become more tense than British people in opposite-sex interactions when they are not in an intimate relationship. Their nervousness and uncomfortable moods were observed in their posture, and also among male interactants, in their low level of gaze and tendency to look down.

In couple scenes, British interactants showed clear proximity cues, such as sitting very close to each other so that parts of their bodies touched each other or holding hands. In Japanese couple scenes, on the other hand, no body contact nor very close distance between partners were observed as in non-intimate relationship scenes. This seems to suggest that British people are more expressive in terms of intimate relationship cues than Japanese people (as least in public).

Kinship scenes seem to be less affected by social rules as observed from smaller behavioural differences between British and Japanese interactants in this scene type in comparison with those in other scene types. British and

Japanese parents and children, brothers and sisters showed similar levels of relaxation in their interactions. Similar levels of body contact and close interacting distance between parents and their young children were also observed in British and Japanese scenes, although Japanese parents seemed to have slightly more body contact with their children than their British counterparts. Relatively high level of body contact between Japanese mothers and children was reported in the previous American-Japanese cross-cultural study (Caudill & Weinstein, 1969). However, the differences observed in this study are rather small, and considering the small number of scenes which contained mother-child interactions, further studies are needed to support the present finding.

Another difference observed in kinship scenes was that when a guest was involved in interactions, the Japanese parents in the clips showed more involvement in the interactions than British parents by using more gestures, nodding more and laughing more. It looked as if parents were encouraging their children to get involved with the interaction with the guest by showing enthusiasm themselves.

In status scenes, British bosses exhibited more tense postures than their Japanese counterparts, while Japanese subordinates exhibited more tense postures than their British counterparts. As has been suggested previously, hierarchical relationships are more emphasised in Japan, in other words, there are more stringent rules for subordinates to follow to show politeness and respect to those who are higher in occupational status. Because of these rules, Japanese subordinates exhibited tension in their body and subordination cues such as nodding a lot and avoidance of direct gaze. Japanese bosses, on the other hand, tended to be relaxed more, probably because their position in interactions was protected by the social rules. At the same time, it has to be mentioned that Japanese social rules require them to look reassuring and relaxed by masking uncomfortable feelings in social situations (Matsumoto, 1996). In the UK where these social rules are not as clear as in Japan, bosses

are not protected for their authority in terms of others' behaviour toward them and might be more tense in making efforts to assert their authority. This was observed in the stiff trunk posture they usually exhibited in the company of subordinates. British subordinates, on the other hand, showed a lot more relaxed behaviour than Japanese subordinates.

Gaze behaviour was very different between British and Japanese interactants. British subordinates sustained gaze toward their boss, indicating their attention to him/her; however, Japanese subordinates did not sustain gaze and often looked down between their talks. This was partly due to their social rule which regards direct gaze at others, particularly at those with higher status, as rude. Possibly because of this traditional social rule, Japanese people show less gaze to others than British people in certain situations. In addition, the high level of nervousness they often experience in various social settings seems to contribute to reducing the amount of their gaze to others. This was observed, for example, among Japanese male interactants who were in opposite-sex friend or new acquaintance interactions, and among losers of games in interactions with winners.

Concerning the shortcoming of the above analyses, it has to be mentioned that the relaxation ratings of the interactants were carried out by two Japanese researchers and this bias in nationality might have affected the results. The rating by both British and Japanese researchers might have improved the reliability of the results.

In conclusion, the results of the study suggest that, at least in public, British people are more overt than Japanese people in expressing intimacy cues such as having body contact and very close interacting distance with their partners. They are more relaxed than Japanese people in competition and intimacy contexts. On the other hand, in status contexts British bosses seem to be more tense in the company of their subordinates than Japanese bosses who express a lot of relaxation cues toward their subordinates. Japanese people are

more expressive in terms of their subordination cues toward people with higher occupational status as dictated by their social rules.

6.2. Nonverbal cues used for interpretation of the BJSPT scenes

In this section, cross-cultural comparisons are made as to the processes of person perception based on the BJSPT cross-cultural testing results summarised in Chapter 5. While in Chapter 5 comparisons in perceptual accuracy were carried out, in this chapter the nonverbal cues British and Japanese participants utilised for their interpretation of the BJSPT scenes are examined.

Nonverbal cues described as the important clues for interpretation of each scene by 23 British and 57 Japanese BJSPT re-test participants (see Chapter 5 section 5.2.1 & 5.2.2) are examined according to four scene types of the BJSPT. Nonverbal cues utilised by the participants were summarised into the seven nonverbal categories used for micro-analysis of the scenes in the previous section of this chapter. For each scene type, frequency of the use of each nonverbal category and particular nonverbal cues used in each category were compared between British and Japanese participants for correct and incorrect interpretations separately. In the following sections, the results are presented in the order of competition, intimacy, kinship and status scene types. In each section the frequency of the seven nonverbal categories used for correct interpretation is presented first in a figure, followed by lists of specific nonverbal cues included in the categories. Following these, the frequency of the nonverbal categories used for incorrect interpretation is presented in a figure together with the lists of specific nonverbal cues. At the final part of each section comparisons of nonverbal cue usage between correct and incorrect interpretation of the scenes are carried out as the overview of results.

6.2.1 Competition scene perception

6.2.1.1 Correct interpretation of the scenes

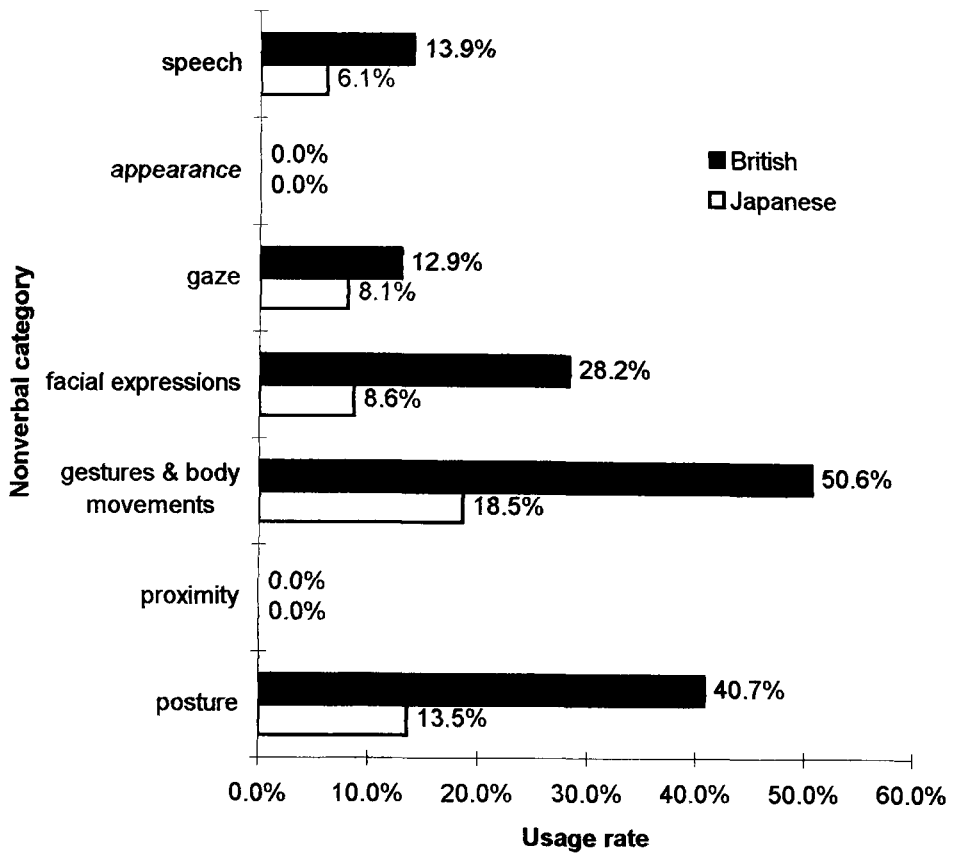

Figure 6.1 *Nonverbal cue categories used by British and Japanese participants which led to correct interpretation of competition scenes*

Compared with British participants, smaller percentages of Japanese participants described the nonverbal cues they used for their interpretation, as many of them stated their holistic impressions of the scenes only, such as "the man on the left looks more relaxed". Among British participants, gestures, body movements and posture were the most often used cues, followed by facial expressions. Among Japanese participants, the same order was found in the frequency of the nonverbal categories used, although gaze was used as frequently as facial expressions. When the results of the British and Japanese participants were averaged out, gestures and body movements were the most often used cues (34.6%), followed by posture (27.1%) and facial expressions

(18.4%). Specific cues used for gesture and body movement, posture and facial expression categories, and the participants' interpretations of these cues are summarised in Table 6.17, 6.18 and 6.19.

Table 6.17 *Gesture and body movement cues reported by British and Japanese participants which led to correct interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition man vs. man squash	winner less body movement (13%)	confident, relaxed		
	loser keeps moving body & racket (50%)	frustrated, agitated, uneasy	loser keeps moving body & racket (28%)	frustrated, unconvinced, not skilled
	loser taps his leg with racket (13%)	frustrated, nervous tension	loser taps his leg with racket (6%)	
	loser shifts his position (6%)			
15. British competition man vs. woman tennis	winner swings racket (50%)	pleased	winner swings racket (9%)	pleased, confident
	loser rigid movements (17%)	tense		
	loser shows tennis moves (50%)	explaining why she lost		
	loser shakes head (17%)			
12. Japanese competition man vs. man tennis	winner sorts out racket (25%)	proud	winner sorts out racket often (3%)	
			winner less body movement (3%)	
	loser bangs racket against leg (13%)	frustrated	loser keeps moving racket (6%)	frustrated
			loser leans his head (3%)	not confident
14. Japanese competition woman vs. woman tennis	winner less body movements (8%)	confident		
	loser fidgets with racket strings (31%)	uncomfortable	loser fidgets with racket strings (15%)	blaming the racket for loss
			loser keeps moving body (3%)	restless, not skilled

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene correctly.

Table 6.18 *Posture cues reported by British and Japanese participants which led to correct interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition	winner stands with arms folded (19%)	confident	winner stands with arms folded (34%)	confident, skilled in tennis, relaxed, satisfied
man vs. man squash	winner stands with legs open (6%)	confident	winner stands with legs open (3%)	confident
15. British competition			winner hand in pocket (3%)	confident
man vs. woman tennis				
12. Japanese competition	winner stands holding racket more strongly (13%)	confident	winner stands with legs open (3%)	confident, skilled, relaxed
man vs. man tennis	loser hides racket behind his legs (13%)	did not do well	loser hides racket behind his leg (6%)	
	loser shoulder slouched, head down (25%)	not confident	loser arms akimbo (6%)	regretting his performance
14. Japanese competition	winner stands with hands behind back (38%)	confident, relaxed	winner stands with hands behind back (3%)	
woman vs. woman tennis	winner rarely changes posture (8%)	confident		
	winner keeps head up and open posture (15%)	confident, pleased	winner keeps head up (3%)	confident
	loser keeps head down (15%)			

Table 6.19 *Facial expression cues reported by British and Japanese participants which led to correct interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition man vs. man squash	winner happier expressions (6%) loser frowns (19%) loser false smiles (6%)	disappointed, sullen	loser unhappy expressions (4%) loser no smiles (4%)	
15. British competition man vs. woman tennis	winner happier expressions (17%)		winner confident expressions (4%)	
12. Japanese competition man vs. man tennis	winner more smiles (13%) loser not sustained smiles after laughing (13%)	happier	winner happier expressions (8%) loser grimace (17%)	disappointed, regretting
14. Japanese competition woman vs. woman tennis	winner a lot of smiles (46%)	happier	winner more smiles (24%) loser unsatisfied expressions (6%)	happier

6.2.1.2 Incorrect interpretation of the scenes

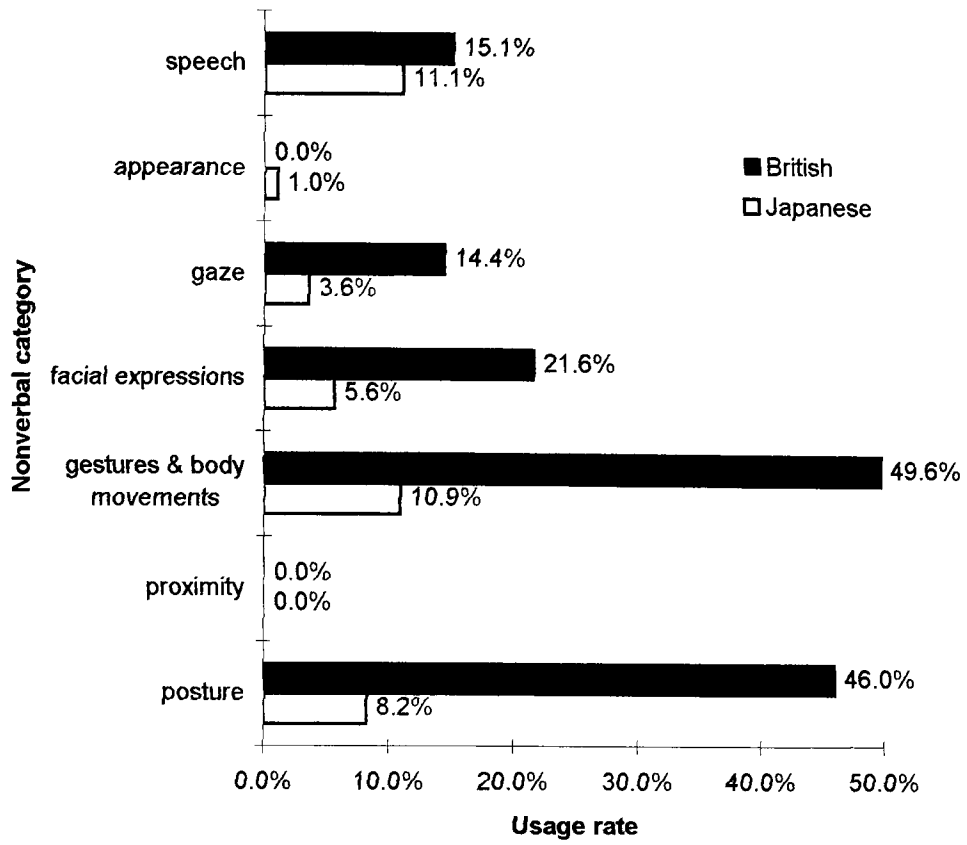

Figure 6.2 *Nonverbal cue categories used by British and Japanese participants which led to incorrect interpretation of competition scenes*

As observed for the correct interpretation of the scenes, smaller percentages of Japanese participants specified the nonverbal cues they used for incorrect interpretation in comparison with British participants. Among British participants, gestures, body movements and posture were most often used, followed by facial expressions. Among Japanese participants, speech cues and gesture and body movement cues were utilised most at similar frequencies. These were followed by posture. When British and Japanese results were averaged out, the most often used cues were gestures and body movements (30.3%), followed by posture (27.1%) and facial expressions (13.6%). Specific cues used for gesture and body movement, posture and facial

expression categories and the participants' interpretations of these cues are presented in Table 6.20, 6.21 and 6.22.

Table 6.20 *Gesture and body movement cues reported by British and Japanese participants which led to incorrect interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition man vs. man squash	loser moves body and racket more (43%)	at ease, confident	loser moves body and racket more (24%)	happy, confident, more skilled
	loser and winner play with racket similarly (14%)	equal in confidence		
15. British competition man vs. woman tennis	loser shows tennis moves (47%)	giving advice	loser shows tennis moves (33%)	giving advice, confident
	winner imitates moves (6%)	try to master the shot		
	winner and loser show similar gestures (6%)	equal in confidence		
	loser gestures more (6%)	confident		
	winner rubs his arm (6%)	want to run away		
12. Japanese competition man vs. man tennis	winner and loser show similar gestures (7%)			
	winner fiddles with racket (20%)			
14. Japanese competition woman vs. woman tennis	loser keeps moving body (20%)	excited	loser keeps moving body (6%)	happy
	loser plays with racket (30%)	confident	loser plays with racket (12%)	happy

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene incorrectly.

Table 6.21 *Posture cues reported by British and Japanese participants which led to incorrect interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition	winner stands with arms folded (43%)	disappointed defensive	winner stands with arms folded, racket in arm (12%)	unconvinced, not skilled
man vs. man squash			winner leans his head (4%)	unconvinced
			loser stands a little closer to the camera (4%)	confident
15. British competition	winner hand in pocket (6%)			
man vs. woman tennis	winner and loser similar stance (12%)	equal in confidence		
	loser stands with a ball in hand (6%)	happy	loser stands with a ball in hand (4%)	teaching tennis skills
12. Japanese competition	loser stands taller (20%)	happy, confident		
man vs. man tennis	loser more open posture (13%)	confident		
	loser arms akimbo (40%)	confident, happy, dominant	loser arms akimbo (17%)	confident
	winner and loser stand similarly (13%)		winner and loser stand similarly (4%)	
	loser stands with a ball in hand (7%)	proud		
14. Japanese competition	winner stands still (10%)			
woman vs. woman tennis	winner stands with hands behind back, hides racket (40%)	passive		
	loser clutches racket in front of her (20%)	confident		
	both relatively still (10%)	equal in confidence, excitements		

Table 6.22 *Facial expression cues reported by British and Japanese participants which led to incorrect interpretation of competition scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
2. British competition man vs. man squash	winner and loser similar expressions (14%)	equal in happiness and confidence	loser proud, happier expressions (8%)	
15. British competition man vs. woman tennis	winner and loser both smiling (12%) winner and loser similar amount of laughter (6%) loser happier expressions (24%)	equal in happiness equal in happiness		
12. Japanese competition man vs. man tennis	loser more smiles (27%)	happier	loser more smiles (21%)	happier
14. Japanese competition woman vs. woman tennis	loser more smiles (10%)	happier	winner stiffened face (6%)	

6.2.1.3 Overview of results

Nonverbal cues described by British and Japanese participants nearly matched those observed in the micro-analysis of the four competition scenes. In accurate perception, as shown in Table 6.17, losers' restless body movements such as keep moving a racket, shift positions were interpreted as signs of their frustration and uncomfortable feelings. On the other hand, winners were described as more stationary, which was interpreted as indicating their relaxation and confidence. Winners' confidence seems to have been

particularly clear in their posture cues which comprised folded arms, open legs and up held head (Table 6.18). Losers were observed to keep their head down and have their shoulders slouched, showing their disappointment and lack of confidence.

Micro-analysis of the four scenes revealed that British winners tend to have more relaxed trunk postures than losers; however, this was not mentioned by British nor Japanese participants. Other nonverbal cues mentioned often by the participants for accurate perception (but not included in the tables) are gaze cues such as losers' downcast gaze or avoidance of eye contact with the winner, which were interpreted as signs of their disappointment and annoyance.

Correct and incorrect scene perception did not differ in the nonverbal cues reported, but rather they differed in interpretation of the cues. While losers' constant body movements were interpreted as signs of their frustration and uneasiness in accurate perception (Table 6.17), they were interpreted as indicating their confidence and excitement in inaccurate perception (Table 6.20). As for posture, certain cues seem to have particularly stood out as misleading cues. Table 6.21 shows that the winner's folded arms were interpreted as showing his disappointment and defensive attitudes, and the arms' akimbo posture exhibited by a loser for only a few seconds was interpreted as showing his confidence. In accurate perception, as described in Table 6.18, folded arms were interpreted as showing the winner's confidence and relaxation, and arms akimbo as showing the loser's disappointment. Examination of other nonverbal cues, used together with these cues, revealed that the participants seem to have taken into consideration the information from other cues such as gaze and speech more in accurate interpretation than in inaccurate interpretation.

Other nonverbal cues which misled the participants were losers' smiles, particularly, those of Japanese losers (Table 6.22). As described in the micro-analysis of competition scenes, Japanese losers tend to exhibit similar amount

of smiles and laughter to winners, which is more than their British counterparts and even British winners. This seems to have been confusing for both British and Japanese participants. In accurate scene perception, some participants detected losers' leaked expressions such as grimaces and succeeded in interpretation even when winners and losers exhibit a similar amount of smiles (Table 6.19). At the same time, these participants seem to have been more sensitive to subtle differences in winners' and losers' smiles, sometimes describing losers' smiles as "false smiles". In inaccurate perception, frequency of smiles was mainly reported.

6.2.2 *Intimacy scene perception*

6.2.2.1 Correct interpretation of the scenes

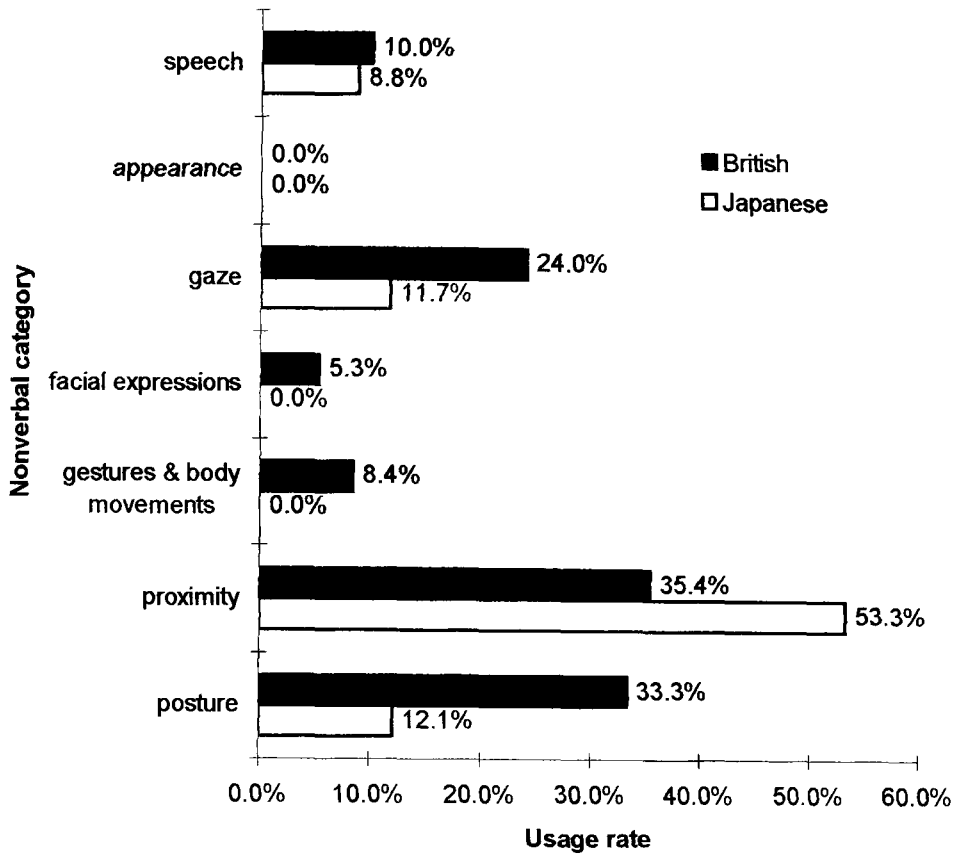

Figure 6.3 *Nonverbal cue categories used by British and Japanese participants which led to correct interpretation of intimacy scenes*

Proximity cues were found to be by far the most important cues for accurate interpretation of intimacy scenes, particularly for Japanese participants. Considering the generally small percentage of Japanese participants who described the specific nonverbal cues they used, this high percentage of responses by Japanese participants for proximity cues is exceptional. This seems to suggest that they have particular awareness of these cues in intimacy relationships. For British participants, proximity cues were also important, but posture cues seemed to be equally important for them. Another cue utilised often by British and Japanese participants was gaze. When the British and Japanese results were combined, the most often used cues were proximity

(44.4%), followed by posture (22.7%) and gaze (17.9%). Specific cues in proximity, posture and gaze categories which led to accurate interpretation of intimacy scenes are summarised in Table 6.23, 6.24 and 6.25 together with participants' interpretations of these cues.

Table 6.23 *Proximity cues reported by British and Japanese participants which led to correct interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend	husband and wife sit close to each other (65%)	attracted to each other, protective	husband and wife sit close to each other (88%)	
8. British intimacy male & female friends			man and woman sit far from each other (50%)	
1. Japanese intimacy married couple & a friend			husband sits closer to friend (7%)	welcoming a friend
5. Japanese intimacy male & female friends	man and woman sit far from each other (76%)	not intimate, having serious discussion	man and woman sit far away from each other (68%)	not intimate, try to keep distance

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene correctly.

Table 6.24 Posture *cues reported by British and Japanese participants which led to correct interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend	husband and wife lean toward each other (25%) wife's friend sits upright (5%)	intimate		
8. British intimacy male & female friends	man and woman lean back (away from each other) (33%)	not intimate		
1. Japanese intimacy married couple & a friend	wife relaxed posture (11%)	know each other well	wife sits more steadily (14%)	relaxed
5. Japanese intimacy male & female friends	woman arms folded (6%) woman and man keep their arms close to their body (12%) woman leans away from man (41%)		woman arms folded (2%) woman leans away from man (34%)	

Table 6.25 Gaze *cues reported by British and Japanese participants which led to correct interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend	husband and wife look at each other often (40%) husband and wife look at friend together (5%)	intimate, support each other friend looks like an outsider	husband and wife look at each other often (8%)	intimate
8. British intimacy male & female friends			man and woman sustain gaze (13%)	
1. Japanese intimacy married couple & a friend	husband pays more attention to friend (33%)	welcoming a friend as a guest	husband pays more attention to friend (21%)	
5. Japanese intimacy male & female friends	man and woman have little eye contact (18%)	much less eye contact than expected for a couple	man does not look at woman (2%) man and woman have little eye contact (2%)	

6.2.2.2 Incorrect interpretation of the scenes

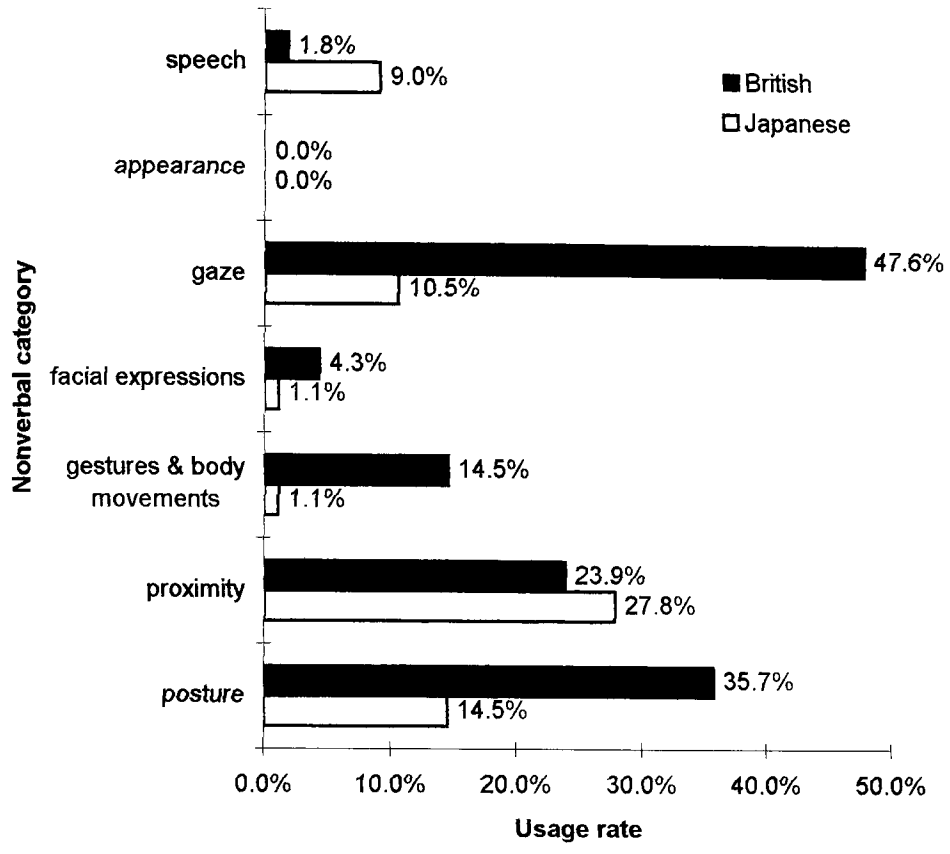

Figure 6.4 *Nonverbal cue categories used by British and Japanese participants which led to incorrect interpretation of intimacy scenes*

Examination of nonverbal cues that led to incorrect interpretation of intimacy scenes revealed that the frequency of the cues utilised by British participants was different from that identified for correct interpretation. The highest percentage of British participants whose interpretation was incorrect used gaze, followed by posture and proximity cues. For Japanese participants, nonverbal cues used for incorrect interpretation were similar to those used for correct interpretation. However, the percentage of Japanese participants who used proximity cues was half of that observed for accurate perception. When the British and Japanese results were combined, the most often utilised category was gaze (29.1%), followed by proximity (25.9%) and posture (25.1%). Specific cues used in gaze, proximity and posture categories which

led to incorrect interpretations are summarised in Table 6.26, 6.27 and 6.28 together with participants' interpretation of these cues.

Table 6.26 *Gaze cues reported by British and Japanese participants which led to incorrect interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend	husband looks at two women equally (33%)			
8. British intimacy male & female friends	man and woman have a lot of eye contact (50%)	intimate	man and woman have a lot of eye contact (14%)	intimate
1. Japanese intimacy married couple & a friend	husband and friend have more eye contact (43%) husband has equal amount of eye contact with both women (7%) husband and friend look together at wife (7%)		husband and friend have more eye contact (23%) wife does not look at husband (2%) husband and friend look together at wife (2%)	not interested
5. Japanese intimacy male & female friends				

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene incorrectly.

Table 6.27 *Proximity cues reported by British and Japanese participants which led to incorrect interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend			husband and friend sit closer (13%)	
8. British intimacy male & female friends	man and woman's legs nearly touching (40%) man and woman sit close (15%)	intimate intimate	man and woman's legs nearly touching (14%) man and woman sit close (33%) man and woman sit far (4%)	intimate intimate not quite used to each other yet
1. Japanese intimacy married couple & a friend	husband and friend sit closer (7%)		husband and friend sit closer (9%)	
5 Japanese intimacy male & female friends			man and woman sit close (15%) man and woman sit far (23%)	comfortable with each other not used to each other

Table 6.28 *Posture cues reported by British and Japanese participants which led to incorrect interpretation of intimacy scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
3. British intimacy married couple & a friend				
8. British intimacy male & female friends	man and woman face each other directly (20%)		man and woman face each other directly (10%)	
	woman's knees between man's knees (20%)	intimate	man and woman legs open (6%)	intimate
	man and woman's hands mostly on lap (5%)	a little uncomfortable		
	man and woman's head tilt in the opposing direction (5%)			
1. Japanese intimacy married couple & a friend	husband leans toward friend/ friend leans toward husband (43%)	intimate, flirting	husband leans toward friend/ friend leans toward husband (14%)	
	wife leans back (7%)	not interested	wife hands on lap (2%)	not at ease
	husband faces friend (7%)		wife posture rigid (5%)	not at ease
			friend stands elbow on the table (5%)	relaxed
5. Japanese intimacy male & female friends			woman leans away from man (15%)	
			woman and man sit side by side (8%)	comfortable with each other

6.2.2.3 Overview of results

Nonverbal cues described by British and Japanese participants were similar to the nonverbal cues observed in micro-analysis of the scenes. As described in Table 6.23 and 6.24, British couple's close sitting distance was the most reliably utilised cue which was accompanied by their "leaning toward each other" posture. On the other hand, Japanese opposite-sex friends' far sitting distance was also accurately interpreted as indicating the distance in their relationship by both British and Japanese participants. The woman's "leaning away" posture also helped their interpretation.

Table 6.27 shows, however, British opposite-sex friends' sitting position confused British and Japanese participants, as their legs are very close and nearly touching each other although their upper bodies are not close. Those who focused on the distance in their upper bodies or their "leaning back/away from each other" posture succeeded in accurate interpretation (Table 6.23 and 6.24). However, among those who made an inaccurate interpretation, about half of the participants were misled by the closeness of their legs.

As for gaze cues, British couple's frequent gaze at each other was utilised as often as posture cues in accurate interpretation of the scene (Table 6.25) while Japanese couple's lack of mutual gaze was confusing for some of the participants (Table 6.26). In one of the clips, a Japanese husband paid more attention to his female friend than to his wife. However, those participants who looked at other nonverbal cues such as the wife's relaxed trunk posture succeeded in guessing their relationship correctly by concluding that the husband is welcoming the guest by paying a lot of attention to her (Table 6.25). On the other hand, some of British and Japanese participants were confused by British opposite-sex friends' sustained eye-contact and concluded that they were a couple rather than just friends (Table 6.26). Japanese opposite-sex friends' little eye-contact seems to have been a clear

clue for British participants to interpret their non-intimate relationship (Table 6.25).

6.2.3 Kinship scene perception

6.2.3.1 Correct interpretation of the scenes

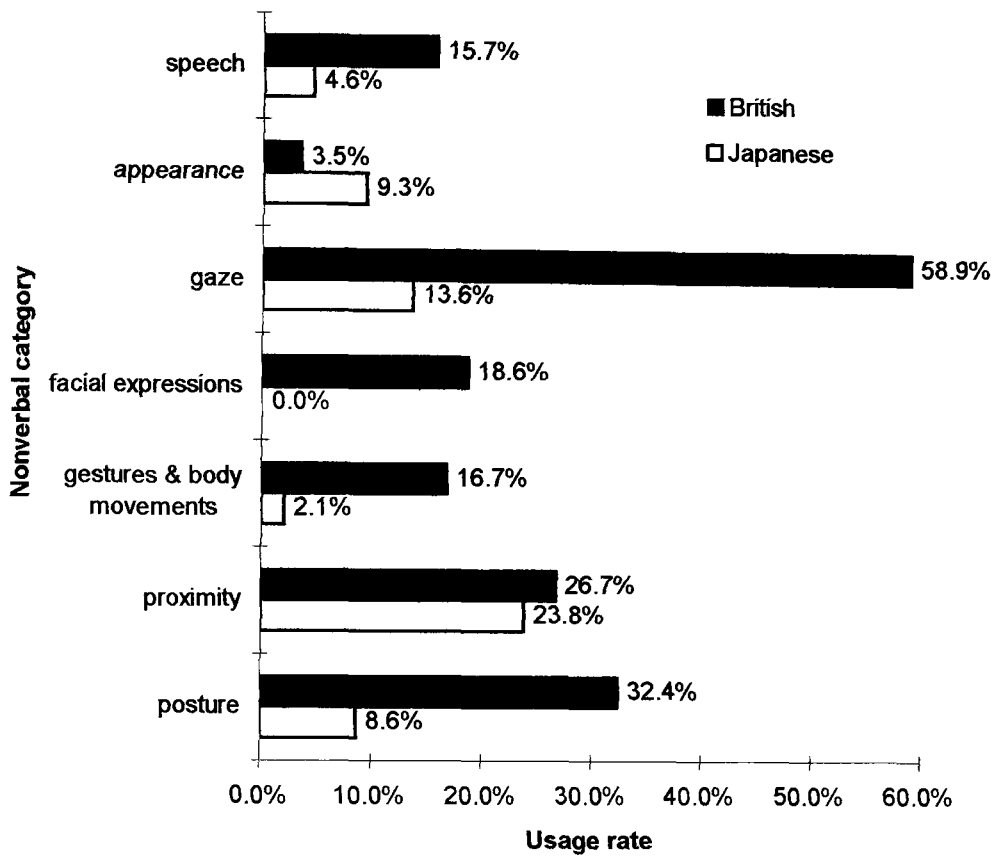

Figure 6.5 *Nonverbal cue categories used by British and Japanese participants which led to correct interpretation of kinship scenes*

The largest percentage of British participants used gaze cues, followed by posture and proximity cues. On the other hand, Japanese participants used proximity cues most often, followed by gaze and appearance cues. Generally, a rather low percentage of Japanese participants described particular nonverbal cues they used compared with British participants. Appearance cues such as physical similarity between family members seem to have helped Japanese

participants often on their own without support from any other nonverbal cues. When the British and Japanese participants' results were combined, the three most often used cues were gaze (36.3%), proximity (25.3%) and posture (20.5%). Gaze, proximity and posture cues which led to accurate interpretation of British and Japanese participants are summarised in Table 6.29, 6.30 and 6.31 together with participants' interpretation of these cues.

Table 6.29 *Gaze cues reported by British and Japanese participants which led to correct interpretation of kinship scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
4. British kinship mother, daughter & mother's friend	child looks at mother occasionally (88%)	seeking support/ reassurance	child looks at mother occasionally (9%)	seeking support
			child mostly looks at another woman (4%)	paying attention to a guest
			mother keeps looking at child (4%)	protective
6. British kinship brother & sister	man and woman do not look at each other often (47%)	know each other well, do not see each other often	man and woman do not look at each other (6%)	know each other well
13. Japanese kinship brother & sister	man and woman have little eye contact (30%)	not like a couple, know each other well	man and woman have little eye contact (17%)	
			man and woman look down often (6%)	
16. Japanese kinship mother, daughter & mother's friend	child looks at another woman more than at mother (29%)	child shows interest in guest	child looks at another woman more than at mother (14%)	child shows interest in guest
	mother keeps looking at child (29%)	protective, proud of child	mother keeps looking at child (8%)	protective
	child and mother look at another woman together (21%)	another woman is an outsider		

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene correctly.

Table 6.30 *Proximity cues reported by British and Japanese participants which led to correct interpretation of kinship scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
4. British kinship mother, daughter & mother's friend	child close to mother (13%)		child close to mother (30%)	
6. British kinship brother & sister	man and woman sit apart (20%)		man and woman sit apart (3%)	
13. Japanese kinship brother & sister			man and woman sit apart (6%)	
16. Japanese kinship mother, daughter & mother's friend	child close to mother (64%)		child close to mother (48%) child and mother have body contact (8%)	

Table 6.31 *Posture cues reported by British and Japanese participants which led to correct interpretation of kinship scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
4. British kinship mother, daughter & mother's friend	child leans toward her mother (38%)		child leans toward her mother (9%) child's body directed at another woman (4%) mother's body directed at another woman (4%)	another woman is a guest
6. British kinship brother & sister	man and woman do not sit toward each other (7%) man and woman sit back (13%) legs crossed away from each other (13%)	relaxed not comfortable with each other	man and woman sit back (6%)	relaxed
13. Japanese kinship brother & sister	man arms folded (30%)	not at ease	man and woman do not direct their bodies to each other (6%)	know each other well
16. Japanese kinship mother, daughter & mother's friend	child and mother sit in the same posture (14%) child leans toward mother (14%)		child and mother sit in the same direction/posture (14%)	

6.2.3.2 Incorrect interpretation of the scenes

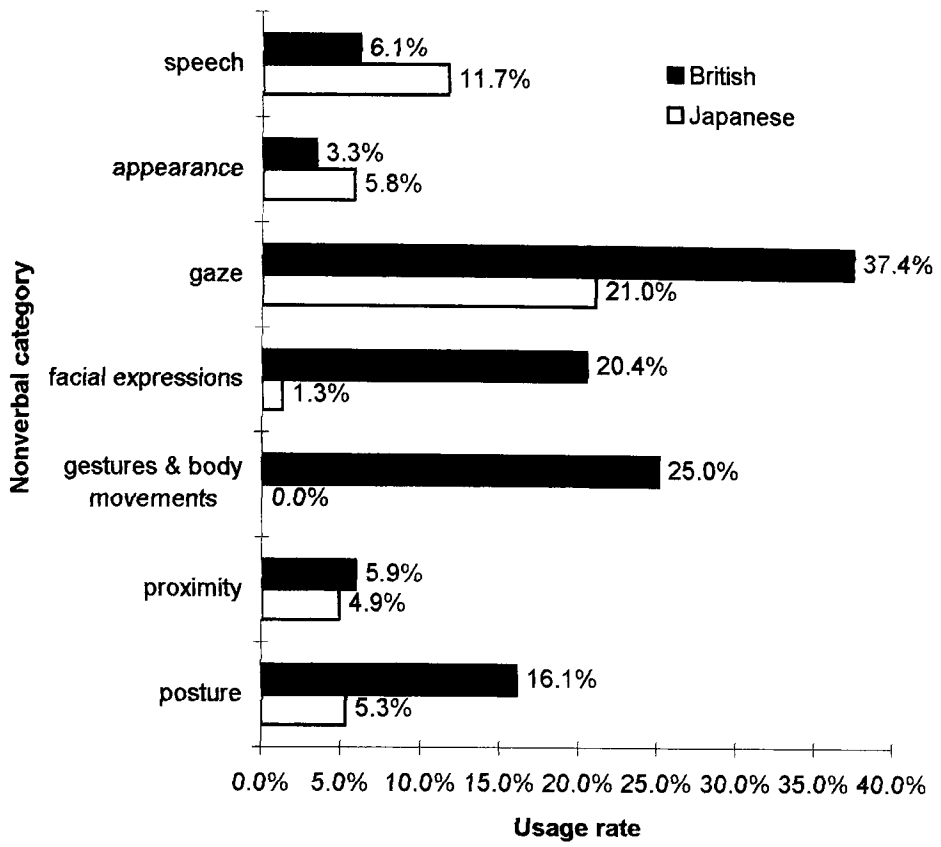

Figure 6.6 *Nonverbal cue categories used by British and Japanese participants which led to incorrect interpretation of kinship scenes*

In inaccurate interpretation, British participants used gaze cues most often followed by gestures, body movements and facial expressions. Japanese participants also used gaze cues most often; however, they hardly used gestures, body movements or facial expressions of the interactants in their interpretation. They rather relied on speech cues and appearance cues. Gaze cues, therefore, seem to be the common cues which confused both British and Japanese participants. Gaze cues were also most frequently used for correct interpretation as shown in the previous section. In order to examine how the same cues led to correct and incorrect interpretation, gaze cues incorrectly used by British and Japanese participants are summarised in Table 6.32 together with the participants' interpretations.

Table 6.32 *Gaze cues reported by British and Japanese participants which led to incorrect interpretation of kinship scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
4. British kinship	child does not look at mother (7%)	child more comfortable with another woman	child looks at another woman more than at mother (18%)	
mother, daughter, & mother's friend	another woman often looks at child (7%)		another woman often looks at child (9%)	
	child and another woman have more eye contact (20%)	more comfortable with each other		
6. British kinship	man and woman keep looking at each other when they speak (38%)		man and woman do not look at each other (4%)	too accustomed to each other
brother & sister				
13. Japanese kinship	man and woman have little eye contact (8%)		man and woman have little eye contact (8%)	embarrassed
brother & sister	man and woman have a lot of eye contact (8%)		man and woman have a lot of eye contact (8%)	
	woman looks at man often (8%)		man and woman look down often (5%)	shy, embarrassed
			woman keeps looking at man (10%)	in love
16. Japanese kinship	child never looks at mother (44%)	mother is a stranger	child keeps looking at another woman (29%)	
mother, daughter & mother's friend	child pays equal attention to two women (11%)	neither is mother		

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene incorrectly.

6.2.3.3 Overview of results

In kinship scenes, gaze cues were found to be the most frequently used cues both for correct and incorrect interpretations of the scenes. Although British and Japanese participants differed slightly in the nonverbal cues they used, their interpretations of the cues were very similar.

Gaze behaviours of children and mothers observed in the video-clips were similar between British and Japanese scenes (Table 6.29). Children usually paid more attention to a guest than to their mother. In correct perception of the scenes this was interpreted as children's interest in the guest. On the other hand, children's occasional look at their mother was interpreted as seeking reassurance and support from their mother. Both British and Japanese mothers' continuous looks at their child were interpreted as reflecting their protective attitudes toward their child. These gaze behaviours were also accompanied by close sitting distance or body contact between children and their mother as described in Table 6.30; these cues were often utilised together by the participants who interpreted the scenes correctly. Among posture cues, children's leaning toward their mother was the most obvious cue for the participants, followed by postural similarity between children and their mother (Table 6.31). Correct interpretation of the scenes seem to have resulted from the appropriate use of proximity and posture cues in conjunction with gaze cues.

Similar use of cues were also observed for accurate perception of brother-sister scenes. As shown in Table 6.29, eye contact between a brother and a sister was limited, which was interpreted as a sign of familiarity. Although they showed certain levels of relaxation cues, they lacked immediacy cues which they would have shown to their partner or friends (Table 6.30 & 6.31 for proximity and posture cues). These combination of nonverbal cues led British and Japanese participants to interpret that a man and a woman in

the clips were not a couple nor friends and, therefore, possibly a brother and a sister.

Table 6.32 shows that the cue which mainly led to misinterpretation of kinship scenes was children's attention to a guest. This was often interpreted as a sign of kinship familiarity and children's efforts to seek reassurance from their mother. The participants who misinterpreted mother-daughter scenes by focusing on gaze cues seem to have failed to take into consideration the information transmitted by other useful nonverbal cues such as proximity. As for brother-sister scenes, there were no agreements between the participants as to the amount of gaze observed in the scenes. Some participants perceived little gaze between a brother and a sister and believed they were a couple and just being shy. Others perceived a lot of gaze between them and interpreted it as a sign of intimacy.

6.2.4 Status scene perception

6.2.4.1 Correct interpretation of the scenes

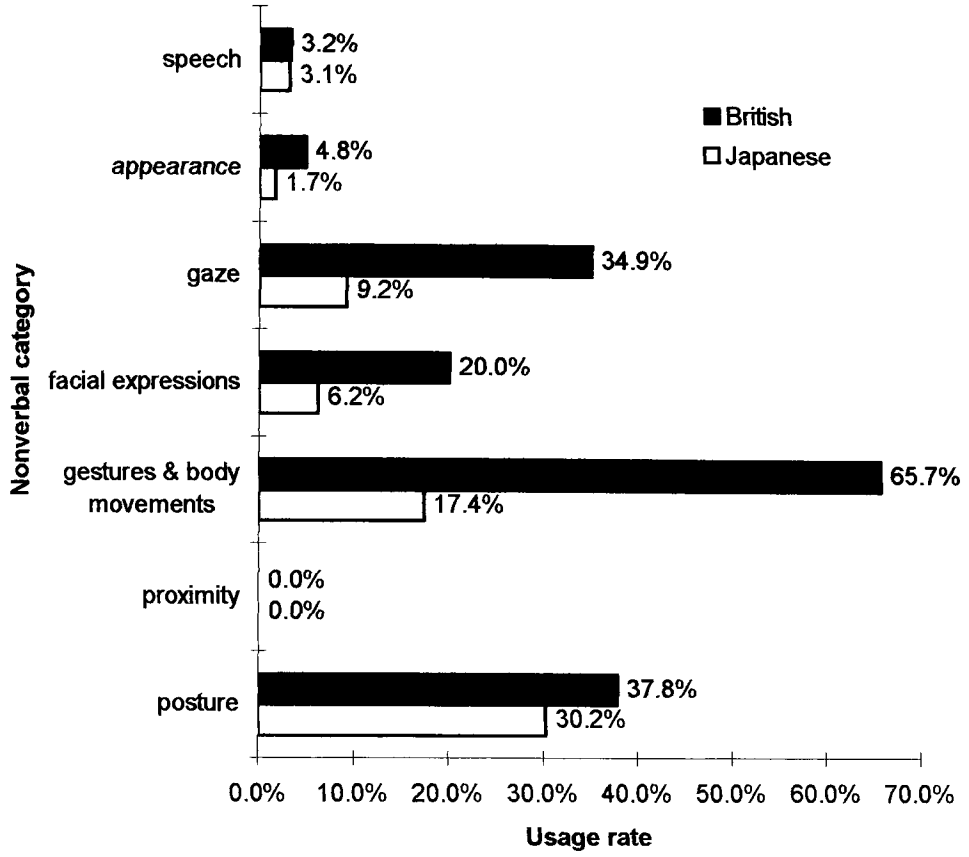

Figure 6.7 *Nonverbal cue categories used by British and Japanese participants which led to correct interpretation of status scenes*

Frequencies of nonverbal cues used for interpretation of status scenes were similar in order between British and Japanese participants. However, as in other scene types, the rates of participants who specified nonverbal cues were higher for British participants. British participants used gesture and body movement cues most often followed by posture and gaze cues, while Japanese participants used posture cues most often followed by gesture and body movement cues and gaze cues. When the British and Japanese participants' results were combined, gestures and body movements were most often used (41.6%) followed by posture (34.0%) and gaze (22.1%). Specific nonverbal

cues utilised for gesture and body movement, posture and gaze cue categories are summarised in Table 6.33, 6.34 and 6.35 together with participants' interpretation of these cues.

Table 6.33 *Gesture and body movement cues reported by British and Japanese participants which led to correct interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status a male (with his subordinate)	emphatic gestures (60%) plays with a pen (20%)	confident, explaining something to his subordinate confident	emphatic gestures (7%)	instructing subordinates, authoritative
11. British status a female (1- with similar, 2 - with higher status person)	1st scene - open gestures (6%) 2nd scene - hand movements, taps fingers on the table (56%)	nervous	2nd scene - a lot of nodding (2%) 2nd scene - taps fingers on the table (14%)	restless
7. Japanese status a male (with his subordinate)	strong hand gestures (including pointing) (90%) keeps touching glasses (10%)	commanding, confident	a lot of gestures (20%)	trying to explain things to subordinate/ giving advice
9. Japanese status a male (with his boss)	few hand movements - close to body (21%) taps fingers on the table (5%) nods a lot (16%)	agreeing with boss	weak hand movements (2%) nods a lot (19%)	

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene correctly.

Table 6.34 *Posture cues reported by British and Japanese participants which led to correct interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status a male (with his subordinate)	sits back (33%)	confident, relaxed	sits back (30%)	confident, relaxed
	leaning on the desk (7%)	authoritative	sits upright without moving his back (7%)	confident, dignified
	open arms (7%)		rests hands on the table (3%)	
			does not sit deep in a chair (3%)	authoritative
11. British status a female (1- with similar, 2- with higher status person)	1st scene - face on her hands, elbows on the table (13%)	at ease	1st scene - stands elbow on the table (52%)	relaxed, enjoying conversation, rude behaviour to exhibit to boss
	1st scene - leans forward (44%)	comfortable		
	1st scene - raised in a chair (13%)	at ease, non-submissive		
	2nd scene - hand outstretched (6%)	efforts to form a block	2nd scene - keeps ducking head (2%)	submissive (saw similar behaviour in European films)
	2nd scene - body withdrawn/ upright (19%)	nervous	2nd scene - hands on the table (2%)	
7. Japanese status a male (with his subordinate)	sits upright (10%)		arms on arms rest of a chair (3%)	
	continual head-up (10%)	important, in charge	sits deep in a chair (10%)	
			trunk not upright (7%)	relaxed
9. Japanese status a male (with his boss)	head down (16%)	nervous	head down (5%)	
	closed body position (5%)		stiff shoulder (2%)	nervous
			leans forward (2%)	serious

Table 6.35 *Gaze cues reported by British and Japanese participants which led to correct interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status a male (with his subordinate)	looking down at the other (7%) does not sustain gaze (7%) sustains gaze (13%)	authoritative		
11. British status a female (1- with similar, 2- with higher status person)	1st scene - sustains gaze (6%) 2nd scene - little gaze (6%)		2nd scene - looking upwards at the other (5%)	
7. Japanese status a male (with his subordinate)	sustains gaze (30%) blinks a lot (10%) looks away sometimes (10%)	in charge emphasise authority	sustains gaze (3%)	not nervous
9. Japanese status a male (with his boss)	looks down/away most of the time (63%) only sometimes looks up (5%) keeps moving eyes, avoids eye contact (32%)	nervous, shy nervous	looks down often (21%) looks upwards at the other (5%) keeps moving eyes, avoids eye contact (10%)	reserved reserved

6.2.4.2 Incorrect interpretation of the scenes

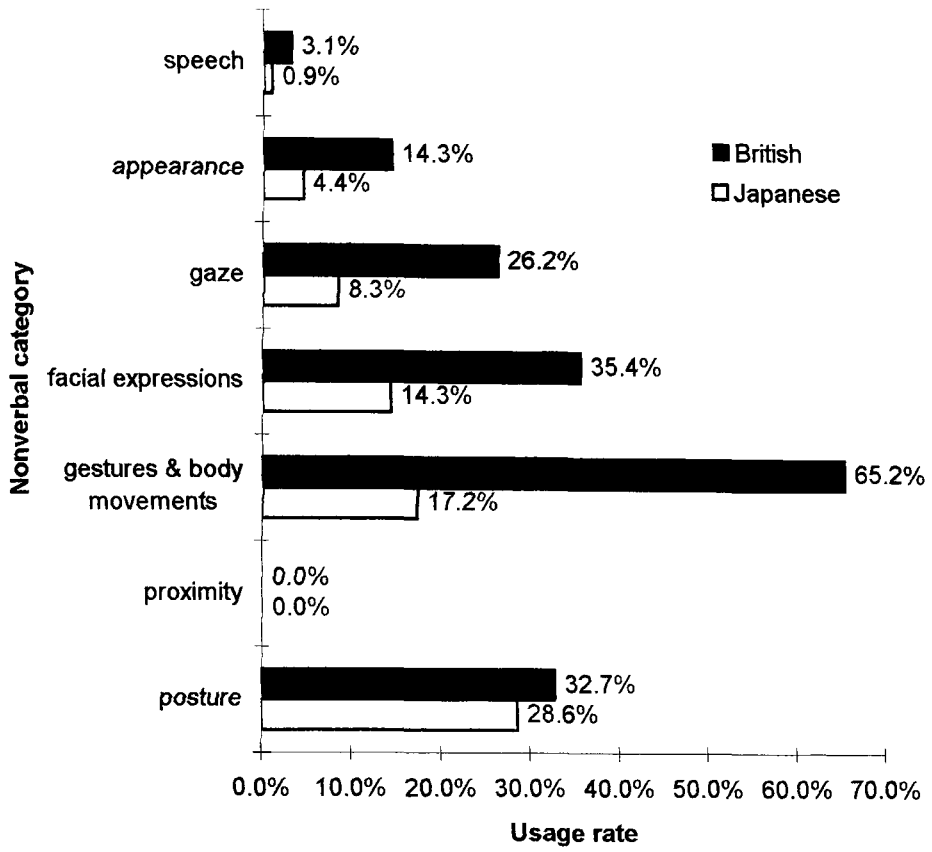

Figure 6.8 *Nonverbal cue categories used by British and Japanese participants which led to incorrect interpretation of status scenes*

Among incorrect answers, gesture and body movement cues were most often relied on by British participants. These were followed by facial expression and posture cues. Japanese participants used similar cues; they relied on posture most followed by gestures, body movements and facial expressions. When the British and Japanese results were averaged out, the most utilised cue category was gestures and body movements (41.2%) followed by posture (30.7%) and facial expressions (24.9%). Specific nonverbal cues used for gesture and body movement, posture and facial expression cue categories are shown in Table 6.36, 6.37 and 6.38 together with participants' interpretation of these cues.

Table 6.36 *Gesture and body movement cues reported by British and Japanese participants which led to incorrect interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status	fidgets with his hands/fiddles with his pen (25%)	nervous, not confident	little hand and body movement (4%)	
a male (with his subordinate)	not many hand movements (13%)		casual gestures (4%)	talking with someone familiar
11. British status	1st scene - fidgets a lot (14%)	nervous		
a female (1- with similar, 2- with higher status person)	2nd scene - taps fingers on the table (57%) 2nd scene - moving about in a chair (14%)	rude behaviour, not trying to impress boss, nervous	2nd scene - taps fingers on the table (33%)	restless, rude behaviour to exhibit to boss, relaxed
7. Japanese status	gestures - arms not spreading wide (23%)	not commanding	a lot of gestures (6/27)	making various explanations, not authoritative
a male (with his subordinate)	a lot of gestures (54%)	trying to convey a point to his boss, at ease	a lot of self touching (face, glasses) (11%)	nervous
9. Japanese status	few hand movements (50%)		a lot of hand movements (70%)	relaxed
a male (with his boss)	some head movements (25%)	relaxed	nods a lot (7%)	

Note: Figures in parentheses indicate the percentages of participants who used the nonverbal cues shown out of all the British or Japanese participants who interpreted the scene incorrectly.

Table 6.37 *Posture cues reported by British and Japanese participants which led to incorrect interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status	sits back (38%)		sits back (22%)	relaxed
a male (with his subordinate)			sits deep in a chair (4%)	
11. British status	1st scene - leans forward (43%)	efforts to match the higher occupational status of the other, relaxed	1st scene - rests elbow on the table (60%)	relaxed, rude behaviour to exhibit to boss, reserved
a female (1- with similar, 2- with higher status person)	1st scene - grasps chin (29%)	talking with an equal	relaxed shoulders and hands in both scenes (7%)	relaxed in both scenes
7. Japanese status	a hand on lap (8%)	submissive	sits back (11%)	relaxed
a male (with his subordinate)	trunk not upright (8%)	not in a dominant position	trunk not upright (7%)	not nervous
			arms on arms' rest of a chair (4%)	relaxed
9. Japanese status				
a male (with his boss)				

Table 6.38 *Facial expression cues reported by British and Japanese participants which led to incorrect interpretation of status scenes*

BJSPT no.	British participants		Japanese participants	
	cues reported	interpretation	cues reported	interpretation
10. British status a male (with his subordinate)	comfortable facial expressions (13%)		smiles (4%)	enjoying conversation with colleagues
11. British status a female (1- with similar, 2- with higher status person)	1st scene - smiles a lot (29%) genuine laughter in both scenes (29%) 2nd scene - laughs more openly (14%)	effort to match the higher occupational status, talking with an equal not talking with boss in neither scenes less restrained		
7. Japanese status a male (with his subordinate)	bland expression (8%)	at ease		
9. Japanese status a male (with his boss)	some smiles (50%)	does not seem nervous nor authoritative	some smiles (20%) some annoyed expressions (7%) expressive (27%)	relaxed relaxed

6.2.4.3 Overview of results

For correct interpretation of the scenes, gestures were the cues most often used by British participants. As shown in Table 6.33, they were often regarded as an important behaviour for asserting one's authority. On the other hand, restless hand movements were interpreted as indicating one's lower status. Japanese participants who interpreted the scenes correctly also identified these

similar gesture and body movement cues but at a lower rate. Their focus was more on posture cues and they were particularly attuned to relaxation cues such as leaning back in a chair (Table 6.34). This coincided with higher levels of postural relaxation observed in the behaviour of Japanese bosses in comparison with that of British bosses in the status scenes filmed for the BJSPT.

Several differences in interpretation of nonverbal cues were observed between the two nationalities. Although both British and Japanese participants interpreted "resting elbow on the table" behaviour as indicating relaxation level of the interactant, Japanese participants also emphasised rudeness of this postural cue exhibited by a subordinate to a boss (Table 6.34, 11 - British scene).

Another difference observed was in the interpretation of gaze. As described in Table 6.35, British participants generally regarded gaze as very important for asserting authority and indicating attention of interactants. Thus, they interpreted lack of gaze negatively, as either a sign of nervousness or indifference. On the other hand, Japanese participants often regarded avoidance of gaze, particularly if shown by subordinates, as a more positive sign of modest behaviour.

The above mentioned nonverbal cues were also used for incorrect interpretation of the scenes, however, they seem to have led to different impressions of the scenes. For example, the same gestures by the same interactant were interpreted as confident and commanding for correct answers (Table 6.33, 7 - Japanese scene) and as not commanding for incorrect answers (Table 6.36). This seems to be partly due to how the participants combined various cues which were presented in the clip. Those who did not interpret a boss correctly seem to have picked up leaked nervousness from a boss, which was possibly induced by awareness of being filmed. Nervousness was detected mainly through other hand and body movements (Table 6.36).

Another misleading cue was the facial expression of the interactants. Table 6.38 shows that generally, smiles seem to have been a confusing cue for interpretation of both a boss and subordinate. Smiles often made the participants seem to believe that the interactants were very relaxed as if with a colleague of equal status. In the use of facial expressions, the difference between correct and incorrect answers seems to be that in correct answers, the participants were more attuned to subtle differences in facial expressions. They were more aware of, for example, swift changes in facial expressions or polite and diplomatic smiles made by a subordinate to a boss.

6.2.5 Discussion

Examination of nonverbal cues used for interpretation of the four BJSPT scene types revealed some commonality between them. For competition and status scenes, gesture and body movement cues were most often used, followed by posture cues. Gestures were utilised for their importance in stating dominance and persuasiveness. On the other hand, frequent hand and body movements were often used for interpretation of nervousness. Similarly, posture cues were used for the interpretation of relaxation level and dominant-submissive relationships between interactants. As has been suggested, both competition and status scenes contain communication of dominant-submissive relationships, competition scenes being based on a temporary loser-winner power relationship and status scenes on more long-term occupational status differences. Reading temporary emotions from leaked facial expressions and hand movements can be useful for competition scenes. However, this can be confusing in relation to status scenes as these cues can be contrary to other nonverbal cues, which convey their relative social status.

For intimacy and kinship scenes, proximity, posture and gaze cues were found to be important, although the order of importance was different between

the two scene types. Both scene types depict relationships which entail different kinds of affiliative communication. While couple scenes involve sexual attraction of two people which is expressed particularly by such cues as body contact and mutual gaze, parent-child scenes are based on protective cues of parents such as continuous gaze toward their child and dependent cues of children such as leaning toward their parent. The differences observed in the order of nonverbal cues utilised seem to reflect these differences in the nature of communication contained.

Differences in correct and incorrect perception of the scenes seem to have been the results of: (1) whether participants focused on appropriate cues in the particular context and (2) whether participants could take into consideration the information presented in various other nonverbal cues in a scene. For example, in some scenes frequent hand movements were interpreted as a sign of nervousness for accurate interpretation and a sign of confidence for inaccurate interpretation. Inaccurate interpretation of the scenes seems to have resulted from a failure to take into account other meaningful nonverbal cues such as posture, which can communicate interactants' confidence and relaxation level. A number of nonverbal cues are presented in parallel and some of them can send misleading and contrary information to other cues. These misleading cues seem to have weighed more heavily in inaccurate interpretation, possibly due to biased focus or lack of synthesis of information in the process of interpretation. According to Livesley and Bromley (1973), one of the factors affecting the process of impression formation of others is the perceivers' cognitive abilities and personal characteristics, including their moods and expectations. In cross-cultural perception, differences in expectations in communication contexts seem to play a major role in affecting one's perceptual accuracy.

Several cross-cultural differences were observed in the process of perception and in the style used by British and Japanese participants to report their process of perception. Firstly, in spite of receiving the same instructions,

while about 80% of British participants identified the specific nonverbal cues they utilised, only about 40% of Japanese participants did. Often the Japanese participants just stated their impressions of the interactants without specifying nonverbal cues. This difference might reflect British participants' more conscious observation of their own perceptual process than Japanese participants. However, differences in experimental conditions - British participants having taken the task in smaller groups than Japanese participants - might have affected this result. Being in smaller groups might have forced British participants to be more observant and careful about their responses in the task. This difference, therefore, has to be re-examined in future studies.

The second difference observed is in the nonverbal cues reported. British participants used gesture and body movement cues in competition and status scenes at high percentage levels. They seem to rely on gesture cues particularly as clues for authority statements. Gaze cues were also highly utilised by them particularly in kinship scenes for interpretation of attention by children and parents. Japanese participants, on the other hand, seem to rely on posture more for interpretation of people's social status and relaxation level. They also utilised proximity cues highly in intimacy and kinship scenes. Gudykunst and Ting-Toomey (1988) stated that individualistic cultures (such as the UK) place greater emphasis on verbal communication and directness of communication than collectivist cultures (such as Japan). This preference seems to be reflected in British participants' tendency to focus on more visibly expressed nonverbal cues such as speech-related hand movements. Japanese participants, on the other hand, seem to be attuned to nonverbal cues which are less dynamic and are described as useful for interpretation of people's general attitudes. Posture cues such as bowing are in fact socially important in Japan as a means of communicating respect and relative status between people (Argyle, 1975; Brosnahan, 1998; Higuchi, 1994; Morsbach, 1988).

The third difference observed was in the interpretation of nonverbal cues. The most clear difference was in the interpretation of gaze. While

British participants emphasised the importance of direct gaze in communication between a boss and a subordinate, Japanese participants regarded direct gaze as rude or too assertive for a subordinate to exhibit to a boss. As British subordinates in the video-clips maintained gaze toward their boss, this seems to have been very confusing for Japanese viewers of the clips. This difference is a reflection of how gaze is regarded in respective cultures as explained previously and seems to affect not only their behaviour but also their interpretation of others. This finding arguably has important implications for intercultural communication training.

It seems that social rules affect the whole process of person perception - when taking in information from various nonverbal cues, when interpreting the significance and meaning of information received, and possibly when reporting the perceptual results. Cross-cultural differences were observed to different degrees in speech contexts. The most clear differences were observed in status and competition scenes, probably because these communication contexts are more affected by differences in social rules than other contexts. On the other hand, a lot of similarities were observed in perception of kinship scenes which contain similar nonverbal cues between British and Japanese scenes. Thus, it has to be emphasised that the cultural significance of context has to be taken into consideration in the analysis of people's perceptual sensitivity and perceptual processes.

6.3. General discussion

Nonverbal expressivity and the perceptual processes of British and Japanese people were examined in this chapter. Similarities and differences were observed in the four communication contexts used in the BJSPT. This indicates that both expressivity and perceptual processes are influenced by social rules which are embedded in context. In terms of expressivity, clear

cultural differences were found in competition, intimacy and status scenes. The expressive styles that distinguished between the two cultures were: (1) levels of relaxation as observed in such cues as posture (2) use of gaze (3) use of smiles and laughter (4) use of body contact. In competition and intimacy scenes, Japanese interactants were found to be more tense than British interactants. In status scenes, Japanese subordinates were also found to be more tense than their British counterparts; however, British bosses were observed to be more tense than their Japanese counterparts. Although Japanese people were found to be more nervous than British people in various settings, the fact that British and Japanese interactants showed similar relaxation levels in kinship scenes indicates that Japanese people are not naturally more nervous than British people. Rather, this seems to indicate that Japanese people might be more tied to various social rules, which make their behaviour more constrained in certain contexts and sometimes make them nervous. These social rules relate to a much smaller amount of gaze and more smiles and laughter exhibited by Japanese interactants, compared with British interactants. Matsumoto (1996) also reported the Japanese display rule of substituting negative emotion expressions with smiles and laugher. Another influence of social rules was observed in the finding that Japanese couples did not have any body contact in the video-clips. This was in clear contrast to their British counterparts who often had some kind of body contact between them. Generally, Japanese people are reported to have little body contact in public (Argyle, 1975; Barnlund, 1975) and this seems to extend to interactions even between a couple (Brosnahan, 1998).

Examination of the perceptual processes of British and Japanese people clarified the causes for the differences in their perceptual sensitivity which was reported in Chapter 5. Although the nonverbal cues British and Japanese participants utilised differed depending on the four communication contexts in a similar way, their tendency to give attention to certain cues was found to be slightly different. British participants generally utilised gesture, body

movement and gaze cues often while Japanese participants were more attuned to posture and proximity cues. In status scenes, gestures and gaze together with posture seem to be the reliable cues and, therefore, British participants were more accurate than Japanese participants in perception of these scenes. On the other hand, in intimacy scenes, sensitivity to proximity and posture helped Japanese participants to perform better than their British counterparts.

These results suggest that although Japanese people show less intimacy cues in public than British people, they are very sensitive to intimacy cues expressed by others. On the other hand, British people who show similar amounts of gaze and gestures regardless of their interacting partners, seem to be sensitive to differences in the amount of these cues observed between Japanese bosses and subordinates. People seem to become sensitive to nonverbal cues of others which are not very obvious in their own cultural environments, possibly because they are still required to make an effort to read the significance of the cues exhibited in subtle ways. This negative relationship between cultural nonverbal expressivity and perceptual sensitivity gave support to Halberstadt's (1983, 1986, 1991) previous findings. Halberstadt examined the influence of family expressivity on the development of individuals' perceptual sensitivity using only emotion expressions. In spite of the differences between her studies and the present study, environmental influences were shown to have similar effects on the development of people's perceptual sensitivity.

Inaccurate perception was found to be the results of not focusing on appropriate cues in contexts, not synthesising various information from other nonverbal cues, and attributing wrong meaning and significance to the nonverbal cues used. The finding that both British and Japanese participants performed significantly better in their own cultural scenes than in cross-cultural ones indicates that familiarity and cultural knowledge affects perceptual accuracy of people to a large degree. Teaching cultural rules which affect nonverbal expressive and perceptual styles of people seems to be an

important part of intercultural perception training. This will also help people to observe others from the same culture more objectively. In the next chapter, the possibility of nonverbal perception training will be examined using the BJSPT as an assessment tool.

CHAPTER SEVEN

Nonverbal perception training

This chapter summarises the results of the nonverbal perception training with British and Japanese people. The BJSPT was used to assess their perceptual accuracy. As has been described in the previous chapters, the final aim of this research was to examine the possibility of improving people's perceptual skill particularly in intercultural perception by helping them to become aware of nonverbal and cultural aspects of communication.

Training was carried out with three groups: (1) British university students in the UK (2) Japanese university students who were enrolled in one-month summer English courses in the UK (3) Japanese university students in Japan. These training groups were compared both before and after the training with equivalent control groups who viewed the BJSPT twice without any training.

7.1. Training with British university students in the UK

7.1.1 Method

Participants

The participants consisted of 12 British undergraduate students (5 males and 7 females, mean age 18.5 years, SD 0.67) who formed the training group, and 13 British undergraduate students (5 males and 8 females, mean age 20.7 years, SD 2.95) who formed the control group. Individuals making up the groups were from mixed academic backgrounds, including Psychology, Physics and Biology at the University of York.

Procedure

All the participants were first tested with the BJSPT in small groups of two, three or four. This was undertaken outside of their normal class time. They were then randomly divided into training and control groups by the researcher. Three weeks later, the training group received a training session immediately before taking the BJSPT again while the control group took the BJSPT without any training. The training session consisted of (1) viewing training video-clips (2) discussing the nonverbal cues contained in the video-clips (3) discussing cultural similarities and differences observed in four communication contexts - competition, intimacy, kinship and status.

Training video-clips were selected from the video material that was not included in the final version of the BJSPT. One British and one Japanese clip were selected for each scene type except for intimacy where two clips (one couple and one friend clip) were selected for both British and Japanese. In total, 10 training video-clips were shown to the training group in the order of competition, intimacy, kinship and status scenes. All the scenes viewed by the participants had had above-chance accuracy levels in the within-cultural scene-selection testing, as described in Chapter 4.

After viewing each video-clip, the participants in the training group were asked to state the relationship of people in the clip and also to give reasons for their choice. They were then given the correct answer. They were also provided with a list of nonverbal cues. These had been identified by participants for each scene type in previous BJSPT testings and further examined by the researcher in a micro-analysis of each scene.

For example, in the status scenes, common behavioural cues observed from British and Japanese bosses were clear gestures, relaxed trunk posture and direct gaze. Behavioural cues of subordinates observed were restless hand movements, smaller gestures, nodding, tense posture and looking down. Cross-cultural differences were also observed, particularly amongst the subordinates. While the Japanese used obvious subordination cues such as

tense trunk posture, nodding and avoidance of direct gaze, the behavioural cues of British subordinates were more similar to their bosses. These cross-cultural similarities and differences were discussed in relation to British and Japanese social rules regarding differences in status. Participants then viewed the BJSPT for a second time. The training session took approximately 1 hour, including 20 minutes of BJSPT second viewing.

Upon completion of the two sessions, the Psychology students in both groups received two course credits and non-Psychology students a participation fee of £6. Both the training and control sessions were carried out by the researcher.

7.1.2 Results

Accuracy levels on the BJSPT for the training and control groups are reported in Table 7.1 and 7.2 respectively, together with the results of matched-sample t-tests, used to examine differences between the two testings. Group differences on the first and second testing accuracy were also tested with 2 (group) x 2 (gender) x 8 (scene type - 4 British and 4 Japanese scene types) and 2 (group) x 2 (gender) x 2 (all the British scenes and all the Japanese scenes) MANOVAs. The results are described in the following section.

Table 7.1 *Comparisons of the first and second BJSPT mean accuracy percentage for the British training group*

scene types	first testing	second testing	$t(11)$	p
BT competition	54.2	54.2	0.00	*ns*
BT intimacy	50.0	50.0	0.00	*ns*
BT kinship	58.3	87.5	-2.03	*ns*
BT status	45.8	45.8	0.00	*ns*
BT total	52.1	59.4	-1.21	*ns*
JP competition	37.5	33.3	0.43	*ns*
JP intimacy	54.2	62.5	-0.69	*ns*
JP kinship	58.3	70.8	-1.00	*ns*
JP status	66.7	83.3	-1.00	*ns*
JP total	54.2	62.5	-1.21	*ns*
BJSPT total	53.1	60.9	-2.03	*ns*

Table 7.2 *Comparisons of the first and second BJSPT mean accuracy percentage for the British control group*

scene types	first testing	second testing	$t(12)$	p
BT competition	65.4	61.5	0.43	*ns*
BT intimacy	53.8	57.7	-0.37	*ns*
BT kinship	53.8	65.4	-1.39	*ns*
BT status	76.9	84.6	-1.00	*ns*
BT total	62.5	67.3	-1.24	*ns*
JP competition	50.0	26.9	2.52	<.05
JP intimacy	38.5	53.8	-1.76	*ns*
JP kinship	57.7	50.0	1.00	*ns*
JP status	53.8	50.0	0.32	*ns*
JP total	50.0	45.2	0.96	*ns*
BJSPT total	56.3	56.3	0.00	*ns*

On the first BJSPT testing the overall mean accuracy for the training group was 53.1%, for the control group 56.3%. The results of the MANOVA did not reveal any group or gender differences. On the second testing the accuracy of the training group improved to 60.9%. This improvement, however, failed to reach statistical significance In contrast, the overall accuracy of the control group was exactly the same on the two testings. Group differences in post-training accuracy according to four British and four Japanese scene types were

found to be nonsignificant. However, accuracy comparisons based on all the British scenes and all the Japanese scenes revealed a significant main effect of group ($F(2, 20) = 3.84, p < .05$). Follow-up ANOVAs showed that Japanese scene accuracy of the training group is significantly higher than that of the control group ($F(1, 21) = 5.22, p < .05$).

Comparisons of accuracy between British and Japanese scenes among the training group showed that the accuracy on the second testing was significantly higher for Japanese than for British status scenes ($t = -2.69, p < .05$). None of British-Japanese scene comparisons differed significantly on the first testing.

Although overall accuracy of the control group was the same on the two testings, a significant accuracy decline was observed in Japanese competition scenes ($t = 2.52, p < .05$) on the second testing. Accuracy levels for status became significantly higher for British than for Japanese scenes ($t = 2.42, p < .05$); overall, accuracy was significantly higher for British than for Japanese scenes ($t = 2.47, p < .05$). But none of the British-Japanese scene comparisons were significantly different on the first testing.

7.1.3 Discussion

Overall, the results show that the training group made more improvements in the BJSPT scenes than the control group. This seems to suggest that the training had some effects on the improvement of this group's nonverbal perceptual accuracy. In particular, the training session helped the trainees to become aware of Japanese nonverbal communication styles, as the training group's accuracy for cross-cultural scenes became significantly higher than that of the control group on the second testing. The results suggest, therefore, that making people aware of cross-cultural differences and the importance of social contexts in nonverbal communication is more easily achieved than

improving their general nonverbal sensitivity. In micro-analysis of the status scenes (as reported in Chapter 6) Japanese subordinates were found to be expressive in communicating their lower status in occupational settings. Overt cues contained in Japanese status scenes (as explained in the training) seem to have helped the British trainees to interpret these scenes significantly more accurately than British status scenes on the second testing.

The control group's accuracy for within-cultural scenes became significantly higher than cross-cultural scenes on the second testing. This was partly due to a significant decline in Japanese competition scenes. Interpretation of competition scenes is based on understanding the emotions of winners and losers rather than their social relationships. As described in the previous chapters, Japanese people tend to suppress negative emotion expressions and to mask them with smiles and laughter (Matsumoto, 1996). In this regard, Japanese losers' smiles and laughter seem to have confused the participants. Re-observation of the scenes without any explanations about Japanese culture might have made them more confused about this particular scene type.

7.2. Training with Japanese university students at the summer English course in the UK

7.2.1 Method

Participants

The participants in this part of the research consisted of 13 Konan Women's University students (all females, mean age 19.7 years, SD 0.95) for the training group and 15 Tsuda University students (all females, mean age 19.2 years, SD 1.08) for the control group. They were all attending one-month summer

English courses at the University of York, UK. The participants were from various academic backgrounds, including English literature, international relations and Psychology.

Procedure

All the participants viewed the BJSPT during the first week of their stay in the UK. This first session was carried out for the training and control groups separately. Oral instructions were given in Japanese and the answer sheets used were also written in Japanese (translated from the original English answer sheets as described in Chapter 5). One week later, the training group received training according to the same procedure as described in the previous section for the British participants. All the explanations and discussions were, however, carried out in Japanese. Immediately after the training session, the participants in this group took the BJSPT for the second time. The training session took approximately 1 hour, including 20 minutes of BJSPT viewing. The control group also had the second BJSPT session one week after their first session, but without any training. Participants in both groups were offered £6 at the end of the two sessions. Both the training and control sessions were organised and administered by the researcher.

7.2.2 Results

Comparisons of the first and second BJSPT testing results are shown for the training and control groups in Table 7.3 and 7.4 respectively, together with the results of the matched sample t-tests. Between-group differences were examined with 2 (group) x 2 (gender) x 8 (scene type - 4 British and 4 Japanese scene types) and 2 (group) x 2 (gender) x 2 (all the British scenes and all the Japanese scenes) MANOVAs. The results are described in the following section.

Table 7.3 *Comparisons of the first and second BJSPT mean accuracy percentage for the Japanese training group in the UK*

scene types	first testing	second testing	$t(12)$	p
BT competition	50.0	65.4	-1.30	*ns*
BT intimacy	65.4	50.0	1.76	*ns*
BT kinship	26.9	46.2	-1.81	*ns*
BT status	46.2	65.4	-1.81	*ns*
BT total	47.1	56.7	-3.33	<.01
JP competition	61.5	50.0	1.00	*ns*
JP intimacy	46.2	38.5	0.52	*ns*
JP kinship	38.5	57.7	-2.13	=.05
JP status	84.6	73.1	1.00	*ns*
JP total	57.7	54.8	0.56	*ns*
BJSPT total	52.4	55.8	-1.10	*ns*

Table 7.4 *Comparisons of the first and second BJSPT mean accuracy percentage for the Japanese control group in the UK*

scene types	first testing	second testing	$t(14)$	p
BT competition	43.3	50.0	-0.56	*ns*
BT intimacy	66.7	56.7	1.38	*ns*
BT kinship	36.7	36.7	0.00	*ns*
BT status	56.7	53.3	0.37	*ns*
BT total	50.8	49.2	0.29	*ns*
JP competition	70.0	63.3	0.62	*ns*
JP intimacy	56.7	63.3	-1.00	*ns*
JP kinship	63.3	60.0	0.56	*ns*
JP status	76.7	76.7	0.00	*ns*
JP total	66.7	65.8	0.20	*ns*
BJSPT total	58.8	57.5	0.30	*ns*

In the first BJSPT testing overall mean accuracy for the training group was 52.4% while that for the control group was 58.8%. This difference was nonsignificant. Group differences according to four British and four Japanese scene types were also found to be nonsignificant. Both groups' accuracy was significantly higher on Japanese scenes than on British scenes (training group $t = -2.51$, $p < .05$, control group $t = -2.80$, $p < .05$).

On the second testing the training group's overall accuracy level improved significantly on British scenes overall (t = -3.33, p < .01). Their accuracy on Japanese kinship scenes also improved significantly (t = -2.13, p = .05). Their accuracy on the second testing became similar for British and for Japanese scenes. The control group's accuracy, on the other hand, remained at a similar level both in British and Japanese scenes. Their performance on Japanese scenes remained significantly better than that on British scenes (t = -3.35, p < .01) on the second testing.

The results of the MANOVA showed no significant group differences on accuracy for the overall BJSPT and accuracy according to British and Japanese scene types separately. However, a significant effect of group was observed when accuracy was examined according to total British and Japanese scenes ($F(2, 23) = 3.96$, $p < .05$). The follow-up ANOVAs revealed that the training group were turned out to be significantly more accurate on British scenes than the control group ($F(4, 43) = 4.27$, $p < .05$).

7.2.3 Discussion

Consistent with the results for British university students, training with this group of Japanese university students seems to have been particularly effective in terms of improvements in their cross-cultural perceptual accuracy. The Japanese training group showed a significant accuracy improvement on British scenes as a whole. They also showed a significant improvement on Japanese kinship scenes. Improving perception of kinship scenes might be easier than that of other relationship scenes due to the clear use of nonverbal cues which are less influenced by social rules. Once the trainees became aware of useful nonverbal cues such as the posture and gaze of parents and children, they improved their accuracy of the scenes.

Both the training and control groups performed significantly better on Japanese scenes than on British scenes in their first testing. After the training, due to improvements in cross-cultural perception, accuracy of the training group became similar for within-cultural scenes and for cross-cultural scenes. In contrast, accuracy of the control group remained significantly higher for within-cultural scenes than for cross-cultural scenes.

As discussed in the previous section, the above results suggest that it is more difficult to improve within-cultural perceptual sensitivity in the training. This is possibly because the discussions made on the nonverbal communication and their own culture did not provide the trainees with enough new knowledge to improve their accuracy. The cross-cultural similarities and differences discussed might also have confused the trainees regarding perceptions of some of their own nationality scenes. At the same time, only 10 example clips were shown to the trainees and this relatively small number might not have been enough for them to practise observation of nonverbal cues.

7.3. Training with Japanese university students in Japan

7.3.1 Method

Participants

The participants for this session were made up of 20 Japanese undergraduate students (9 males and 11 females, mean age 19.0 years, SD 0.83) for the training group and 9 Japanese undergraduate students (all females, mean age 18.4 years, SD 0.53) for the control group. They were all enrolled in the introductory Psychology course at Konan University in Japan.

Procedure

Participants took their first session BJSPT at the end of their Psychology lecture alongside other students who were attending the lecture at that time. The BJSPT was, therefore, shown by a Japanese Psychology lecturer at the university and not by the researcher. Two weeks later, the participants attended the second session in two separate groups during their lunch break. Group division was based on the time available for the students and their willingness to join either groups, as the training group session required approximately double the time in comparison with the control group session. In the second session, the training group underwent the same training as the other two groups using the example video-clips, and then viewed the BJSPT at the end of the session. This training session was carried out by the researcher. It took approximately 1 hour, including 20 minutes of second BJSPT viewing. The control group was shown the BJSPT without any training by the same Psychology lecturer as in the first session. At the end of the session, the training group participants received ¥ 900 (about £ 4.80) and the control group participants ¥500 (about £ 2.70) for their second session. No participation fee was paid for the first session as it was carried out as part of their Psychology lecture.

7.3.2 Results

Accuracy levels for the first and second BJSPT are reported in Table 7.5 and 7.6, together with the results of matched-sample t-tests. Between-group differences were examined with 2 (group) x 2 (gender) x 8 (scene type - 4 British and 4 Japanese scene types) and 2 (group) x 2 (gender) x 2 (all the British scenes and all the Japanese scenes) MANOVAs. The results are described in the following section.

Table 7.5 *Comparisons of the first and second BJSPT mean accuracy percentage for the Japanese training group in Japan*

scene types	first testing	second testing	$t(19)$	p
BT competition	52.5	55.0	-0.24	*ns*
BT intimacy	55.0	47.5	1.00	*ns*
BT kinship	35.0	65.0	-3.04	<.01
BT status	55.0	57.5	-0.24	*ns*
BT total	49.4	56.3	-1.64	*ns*
JP competition	60.0	57.5	0.33	*ns*
JP intimacy	60.0	37.5	2.65	<.05
JP kinship	42.5	65.0	-2.65	<.05
JP status	60.0	72.5	-1.56	*ns*
JP total	55.6	58.1	-0.54	*ns*
BJSPT total	52.5	57.2	-1.78	*ns*

Table 7.6 *Comparisons of the first and second BJSPT mean accuracy percentage for the Japanese control group in Japan*

scene types	first testing	second testing	$t(8)$	p
BT competition	44.5	50.0	-0.32	*ns*
BT intimacy	50.0	44.5	1.00	*ns*
BT kinship	28.0	55.5	-2.29	=.05
BT status	66.5	61.0	0.32	*ns*
BT total	47.3	52.8	-0.80	*ns*
JP competition	66.5	66.5	0.00	*ns*
JP intimacy	50.0	55.5	-0.43	*ns*
JP kinship	44.5	61.0	-1.41	*ns*
JP status	55.5	66.5	-0.69	*ns*
JP total	54.1	62.5	-1.33	*ns*
BJSPT total	50.7	57.6	-1.70	*ns*

On the first testing, the overall BJSPT accuracy for the training group was 52.5% and that for the control group was 50.7%. This group difference was nonsignificant. The differences according to four British and four Japanese scene types were also found to be nonsignificant.

On the second testing, there were significant improvements in accuracy for both groups. The control group's accuracy improved significantly in British kinship scenes (t = -2.29, p = .05). The training group's accuracy for

both British and Japanese kinship scenes improved significantly (t = -3.04, p < .01 and t = -2.65, p < .05 respectively). However, their accuracy for Japanese intimacy scenes declined significantly (t = 2.65, p < .05). As a result, their British and Japanese scene accuracy levels became similar (56.3% and 58.1% respectively).

With regard to between-group comparisons, overall BJSPT accuracy for the training and control groups became very similar (57.2% and 57.6% respectively) on the second testing. Accuracy differences between the two groups all turned out to be nonsignificant.

7.3.3 Discussion

The results of the above analysis show that overall BJSPT accuracy levels on the first and second testings were similar between the training and control groups, as both groups improved their accuracy over the testings. Among the three control groups studied, this control group is the only group which had a accuracy improvement.

In terms of scene types, the training group significantly improved their accuracy on British and Japanese kinship scenes. This is in accordance with the previous training results with the Japanese training group in the UK. Among the four scene types of the BJSPT, kinship scenes contain most similar nonverbal cues between British and Japanese. This cross-cultural similarity seems to have helped trainees to focus on the relevant cues once they become aware of them in the training. On the other hand, some of the trainees seem to have experienced some confusion with regard to Japanese intimacy scenes after the training. This was probably because the training made them become more aware of intimacy cues, but the Japanese scenes in fact had fewer of these.

The control group also improved their accuracy on British kinship scenes. Cross-cultural similarity in kinship communication probably helped them to learn to interpret these particular cross-cultural scenes more accurately through repeated exposure to them. At the same time, this group had a very low accuracy on British kinship scenes in the first testing, and therefore, they had potential for improvement.

With these groups, training effectiveness was not as clear as with the previous groups. Unlike the two previous sessions, in this session the division into control and training groups was made voluntarily by the participants rather than randomly by the researcher. Different amounts of participation fee were also offered, as the training session took a longer period of time than the control session. This knowledge of differences in participation fee influenced the decision of the trainees to volunteer more for the longer training session This might, therefore, have affected the participants' motivation toward the contents of the session themselves.

7.4. General discussion

The results for the three sessions showed that training was effective principally in improving cross-cultural perceptual accuracy. British trainees made more improvements in accuracy for Japanese than for British scenes, while Japanese trainees made more improvements on British scenes. As a consequence, cross-cultural accuracy for the training groups on the second testing became comparable to within-cultural accuracy. In contrast, within-cultural scene accuracy for the control groups on the second testing remained higher than cross-cultural scene accuracy. Thus, training would appear to have been successful in teaching trainees cultural aspects of nonverbal communication.

Improvements in within-cultural scene accuracy were rather limited, although they did occur for some scene types, such as British and Japanese

kinship scenes. This may have been partly because trainees' baseline within-cultural scene accuracy was high in comparison to their cross-cultural scene accuracy. Furthermore, trainees might not have acquired much new knowledge regarding communication characteristics of their own culture. Indeed, some trainees seem to have actually become confused by the new cross-cultural knowledge and performed worse on some within-cultural scenes on the second testing. In order to improve people's general nonverbal sensitivity, the training might have benefited from more example scenes for the trainees to practise observation of cues.

As the scenes in the BJSPT are set in particular social contexts, good performance involves more than just accurate recognition of nonverbal cues. Observers also have to take into consideration contextual appropriateness. Overall, training in this regard seems to have assisted improvements in cross-cultural scene accuracy. But it seems to have been more effective in relation to the improvement of certain scene types than others. Thus, accuracy on kinship scenes tended to improve more than on other scene types. Learning about cross-cultural similarities regarding kinship relationship seems to have helped trainees. In contrast, identifying private emotions in social contexts seems to have been more difficult. For example, emotions experienced by winners and losers in competition scenes were often masked by display rules and, consequently trainees had difficulty in improving their interpretation of these scenes. It would seem more time and practice may be needed to learn how to read these cues appropriately.

The control groups maintained similar overall BJSPT accuracy over the two testings. Any improvements observed for individual scene types can be attributed to participants' repeated exposure to the same scenes. These improvements were usually less than those observed for the training groups. This would suggest that systematic training improves perceptual accuracy more than just the repeated exposure to nonverbal cues.

One limitation of the study was the shortness of time available for training, given that all the participants were university students who volunteered to undergo testing between lectures. In the terminology of intercultural communication training, a "culture-specific" approach was used: examples of British and Japanese scenes were shown in four communication contexts and useful nonverbal cues discussed. If time had allowed, a "culture general" approach could also have been included: cultural theories could have been taught, together with discussion of how cultural dimensions are related to people's communication characteristics, especially British and Japanese. In this way, trainees could have acquired a wider knowledge of cultural differences and cultural theories which they could have applied in their day-to-day intercultural interactions.

Another limitation of the study was that the participants were not balanced in terms of nationality and sex. Thus, only one British group underwent perception training in the UK, while two Japanese training groups (one in the UK and another in Japan) participated in the training. In addition, while the British training group contained similar number of males and females, the Japanese training groups comprised mainly females (the UK Japanese group had only females). These limitations need to be taken into account when interpreting the results of this study.

From the data presented here, it is not possible to estimate how training contributed to the participants' general within-cultural and intercultural communication skills or whether its effectiveness extends beyond the training sessions. These aspects would need to be examined in more comprehensive training programmes. To make this training procedure more effective, the following aspects would need to be improved. Firstly, more example video-clips are required, so that trainees can practise observation of nonverbal cues more thoroughly, with reference to the cultural and nonverbal knowledge they have acquired. Secondly, more than one training session should be provided, so that effectiveness can become long-lasting by helping trainees to

consolidate their knowledge and have more practice in observing nonverbal cues. Thirdly, training should be carried out in small groups of not more than 10 people, as large group size seems to have affected people's concentration levels. Being in smaller groups also tends to encourage trainees to participate more actively. Apart from British and Japanese differences in learning attitudes, the higher participation of British trainees seem to have been facilitated by working in smaller groups; in contrast, the Japanese trainees participated in groups of more than 10 people and showed rather passive attitudes. Lastly, perception training should be conducted as part of more comprehensive within-cultural or intercultural communication skills training programmes. Acquiring other communication skills might help trainees to improve their perceptual ability. The effectiveness of the procedure might be enhanced, if it was targeted at people particularly in need of communication training.

In conclusion, the results of this study suggest appropriate training can improve people's cross-cultural perceptual accuracy. The training procedure focused on improving cultural awareness of nonverbal behaviour, and improvements in cross-cultural perception were more substantial than in within-cultural perception. It may well be the case that this kind of training in nonverbal sensitivity takes more time and practice than other forms of inter-cultural instruction. Nevertheless, it does seem that after such training, observers can acquire the ability to perceive people from other cultures as accurately as people from their own cultural background.

CHAPTER EIGHT

Conclusions

In this thesis, cultural influences on nonverbal perceptual styles of British and Japanese people were examined by constructing a cross-cultural perception task, the BJSPT. Their nonverbal expressivity was also studied from the nonverbal cues contained in the BJSPT, and the relationship between expressivity, perceptual sensitivity and perceptual processes of British and Japanese people was examined. The results of this cross-cultural study were then utilised for nonverbal perception training with British and Japanese university students. The following sections contain the discussions on the results of the three stages of nonverbal perception research; firstly, the construction of the BJSPT; secondly, cross-cultural comparisons of expressivity, perceptual sensitivity and perceptual processes; finally, nonverbal perception training.

The BJSPT was constructed based on the previous perception tasks such as the IPT (Costanzo & Archer, 1989), PONS (Rosenthal *et al.*, 1979) and JACFEE (Matsumoto & Ekman, 1988). It was intended that the task would enable the examination of the perceptual processes of British and Japanese people so that cultural influences on their perceptual styles can be studied. For this purpose, the format of the IPT was adopted, as it was devised to examine people's perceptual processes by containing naturalistic interaction scenes in various social contexts. In order to produce a cross-cultural task, however, speech content was removed by content-filtering as in the PONS. The BJSPT also utilised both British and Japanese encoders as in the JACFEE, so that comparisons of within- and cross-cultural perception could be carried out. In addition, in order to make sure the task stimuli originate in respective cultures, filming and scene-selection testing for the BJSPT was carried out in the UK

and Japan. The BJSPT thus became a development of the previous within- and cross-cultural perception research. This task, however, helps to expand the focus of the previous cross-cultural studies which mainly dealt with emotion recognition, by examining people's perceptual processes and using other nonverbal communication content in addition to emotion communication.

In cross-cultural studies of emotion recognition, both universality and cultural specificity has been observed (e.g., Ekman & Friesen, 1969, 1971; Elfenbein & Ambady, 2002a, 2002b, 2003a, 2003b; Matsumoto, 1989, 1991, 1992, 1996; Matsumoto, Kasri & Kooken, 1999; Matsumoto *et al.*, 2002; Rosenthal *et al.*, 1979). However, it has not been clear how cultural specificity in emotion recognition affects people's understanding of others in various social contexts. Archer *et al.* (1993) described that ongoing social interactions contain "virtual symphony of communication from different nonverbal channels - facial expressions, tones of voice, gestures, proxemics, and so on" and "each nonverbal act therefore occurs in context with other nonverbal acts" (p. 247). The BJSPT presents multiple nonverbal cues, which enables examination of how people take in information from various nonverbal cues available and how they interpret it. Emotion expressions which have been studied extensively in the previous studies are only part of the nonverbal cues presented in the task. Cultural specificity observed at the early stage of perceptual processes as in emotion recognition would manifest also at the later stages of perceptual processes. In the BJSPT cross-cultural studies conducted in the frame of this thesis, cultural differences were observed both at the nonverbal cue selection stage and at the cue interpretation stage.

In the BJSPT, the British and Japanese scenes were made as equivalent as possible, so that cross-cultural comparisons could be made. At the filming stage, scene settings and the relationships of people in each scene type were made similar. This enabled behavioural comparisons of British and Japanese people in each scene type of the BJSPT. At the scene selection stage, scene difficulty levels for each scene type were made similar between the two

nationality scenes. This made comparisons of within- and cross-cultural perceptual accuracy of British and Japanese people possible. In the previous cross-cultural studies carried out using the PONS (Rosenthal *et al.*, 1979), the participants viewed only one American woman who expressed various emotions. Although their results indicated that emotion recognition accuracy is affected by participants' cultural similarity to the US culture, the PONS was not equipped to clarify cross-cultural differences further. The JACFEE (Matsumoto & Ekman, 1988), which was produced particularly for cross-cultural studies of emotion expression and recognition, contains both American and Japanese encoders of emotions. This task can examine both within- and cross-cultural perceptual accuracy of American and Japanese people; however, it only contains posed emotion expressions captured in photos.

Four interaction contexts which were adopted from the IPT - competition, kinship, intimacy and status - contain communication of different interpersonal relationships. Competition scenes are based on winner-loser relationships, in other words, a temporary dominant-submissive dimension of interpersonal attitudes as described by Argyle (1975). In kinship scenes, the combination of dominant-submissive and affiliative dimensions plays an important part, while in intimacy scenes, the affiliative dimension seems to be the key for their successful interpretation. Status scenes, on the other hand, are based on occupational status differences, which lead to expressions of dominant-submissive relationships. The importance of emotion expressions in the interpretation of these four scene types seems to differ. In competition scenes, for example, accurate understanding of emotions (such as pride, joy or disappointment of players about the result of a game) seems to be more important than in other scene types in which an interpretation of social relationships is required. As described, successful interpretation of these four scene types depends on appropriate selection and interpretation of nonverbal cues in contexts. As behavioural appropriateness in contexts might differ

depending on cultural rules, the BJSPT provides useful materials to examine the differences between British and Japanese people and how these differences affect their perceptual processes and perceptual accuracy.

Comparisons of visual-cue-only BJSPT and visual-plus-audio-cue BJSPT revealed differences in the importance of nonverbal cues depending on the four communication contexts. Although overall BJSPT accuracy was the same between two Japanese groups, the visual-and-audio BJSPT group performed significantly better than the visual-cue-only BJSPT group on competition scenes. As discussed in Chapter 5, vocal nonverbal cues such as tone of voice seem to be vital for interpretation of spontaneous emotion expressions, when social 'display rules' function to hide them. This seems to be the case with the competition scenes in which interactants tried to avoid obvious display of joy or disappointment. On the other hand, for the interpretation of social relationships as required in status scenes, visual cues such as posture and facial expressions might be more reliable than vocal cues. These visual cues were found to reflect appropriate "display rules" of British and Japanese cultures in contexts. The relative importance of nonverbal cues and speech content was examined by Archer and Akert (1977) using their perception task, the Social Interpretations Task (SIT). They found that participants who were presented with the verbal transcript of the task performed worse than chance, and significantly worse than participants who were presented with the full-channel (verbal plus nonverbal) task. They concluded that nonverbal cues provide "a qualitative 'script' without which verbal cues cannot be interpreted accurately" (p. 449). However, they added that as verbal and nonverbal channels were presented together in the SIT, they could not conclude that nonverbal cues alone were sufficient for accurate interpretation. The BJSPT succeeded in clarifying not only that observation of nonverbal cues alone can lead to above-chance accuracy in interpretation of people in various social contexts but also that the relative importance among nonverbal channels varies depending on the contexts.

The interaction scenes filmed for the BJSPT were micro-analysed to compare the expressive styles of British and Japanese people. The behavioural differences observed were in line with the previous research findings and the descriptions of these two cultures according to cultural dimensions. The main differences observed in this study were in the amount of gaze, smiles (and laughter) and body contact, and the level of relaxation.

Japanese interactants showed less gaze than British interactants, particularly in the status scenes in which Japanese subordinates tended to have shorter gaze and look down often. This behaviour of Japanese interactants, together with their stiff posture was interpreted as their overt expression of subordination and respect for their boss. This is in accordance with the differences between British and Japanese people expected in terms of Hofstede's (1980) cultural dimensions. According to Hofstede, the UK is higher on individualism than Japan, while Japan is higher on power-distance, uncertainty avoidance and masculinity than the UK. Japanese expressiveness in work environments seems to reflect the characteristics of collectivist cultures (which emphasise preservation of harmony among in-groups) and those of high power-distance cultures (which endorse status differences). On the other hand, less clear behavioural distinction between British bosses and subordinates seems to reflect the characteristics of individualistic, low power-distance cultures which emphasise the importance of individuals' uniqueness and equality.

Facial "display rules" also reflected the characteristics of the two cultures. In competition scenes, both British and Japanese losers exhibited only limited amount of negative emotions, and winners seemed to have suppressed obvious display of joy and pride. British and Japanese losers either presented neutral facial expressions or even smiles in spite of their loss in games; however, the amount of smiles and laughter Japanese losers presented was much higher than that of British losers. In fact, Japanese winners and losers exhibited similar amounts of smiles and laughter, as if they were both

making efforts to preserve a good atmosphere between them, which seems to reflect the collectivist characteristics of Japanese culture.

The amount of body contact in intimacy relationship was higher for British interactants than for Japanese interactants. In comparison with British interactants who showed some kind of body contact with their partners, Japanese interactants showed none. Together with the high level of eye contact, British interactants were clearly more expressive than Japanese interactants in public display of intimacy relationships. In kinship scenes, however, the amount of body contact between a parent and a child was observed to be slightly higher for Japanese interactants than for British interactants. These two findings were expected from the previous descriptions about the amount of body contact Japanese people display in public (Argyle, 1975; Brosnahan, 1998) and from findings on body contact between Japanese mothers and children (Caudill & Weinstein, 1969). These also seem to reflect the difference between individualistic and collectivist cultures. According to Triandis *et al.* (1988), in collectivist cultures vertical relationships such as parent-child relationship are emphasised, while in individualistic cultures horizontal relationships such as spouse-spouse relationship are emphasised. This difference seems to affect the acceptable amount of body contact British and Japanese people publicly express in these interpersonal contexts.

Among the four communication contexts used in the BJSPT, Japanese interactants were observed to be more tense than British interactants in competition, intimacy and status scenes. As discussed in Chapter 6, this seems to be due to the fact that they are more constrained in their behaviour in these contexts because of their social rules. In competition scenes, although Japanese interactants expressed more smiles and laughter than British interactants due to their display rules, their nervousness seems to have leaked through other channels such as voice and posture. Their efforts to present socially acceptable polite behaviour toward their opponent of the game might have made them more nervous than their British counterparts. A similar

explanation would be applied to the behaviour of Japanese subordinates in status scenes. Japanese bosses, on the other hand, presented a rather relaxed impression in the video-clips, probably because they are less constrained than their subordinates by the social rules in this particular context.

In intimacy scenes, Japanese interactants looked more nervous than British interactants, particularly in conversation with an opposite-sex friend or with a new acquaintance. In Chapter 6, this was attributed to their membership of a high uncertainty avoidance culture. Uncertainty in interacting with unfamiliar people might have made them more nervous than British interactants whose culture is relatively low on this cultural dimension. Triandis *et al.* (1988) also reported that people in individualistic cultures are good at meeting outsiders, forming new groups and getting along with new people. In addition, a clearer behavioural distinction observed between same-sex friend and opposite-sex friend interaction among the Japanese might be related to the high masculine aspect of their culture. The masculinity-femininity dimension is described as related to the rigidity of gender roles (Hofstede, 1980). Gudykunst and Nishida (1987) suggested that opposite-sex relationships are formed and develop more easily in feminine cultures than in masculine cultures.

As explained above, the behavioural differences observed between British and Japanese interactants reflected the social rules of their respective cultures. Their perceptual processes at the cue selection and interpretation stages were also found to be affected by their cultural rules. At the cue selection stage, the differences between the two nationalities were revealed in their preferences for particular nonverbal cues. Although both nationalities relied on similar cues in the four contexts of the BJSPT, British participants tended to focus on gesture and body movement cues in competition and status scenes, and gaze cues in kinship scenes. Japanese participants, on the other hand, tended to rely on posture cues for interpretation of status scenes, and proximity cues for intimacy and kinship scenes. In Chapter 6, these

differences were attributed to the characteristics of individualistic and collectivist cultures. British people seem to prefer more visibly expressed nonverbal cues, such as speech-related hand movements, while Japanese people seem to be more attuned to less dynamic cues, such as posture and proximity.

At the cue interpretation stage, the main difference observed was in the interpretation of gaze. British participants explained the importance of direct gaze as showing attention and interest to interacting partners, while Japanese participants regarded direct gaze as rude or too assertive for subordinates to exhibit to their boss. British participants interpreted the gaze avoidance of Japanese subordinates as reflecting their nervousness, and this helped their interpretation of Japanese status scenes. On the other hand, the gaze behaviour of British subordinates was one of the confusing factors for Japanese participants in their interpretation of British status scenes.

The differences observed between British and Japanese people in their expressive and perceptual styles according to contexts were reflected in their BJSPT accuracy. Not surprisingly, their overall accuracy was higher for their own nationality scenes than for cross-cultural scenes. British participants, however, turned out to be better than Japanese participants in the perception of status scenes, while Japanese participants were better on intimacy scenes. Based on the results of micro-analysis and the examination of nonverbal cues used for accurate interpretation of the scenes, gesture and gaze together with posture were found to be reliable cues for the interpretation of status scenes. British participants, by focusing on the appropriate cues, seem to have succeeded in the interpretation of these scenes. While overt expressions of subordination contained in Japanese status scenes helped British participants, the less clear behavioural distinction between British bosses and subordinates confused Japanese participants. Japanese participants, however, were more successful than British participants in interpretation of intimacy scenes due to their sensitivity to proximity and posture cues, which were analysed to be

important for this scene type. While overt expressions of intimacy exhibited by British couples helped Japanese participants, non-obvious, subtle expressions of intimacy shown by Japanese couples confused British participants.

British and Japanese participants' sensitivity to certain cues in contexts seems to be negatively related to their levels of expressivity. 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. In status contexts, Japanese people seem to 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 people 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. As described in Chapter 6, this finding is in line with the previous claim made by Halberstadt (1983, 1986, 1991) concerning negative relationship between family expressivity and people's perceptual sensitivity. Additionally, the present study revealed that nonverbal perceptual sensitivity is contextually bound, just as expressivity is influenced by social context. It has to be suggested, therefore, that the assessment of people's perceptual sensitivity or ability has to be made by taking into consideration the contexts in which nonverbal cues are presented.

As discussed above, culture forms perceptual styles of people by: (1) making them develop sensitivity to particular types of communication cues in social contexts (2) instilling significance and meanings of cues in context. Nonverbal expressivity of a culture influences people's perceptual styles by creating certain levels of expressive environments within which people develop their perceptual sensitivity. In order to improve cross-cultural

perception, therefore, culture-specific behavioural rules in contexts, and how they relate to people's expressivity and perceptual styles, have to be learned.

Nonverbal perception training with British and Japanese university students was carried out, based on the above research findings. The methods used were particularly aimed at increasing their cultural awareness of nonverbal communication styles. The BJSPT was used as an assessment tool before and after the training; the video-clips which were filmed for the BJSPT but not included in the final task were used as the training video-clips. Overall, the training sessions yielded positive results for the improvement of cross-cultural perception. In other words, British participants improved their accuracy for BJSPT Japanese scenes more than that for British scenes, while Japanese participants improved their accuracy for British scenes more than that for Japanese scenes. As the control groups showed smaller or no improvements in cross-cultural scenes, the results suggest that discussing similarities and differences in nonverbal communication styles of British and Japanese people and making the trainees aware of them did help to improve trainees' cross-cultural perception. One limitation of the present training sessions is that the participants were unbalanced in terms of gender and nationality as discussed in Chapter 7, which has to be taken into consideration in the interpretation of the results. Another limitation is the low test-retest reliability of the BJSPT task itself, which might have affected the results. However, the fact that more improvements were made commonly among training groups than control groups proves the reliability of the present training results.

The training turned out to be more effective on certain scene types of the BJSPT. For example, clear improvements were observed in kinship scenes, while little improvements were observed in competition scenes. As discussed in Chapter 7, the accuracy for the scenes which contain overt cues (particularly when they are similar between the British and Japanese) was more easily improved once the trainees became aware of the cues and their cultural

significance in the particular context. However, when display rules disguise the clues for scene interpretation (as in the competition scenes in which spontaneous emotions of players were masked by some other expressions), it was difficult for the participants to improve their accuracy. For people to learn to detect leaked spontaneous emotions in cross-cultural setting or even within-cultural setting, it probably takes more than just understanding relevant cultures and their communication characteristics. Sensitivity to subtle expressions would have to be acquired through a lot of practice in training and through experiences in real interactions.

In the second BJSPT testing (after the perception training), participants' accuracy for within- and cross-cultural scenes became similar. This suggests that with training people can learn to perceive people from other cultures as accurately as they perceive people from their own culture. Miscommunication caused by misperception of behaviour which relates to cross-cultural differences would be lessened, if proper perception training is given to those who are in contact with other cultures.

Only small improvements were observed in the accuracy for within-cultural scenes. This suggests that increasing awareness of their own and other cultures has limited impact on people's perceptual accuracy for their own people. In addition, the short training sessions carried out in this study were probably not long enough for the participants to improve their nonverbal sensitivity and change their habitual perceptual styles. In the previous within-cultural perception training, which led to positive results, recognition accuracy of emotion expressions (e.g. Davitz, 1964; Jecker *et al.*, 1965; Rosenthal *et al.*, 1979) or deceptive behaviours (e.g. Zuckerman, Koestner, & Alton, 1984; deTurck, Harszlak, Bodhorn, & Texter, 1990) was mainly studied. As interaction scenes in the BJSPT contain various nonverbal cues in social contexts, improvement in their accuracy involves more than just the improvement in recognition of nonverbal cues. Viewers of the task have to improve their accuracy in cue selection and interpretation while taking into

consideration contextual appropriateness. Training on contextual appropriateness made a clear impact on the improvement of cross-cultural scene accuracy. To improve both within- and cross-cultural perception further, however, it would take more time for the examination of trainees' perceptual processes and for practice in observation of cues.

The present training was carried out as part of cross-cultural nonverbal perception research and, therefore, did not constitute more formal intercultural communication training. However, the training effects observed with the methods used suggest that the theories behind various intercultural communication training programmes could also be applied to nonverbal perception training. In intercultural communication training, perceptual processes have received less attention, compared with other elements of communication such as overt behaviour and attributions. One reason for the lack of training in perception seems to be the lack of materials necessary for its assessment and training. The results of this study show that perception materials like the BJSPT would be useful in intercultural communication assessment and training, and would help to improve the effectiveness of training by making its contents more comprehensive.

In conclusion, the following three points are proposed based on the questions raised in the introduction of this thesis. Firstly, it is possible to create a perception task which examines the perceptual processes of people in cross-cultural settings. The BJSPT, which was constructed during the course of this research was found to be useful in clarifying cultural influences on the perceptual styles of British and Japanese people. The main advantages of this task are that: (1) it contains naturalistic interaction scenes in various communication contexts, which enables the examination of people's perceptual processes and (2) it includes both British and Japanese people as encoders, which permits cross-cultural comparisons. The main limitation is that the BJSPT was found to have low reliability in terms of internal consistency and test-retest results. Although low internal consistency was

expected because of the task length and diversity in terms of communication contexts and nonverbal cues contained, low test-retest results are more problematic. Considering the significant differences observed at group level which are in line with previous cross-cultural research findings, the results of the present research can be still regarded as valid. However, this task would not be appropriate for the assessment of individuals' within- and cross-cultural perception in this present form. For the task to be used more extensively outside the scope of this research, further improvements would be required in terms of its reliability.

Secondly, the BJSPT cross-cultural testings revealed that the characteristics of British and Japanese people described by cultural dimensions were related to their expressive and perceptual styles. The main differences observed between the two nationalities were: (1) although British people were more expressive in terms of intimacy cues in public (in video) than Japanese people, they were less sensitive to subtle intimacy cues (2) Japanese people were found to be more overt in expressing occupational status differences than British people but were less sensitive to subtle status difference cues. Social expressive environments, therefore, seem to be negatively related to people's perceptual sensitivity.

Lastly, nonverbal perception training results suggest that perceptual accuracy can be improved by training. For improvement of cross-cultural perceptual accuracy, learning about culture and how it affects people's behaviour and perceptual styles are of great importance. This helps people to be aware of cultural differences in behavioural appropriateness depending on communication contexts, and helps them to pay attention to their own perceptual processes. The effectiveness of this element was observed even after a short training session. Another important element is to train people to adjust their sensitivity to nonverbal cues according to the contextual requirements. This would be important for improvement of both within- and cross-cultural perception. However, it seems more difficult to acquire this

second element than the first element, as people's sensitivity to nonverbal cues has been formed through their past experiences and, therefore, it would take time and practice to adjust it.

The examination of British and Japanese people's perceptual processes, undertaken in this thesis, has revealed their cultural norms and values, and how they have been socialised in their respective environments. It has also shown how perceptual accuracy can be affected by cultural knowledge and experiences. Perceptual processes often occur without any awareness on behalf of the individual. However, examination of these processes helps people to become aware of them. Moreover, such an examination helps people to realise their own cultural expectations according to particular social contexts. In this regard, assessment tools such as the BJSPT are required both for within- and cross-cultural communication research and training. These tools need to examine people's accuracy both at the cue selection and interpretation stages in various contexts in order to clarify the problematic aspects of people's perceptual processes. It is hoped that more studies of perceptual processes are undertaken in the future to clarify the causes for miscommunication between people, and that such studies will help to improve within- and intercultural communication training.

Appendix A

Questionnaire for the British Social Perception Task

The videotape you are about to see contains 30 brief scenes and lasts about 22 minutes. There is one question and three possible answers on this answer sheet for each of the 30 scenes. Before each scene appears on the screen, you may want to read the corresponding multiple choice answers on this sheet. Indicate your answer to each question by drawing a circle around the letter 'a' 'b' 'c' next to the answer you believe to be correct.

1. Who is the higher status person in terms of occupation?
   a) the man.
   b) the woman.
   c) the man and the woman have the equal status.

2. 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.

3. You will see the same woman in two scenes. In which scene is the woman talking to her close friend?
   a) in the first scene.
   b) in the second scene.
   c) in both scenes.

4. 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.

5. What is the relationship between the man and the woman?
   a) they are a couple who have been together for about 3 years.
   b) they are a couple who have been together for about 3 weeks.
   c) they are friends who have known each other for more than ten years.

6. Who is the woman talking to?
   a) someone of similar age.
   b) someone of younger age.
   c) someone of older age.

7. You will see the same man in two scenes. In which scene is the man talking to someone of older age?
   a) in the first scene.
   b) in the second scene.
   c) in both scenes.

8. Which woman is married to the man?
   a) the woman on the left.
   b) the woman on the right.
   c) neither woman.

9. Who is the higher status person in terms of occupation?
   a) the woman on the left.
   b) the woman on the right.
   c) the two women have the same status.

10. Who is the man talking to?
    a) his boss.
    b) his subordinate.
    c) his colleague of the equal status.

11. Who is the woman talking to?
    a) her husband.
    b) her father.
    c) her boss.

12. Who is the man talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

13. 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.

14. Who is the man talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

15. Which woman is the mother of the boy?
    a) the woman on the left.
    b) the woman on the right.
    c) neither woman.

16. Who is the boy talking to?
    a) his school teacher.
    b) his father.
    c) someone whom he met for the first time.

17. Who is the man talking to?
    a) his friend.
    b) his father.
    c) his boss.

18. Who won the chess game?
    a) the man on the left.
    b) the man on the right.
    c) the two men played to a draw.

19. Who is the man talking to?
    a) his boss.
    b) his secretary.
    c) his colleague of the equal status.

20. What is the relationship between the man and the woman?
    a) they are a couple who have been together for about 1 month.
    b) they are a couple who have been together for about 1 year.
    c) they are a couple who have been together for about 4 years.

21. 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.

22. 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.

23. Which girl is the daughter of the couple?
    a) the girl on the left.
    b) the girl on the right.
    c) both girls.

24. 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.

25. Who won the tennis game?
    a) the man.
    b) the woman.
    c) the man and the woman played to a draw.

26. Who is the woman talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

27. Who is the higher status person in terms of occupation?
    a) the woman on the left.
    b) the woman on the right.
    c) the two women have the equal status.

28. Who is the woman talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

29. Which woman is the mother of the girl?
    a) the woman on the left.
    b) the woman on the right.
    c) neither woman.

30. 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.

Thank you very much for your cooperation!

Your age: _____ Gender: male /female

Appendix B

Questionnaire for the Japanese Social Perception Task

日本人社会認知テスト

このビデオは約２３分の長さで、３０の短い場面から構成されています。それぞれの場面に対して質問が一つずつあります。それぞれの場面が出る前に解答用紙の選択枝に目を通してください。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。

1）女性は誰と話をしていますか。
(a) 女性と同じぐらいの年齢の人
(b) 女性より年下の人
(c) 女性より年上の人

2）どちらの男性が女の子の父親ですか。
(a) 向かって左側の男性
(b) 向かって右側の男性
(c) どちらの男性でもなし

3）男性は誰と話をしていますか。
(a) 上司
(b) 部下
(c) 同僚

4）同じ女性が二つの場面に登場します。
親友と話をしているのはどちらの場面ですか。
(a) 最初の場面
(b) 後の場面
(c) 両方の場面

5）男性と女性はどういう関係ですか。
(a) 約三ヶ月間付き合っている恋人
(b) 約一年半付き合っている恋人
(c) いとこ同士

6）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

7）女性は誰と話をしていますか。
(a) 女性と同じぐらいの年齢の人
(b) 女性より年下の人
(c) 女性より年上の人

8）どちらの人がバトミントン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

9）どちらの人が（職業上）立場が上ですか。
(a) 向かって左側の女性
(b) 向かって右側の女性
(c) 同等の立場

１０）女性は誰と話をしていますか。
(a) 夫
(b) 父親
(c) 上司

１１）男性は誰と話をしていますか。
(a) 上司
(b) 部下
(c) 同僚

１２）どちらの人が（職業上）立場が上ですか。
(a) 向かって左側の女性
(b) 向かって右側の女性
(c) 同等の立場

１３）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

１４）女性は誰と話をしていますか。
(a) 女性と同じぐらいの年齢の人
(b) 女性より年下の人
(c) 女性より年上の人

１５）同じ男性が二つの場面に登場します。
親友と話をしているのはどちらの場面ですか。
(a) 最初の場面
(b) 後の場面
(c) 両方の場面

１６）どちらの人が（職業上）立場が上ですか。
(a) 男性
(b) 女性
(c) 同等の立場

１７）男性と女性はどういう関係ですか。
(a) 約一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) 以前に一度会っただけの知人

１８）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（兄弟、姉弟）

１９）どちらの女性が男の子の母親ですか。
(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

２０）どちらの人がバトミントン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

２１）少年は誰と話をしていますか。
(a) 野球のコーチ
(b) 父親
(c) 初対面の男性

２２）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

２３）どちらの人が卓球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

２４）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

２５）同じ男性が二つの場面に登場します。
年上の人と話をしているのはどちらの場面ですか。
(a) 最初の場面
(b) 後の場面
(c) 両方の場面

２６）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

２７）どちらの人が卓球の試合に勝ちましたか。
(a) 男性
(b) 女性
(c) 引き分け

２８）男性は誰と話をしていますか。
(a) 男性と同じぐらいの年齢の人
(b) 男性より年下の人
(c) 男性より年上の人

２９）女性は誰と話をしていますか。
(a) 父親
(b) 恋人
(c) 先生

３０）男性は誰と話をしていますか。
(a) 男性と同じぐらいの年齢の人
(b) 男性より年下の人
(c) 男性より年上の人

ご協力有難うございました。　　年齢＿＿＿＿＿　　性別　男・女

English Translation

The videotape you are about to see contains 30 brief scenes and lasts about 23 minutes. There is one question on this answer sheet for each of the 30 scenes. Before each scene appears on the screen, you may want to read the corresponding multiple choice answers on this sheet. Indicate your answer to each question by drawing a circle around the letter 'a' 'b' 'c' next to the answer you believe to be correct.

1. Who is the woman talking to?
   a) someone of similar age.
   b) someone of younger age.
   c) someone of older age.

2. Which man is the father of the girl?
   a) the man on the left.
   b) the man on the right.
   c) neither man.

3. Who is the man talking to?
   a) his boss.
   b) his subordinate.
   c) his colleague of the same status.

4. You will see the same woman in two scenes. In which scene the woman is talking to her close friend?
   a) in the first scene.
   b) in the second scene.
   c) in both scenes.

5. What is the relationship between the man and the woman?
   a) they are a couple who have been together for about 3 months.
   b) they are a couple who have been together for about 1.5 years.
   c) they are cousins.

6. 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.

7. Who is the woman talking to?
   a) someone of similar age.
   b) someone of younger age.
   c) someone of older age.

8. Who won the badminton game?
   a) the man on the left.
   b) the man on the right.
   c) the two men played to a draw.

9. Who is the higher status person in terms of occupation?
   a) the woman on the left.
   b) the woman on the right.
   c) the two women have the equal status.

10. Who is the woman talking to?
   a) her boyfriend.
   b) her father.
   c) her boss.

11. Who is the man talking to?
   a) his boss.
   b) his subordinate.
   c) his colleague of the same status.

12. Who is the higher status person in terms of occupation?
   a) the woman on the left.
   b) the woman on the right.
   c) the two women have the same status.

13. 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.

14. Who is the woman talking to?
   a) someone of similar age.
   b) someone of younger age.
   c) someone of older age.

15. You will see the same man in two scenes. In which scene the man is talking to his close friend?
   a) in the first scene.
   b) in the second scene.
   c) in both scenes.

16. Who is the higher status person in terms of occupation?
   a) the man.
   b) the woman.
   c) the man and the woman have the equal status.

17. What is the relationship between the man and the women?
    a) they are a couple who have been together for about 1 month.
    b) they are a couple who have been together for about 2 years.
    c) they are acquaintances who have met only once before.

18. 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.

19. Which woman is the mother of the boy?
    a) the woman on the left.
    b) the woman on the right.
    c) neither woman.

20. Who won the badminton game?
    a) the woman on the left.
    b) the woman on the right.
    c) the two women played to a draw.

21. Who is the boy talking to?
    a) his baseball coach.
    b) his father.
    c) a man whom he met for the first time.

22. 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.

23. Who won the table-tennis game?
    a) the woman on the left.
    b) the woman on the right.
    c) the two women played to a draw.

24. Which woman is the mother of the girl?
    a) the woman on the left.
    b) the woman on the right.
    c) neither woman.

25. You will see the same man in two scenes. In which scene is the man talking to someone of older age?
    a) in the first scene.
    b) in the second scene.
    c) in both scenes.

26. Which woman is married to the man?
    a) the woman on the left.
    b) the woman on the right.
    c) neither woman.

27. Who won the table-tennis game?
    a) the man.
    b) the woman.
    c) the man and the woman played to a draw.

28. Who is the man talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

29. Who is the woman talking to?
    a) her father.
    b) her boyfriend.
    c) her teacher.

30. Who is the man talking to?
    a) someone of similar age.
    b) someone of younger age.
    c) someone of older age.

Thank you very much for your cooperation!

Your age: _____ Gender: male /female

Appendix C

Questionnaire for the British and Japanese Social Perception Task - English version

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 D

Questionnaire for the British and Japanese Social Perception Task - Japanese version

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（兄弟、姉弟）

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

Appendix E

Scenarios for the scenes of the British and Japanese Social Perception Task

Encoders for British scenes are all white British citizens and those for Japanese scenes are all ethnic Japanese citizens.

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 friends 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. Only the man is shown in shot.

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 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. Only the subordinate is shown in shot.

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. Only the man is shown in shot.

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. Only the woman who appears in both scenes is shown in shot.

Scene 12 (Japanese competition scene)

Two Japanese 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.

Bibliography

Albert, R. (1983). The intercultural sensitizer or culture assimilator: A cognitive approach. In D. Landis & R. Brislin (Eds.), *Handbook of intercultural training, Vol. 2: Issues in training methodology*. Elmsford, NY: Pergamon.

Altman, I. (1975). *The environment and social behaviour*. Monterey, CA: Brooks/Cole.

Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On judging and being judged accurately in zero-acquaintance situations. *Journal of Personality and Social Psychology*, 69 (3), 518-529.

Andersen, P. A. (1988). Explaining intercultural differences in nonverbal communication. In L. A. Samovar & R. E. Porter (Eds.), *Intercultural communication: A reader*. Belmont, CA: Wadsworth.

Andersen, P. A., & Bowman, L. (1985). *Positions of power: Nonverbal cues of status and dominance in organizational communication*. Paper presented at the annual convention of the international communication association, Honolulu, HI.

Anderson, J. R. (1990). *Cognitive psychology and its implications* (3rd ed.). New York: Freeman.

Archer, D. (1980). *How to expand your S.I.Q. (Social Intelligence Quotient)*. New York: M. Evans and Company.

Archer, D., & Akert, R. M. (1977). Words and everything else: Verbal and nonverbal cues in social interpretation. *Journal of Personality and Social Psychology*, 35 (6), 443-449.

Archer, D., & Akert, R. M. (1984). Problems of context and criterion in nonverbal communication: A new look at the accuracy issue. In M. Cook (Ed.), *Issues in person perception*. London: Methuen.

Archer, D., & Costanzo, M. (1988). *A guide to the Interpersonal Perception Task (IPT) for instructors and researchers.* Berkeley: The University of California Extension Media Center.

Archer, D., Akert, R. M., & Costanzo, M. (1993). The accurate perception of nonverbal behavior: Questions of theory and research design. In P. D. Blanck (Ed.), *Interpersonal expectations: Theory, research and applications.* Cambridge: Cambridge University Press.

Argyle, M. (1969). *Social interaction*. London: Methuen.

Argyle, M. (1975). *Bodily Communication*. London: Methuen.

Argyle, M. (1980). Interaction skills and social competence. In P. Feldman & J. Orford (Eds.), *Psychological problems: The social context*. Chichester: Wiley.

Argyle, M. (1981). *Social skills and health*. London: Methuen.

Argyle, M. (1994). *The psychology of interpersonal behaviour* (5th ed.). London: Penguin.

Argyle, M., Bryant, B. M., & Trower, P. E. (1974). Social skills training and psychotherapy: A comparative study. *Psychological Medicine*, 4, 435-443.

Argyris, C. (1976). *Increasing leadership effectiveness*. New York: Wiley.

Asante, M. K., & Davis, A. (1989). Encounters in the interratial workplace. In M. K. Asante & W. B. Gudykunst (Eds.), *Handbook of international and intercultural communication.* Newbury Park, CA: Sage.

Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology,* 41, 258-290.

Bandura, A.(1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barnlund, D. C. (1975). Communicative styles in two cultures: Japan and the United States. In A. Kendon, R. M. Harris, & M. R. Key (Eds.), *Organization of behavior in face-to-face interaction*. The Hague: Mouton.

Bem, S. L. (1993). *The lenses of gender*. New Haven, CT: Yale University Press.

Benassi, P. (1985). Experiences on rehabilitation and social skill training of chronic psychotics. *Rivista-Sperimentale-di-Freniatria-e-Medicina-Legale-delle-Alienazioni-Mentali*, 109 (2), 293-298.

Bennett, J. M. (1986). Modes of cross-cultural training: Conceptualizing cross-cultural training as education. *International Journal of Intercultural Relations*, 10, 117-134.

Bentley, S. C. (1993). Listening and memory. In A. Wolvin & C. Coakley (Eds.), *Perspectives on listening*, Norwood, NJ: Ablex.

Bhawuk, D. P. S. (1990). Cross-cultural orientation programs. In R. W. Brislin (Ed.), *Applied cross-cultural psychology: Cross-cultural research and methodology series,* Vol. 14. Newbury Park, CA: Sage.

Bhawuk, D. P. S., & Triandis, H. C. (1996). The role of culture theory in the study of culture and intercultural training. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed.), Thousand Oaks, CA: Sage.

Biehl, M., Matsumoto, D., Ekman, P., Hearn, V., Heider, K., Kudoh, T., & Ton, V. (1997). Matsumoto and Ekman's Japanese and Caucasian Facial Expressions of Emotion (JACFEE): Reliability data and cross-national differences. *Journal of Nonverbal Behavior*, 21 (1), 3-21.

Bierman, K., & Montminy, H. P. (1993). Developmental issues in social-skills assessment and intervention with children and adolescents. *Behavior-Modification*, 17 (3), 229-254.

Black, J. S., & Mendenhall, M. (1989). A practical but theory-based framework for selecting cross-cultural training methods. *Human Resource Management*, 28, 511-534.

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid.* Houston: Gulf.

Blanck, P. D., Rosenthal, R., Snodgrass, S. E., DePaulo, B. M., & Zuckerman, M. (1981). Sex differences in eavesdropping on nonverbal cues: Developmental changes. *Journal of Personality and Social Psychology*, 41 (2), 391-396.

Bochner, S. (1986). Coping with unfamiliar cultures: Adjustment or culture learning? *Australian Journal of Psychology*, 38 (3), 347-358.

Bogorya, Y. (1985). Intercultural training for managers involved in international business. *Journal of Management Development*, 4 (2), 17-25.

Bouchard, M. A., Wright, J., Mathieu, M., Lalonde, F., Bergeron, G., & Toupin, J. (1980). Structured learning in teaching therapists social skills training: Acquisition, maintenance and impact on client outcome. *Journal of Consulting and Clinical Psychology*, 48 (4), 491-502.

Brein, M., & David, K. (1971). Intercultural communication and the adjustment of the sojourner. *Psychological Bulletin*, 76, 215-230.

Briggs, S. R., Cheek, J. M., & Buss, A. H. (1980). An analysis of the self-monitoring scale. *Journal of Personality and Social Psychology*, 38, 679-686.

Brislin, R. (1989). Intercultural communication training. In M. K. Asante & W. B. Gudykunst (Eds.), *Handbook of international and intercultural communication.* Newbury Park, CA: Sage.

Brislin, R. (Ed.). (1990). *Applied cross-cultural psychology: Cross-cultural research and methodology series,* Vol. 14. Newbury Park, CA: Sage.

Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross-cultural research methods.* New York: John Wiley & Sons.

Brislin, R., & Pedersen, P. (1976). *Cross-cultural orientation programs*. New York: Gardner Press.

Brislin, R., & Yoshida, T. (1994). *Intercultural communication training: An introduction*. Thousand Oaks, CA: Sage.

Brislin, R., Cushner, K., Cherrie, C., & Yong, M. (1986). *Intercultural interactions: A practical guide*. Beverly Hills, CA: Sage.

Brislin, R., Landis, D., & Brandt, M. (1983). Conceptualizations of intercultural behavior and training. In D. Landis & R. Brislin (Eds.), *Handbook of intercultural training, Vol. 1: Issues in theory and design*. Elmsford, NY: Pergamon.

Brosnahan, L. (1998). *Japanese and English gesture: Contrastive nonverbal communication*. Tokyo: Taishukan Publishing.

Bruner, J. S. & Tagiuri, R. (1954). Person perception. In G. Lindzey (Ed.), *Handbook of social psychology*, Vol. 2. Reading, MA: Addison-Wesley.

Buck, R. (1976). A test of nonverbal receiving ability: Preliminary studies. *Human Communication Research*, 2, 162-171.

Buck, R. (1984). *The communication of emotion*. New York: Guilford Press.

Buhrmester, D., Furman, W., Wittenberg, M. T., & Reis, H. T. (1988). Five domains of interpersonal competence in peer relationships. *Journal of Personality and Social Psychology*, 55 (6), 991-1008.

Bull, P. (1987). *Posture and gesture*. New York: Pergamon Press.

Bull, P. (2002). *Communication under microscope: The theory and practice of microanalysis*. London: Psychology Press.

Buss, A. H. (1980). *Self-consciousness and social anxiety*. San Francisco: Freeman.

Cargile, A. C., & Giles, H. (1996). Intercultural communication training: Review, critique, and a new theoretical framework. In B. R. Burleson (Ed.), *Communication Yearbook 19*. Thousand Oaks, CA: Sage.

Carkhuff, R. R. (1969). *Helping and human relations: A primer for lay and professional helpers*, Vols. I and II. New York: Holt, Rinehart and Winston.

Cartledge, G., & Milburn, J. (1978). The case for teaching social skills in the classroom: A review. *Review of Education Research*, 1 (1), 133-156.

Carton, J. S., Kessler, E. A., & Pape, C. L. (1999). Nonverbal decoding skills and relationship well-being in adults. *Journal of Nonverbal Behavior*, 23 (1), 91-100.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). *Handbook for the 16 PF* (4th ed.). Champaign, IL: Institute for Personality and Ability Testing.

Caudill, W., & Weinstein, H. (1969). Maternal care and infant behavior in Japan and America. *Psychiatry*, 32, 12-43.

Chaney, E. F. (1989). Social skills training. In R. K. Hester & W. R. Eiller (Eds.), *Handbook of alcoholism treatment approaches: Effective alternatives. Pergamon general psychology series*, Vol. 157, New York: Pergamon.

Chen, G. M., & Starosta, W. J. (1996). Intercultural communication competence: A synthesis. In B. R. Burleson (Ed.), *Communication Yearbook 19*. Thousand Oaks: CA: Sage.

Coleman, M., Pfeiffer, S., & Oakland, T. (1992). Aggression replacement training with behaviorally disordered adolescents. *Behavioral Disorders*, 18 (1), 54-66.

Collett, P. (1971). Training Englishmen in the non-verbal behavior of Arabs: An experiment on intercultural communication. *International Journal of Psychology*, 6, 209-215.

Combs, M., & Slaby, D. (1977). Social skills training with children. In B. B. Lahey & A. E. Kazdin (Eds.) *Advances in Clinical Child Psychology*, Vol. 1. New York: Plenum.

'ook, M. (1979). *Perceiving others: The psychology of interpersonal perception*. London: Methuen.

'ordova, I., Jaramillo, M., & Trujillo, R. (1974). Competency-based teacher education for Mexican American students. In W. A. Hunter (Ed.), *Multicultural education through competency-based teacher education*. Washington, DC: American Association of Colleges for Teacher Education.

'osta, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment*, 4, 5-13.

'ostanzo, M. (1992). Training students to decode verbal and nonverbal cues: Effects on confidence and performance. *Journal of Educational Psychology*, 84 (3), 308-313.

'ostanzo, M., & Archer, D. (1989). Interpreting the expressive behavior of others: The Interpersonal Perception Task. *Journal of Nonverbal Behavior*, 13 (4), 225-245.

'ostanzo, M., & Archer, D. (1991). A method for teaching about verbal and nonverbal communication. *Teaching of Psychology*, 18 (4), 223-226.

'ostanzo, M., & Archer, D. (1993). *The Interpersonal Perception Task-15 (IPT-15): A guide for teachers and researchers*. Berkley, CA: University of California.

'oyne, J. C. (1976). Toward an interactional description of depression. *Psychiatry*, 39, 28-40.

'ramer, P., Weegmann, M., & O'Neil, M. (1989). Schizophrenia and the perception of emotions: How accurately do schizophrenics judge the emotional states of others? *British Journal of Psychiatry*, 155, 225-228.

ronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity." *Psychological Bulletin*, 52, 177-193.

rowne, D. P., & Marlowe, D. (1964). *The approval motive*. New York: Wiley.

ırran, J. P. (1977). Skills training as an approach to the treatment of heterosexual-social anxiety: A review. *Psychological Bulletin*, 84. 140-157.

ıshner, K. (1989). Assessing the impact of a culture-general assimilator. *International Journal of Intercultural Relations*, 13, 125-146.

ıshner, K., & Brislin, R. (1996). *Intercultural interactions: A practical guide* (2nd ed.). Thousand Oaks, CA: Sage.

ıshner, K., & Landis, D. (1996). The intercultural sensitizer. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed.) Thousand Oaks, CA: Sage.

ıtting, J. (1981). Judgement of emotional expressions in schizophrenics. *British Journal of Psychiatry*, 139, 1-6.

aibo, K. (1989). Measurement of nonverbal expressiveness: Construction of the Affective Communication Test (ACT) in Japan. *Collective Abstracts of the Japanese society 53rd Annual Conference,* 210.

anzinger, K. (1976). *Interpersonal Communication.* New York: Pergamon.

avits, P. J., & Gibson, M. G. (2000). Recognition of posed and genuine facial expressions of emotion in paranoid and non-paranoid schizophrenia. *Journal of Abnormal Psychology,* 109, 445-450.

avitz, J. R. (1964). *The communication of emotional meaning.* New York: McGraw-Hill.

ePaulo, B. M., Rosenthal, R., Eisenstat, R. A., Rogers, P. L., & Finkelstein, S. (1978). Decoding discrepant nonverbal cues. *Journal of Personality and Social Psychology,* 36 (3), 313-323.

ePaulo, B. M., Zuckerman, M., & Rosenthal, R. (1980). Modality effects in the detection of deception. In L. Wheeler (Ed.), *The review of personality and social psychology.* Thousand Oaks, CA: Sage.

ɜTurck, M. A., Harszlak, J. J., Bodhorn, D. J., & Texter, L. A. (1990). The effects of training social perceivers to detect deception from behavioral cues. *Communication Quarterly*, 38, 189-199.

illard, J., & Spitzberg, B. H. (1984). Global impressions of social skills: Behavioral predictors. In R. Bostrom (Ed.), *Communication Yearbook 8*. Beverly Hills, CA: Sage.

iMatteo, M. R. (1979). Nonverbal skill and the physician-patient relationship. In R. Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences*. Cambridge, MA: Oelgeschlager, Gunn & Hain.

oble, S., & Magill-Evans, J. (1989). A model of social interaction to guide occupational therapy practice. *Canadian Journal of Occupational Therapy*, 59, 141-150.

odge, K. A., & Murphy, R. R. (1984). The assessment of social competence in adolescence. In P. Karoly & J. J. Steffen (Eds.), *Advances in child behavior analysis and therapy, Vol. 4: Adolescent behavior disorder: Current perspective*. Lexington, MA: Heath.

ougherty, F., Bartlett, E., & Izard, C. (1974). Responses of schizophrenics to expressions of the fundamental emotions. *Journal of Clinical Psychology*, 30, 243-246.

ow, M., & Craighead, E. (1984). Cognition and social inadequacy: Relevance in clinical populations. In P. Trower (Ed.) *Radical approaches to social skills training*. London: Croom Helm.

uran, R. L. (1983). Communicative adaptability. *Communication Quarterly*, 31, 320-326.

urkin, K. (1995). *Developmental social psychology: From infancy to old age*. Malden, MA: Blackwell.

dwards, R., Manstead, A. S. R., & MacDonald, C. J. (1984). The relationship between children's sociometric status and ability to recognise facial expression of emotion. *European Journal of Social Psychology*, 14, 235-238.

fron, D. (1941). *Gesture and environment*. New York: King's Crown Press.

sler, R. M., Miller, P. M., & Hersen, M. (1973). Components of assertive behavior. *Journal of Consulting and Clinical Psychology*, 29, 295-299.

kman, P. (1973). Universals and cultural differences in facial expressions of emotion. In J. Cole (Ed.), *Nebraska symposium of motivation*, 1971 Lincoln: University of Nebraska Press.

kman, P. & Friesen, W. V. (1969). The repertoire of nonverbal behavior: Categories, origins, usage, and coding. *Semiotica*, 1, 49-98.

kman, P. & Friesen, W. V. (1971). Constants across cultures in the face and emotion. *Journal of Personality and Social Psychology*, 17, 124-129.

kman, P., & Friesen, W. V. (1974). Nonverbal behavior and psychopathology. In R. J. Friedman & M. Katz (Eds.), *The psychology of depression: Contemporary theory and research*. Washington, DC: Winston & Sons.

kman, P., & Friesen, W. V. (1975). *Unmasking the face*. Englewood Cliffs, NJ: Prentice-Hall.

kman, P., & Friesen, W. V. (1978). *The Facial Action Coding System (FACS)*. Palo Alto, CA: Consulting Psychologists Press.

lfenbein, H. A., & Ambady, N. (2002a). On the universality and cultural specificity of emotion recognition: A meta-analysis. *Psychological Bulletin*, 128 (2), 203-235.

fenbein, H. A., & Ambady, N. (2002b). Is there an in-group advantage in emotion recognition? *Psychological Bulletin*, 128 (2), 243-249.

fenbein, H. A., & Ambady, N. (2003a). When familiarity breeds accuracy: Cultural exposure and facial emotion recognition. *Journal of Personality and Social Psychology*, 85 (2), 276-290.

lfenbein, H. A., & Ambady, N. (2003b). Cultural similarity's consequences: A distance perspective on cross-cultural differences in emotion recognition. *Journal of Cross-Cultural Psychology*, 34 (1), 92-110.

fenbein, H. A., Mandal, M. K., Ambady, N., Harizuka, S., Kumar, S. (2002). Cross-cultural patterns in emotion recognition; Highlighting design and analytical techniques. *Emotion*, 2 (1), 75-84.

llis, R., & Whittington, D. (1972). Contexts for microteaching. *Journal of APLET*, 2, 37-46.

llis, R., & Whittington, D. (1981). *A Guide to social skill training*. London: Croom Helm.

ysenck, S. B., & Eysenck, H. J. (1968). The measurement of psychoticism: A study of factor stability and reliability. *British Journal of Social and Clinical Psychology*, 7 (4), 586-594.

alloon, I., Lindley, P., McDonald, R., & Marks, I. (1977). Social skills training of out-patient groups. *British Journal of Psychiatry*, 131, 599-609.

einman, S., & Lewis, M. (1983). Social referencing at ten months: A second-order effect on infants' responses to strangers. *Child Development*, 54, 878-887.

eldman, R. S., Philippot, P., & Custrini, R. J. (1991). Social competence and nonverbal behavior. In R. S. Feldman & B. Rime (Eds.), *Fundamentals of nonverbal behavior: Studies in emotion and social Interaction*. New York: Cambridge University Press.

eldman, R. S., White, J. B., & Lobato, D. (1982). Social skills and nonverbal behavior. In R. S. Feldman (Ed.), *Development of nonverbal behavior in children*. New York: Springer-Verlag.

enigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, 43, 522-527.

iedler, F. E., Mitchell, T., & Triandis, H. C. (1971). The culture assimilator: An approach to cross-cultural training. *Journal of Applied Psychology*, 55, 95-102.

ischetti, M., Curran, J. P., & Wessberg, H. W. (1977). Sense of timing: A skill deficit in heterosexual-socially anxious males. *Behavior Modification*, 1, 179-194.

icek, M. (1992). Social status of boys with both academic problems and attention-deficit hyperactivity disorder. *Journal of Abnormal Child Psychology*, 20, 353-366.

ɔrgas, J. P. (1978). The effects of behavioural and cultural expectation cues on the perception of social episodes. *European Journal of Social Psychology*, 8, 203-213.

ɔrgas, J. P. (1985). *Interpersonal behaviour*. Oxford: Pergamon.

ɔrgas, J. P. (1988). Episode representations in intercultural communication. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Theories in intercultural communication*. Newbury Park, CA: Sage.

ridlund, A. J., Ekman, P., & Oster, H. (1987). Facial expressions of emotion: Review of literature, 1970-1983. In A. W. Siegman & S. Feldstein (Eds.), *Nonverbal behavior and communication* (2nd ed.). Hillsdale, NJ: Erlbaum.

riedman, H. S., Prince, L. M., Riggio, R. E., & DiMatteo, M. R. (1980). Understanding and assessing nonverbal expressiveness: The Affective Communication Test. *Journal of Personality and Social Psychology*, 39, 333-351.

rijda, N. A. (1969). Recognition of emotion. In L. Berkowitz (Ed.), *Advances in experimental social psychology,* Vol. 4. New York: Academic Press.

ɪlass, C. R., & Merluzzi, T. V. (1981). Cognitive assessment of social-evaluative anxiety. In T. V. Merluzzi, C. R. Glass & M. Genest (Eds.) *Cognitive assessment*. New York: Guilford.

ɪnepp, J., & Hess, D. L. (1986). Children's understanding of display rules for expressive behaviour, *Developmental Psychology*, 22, 103-108.

ɪoldfried, M. R., & D'Zurilla, T. J. (1969). A behavioral-analytic model for assessing competence. In C. D. Spielberger (Ed.) *Current topics in clinical and community psychology*. New York: Academic Press.

oldstein, A. P.(1993). Interpersonal skills training interventions. In A. P. Goldstein & C. R. Huff (Eds.) *The gang intervention handbook.* Champaign, IL: Research Press.

udykunst, W. B. (1993). Toward a theory of effective interpersonal and intergroup communication: An Anxiety/Uncertainty Management (AUM) perspective. In R. L. Wiseman & J. Koester (Eds.), *Intercultural communication competence*. Newbury Park, CA: Sage.

udykunst, W. B. (1995). Anxiety/Uncertainty Management (AUM) theory: Current status. In R. L. Wiseman (Ed.), *Intercultural communication theory*. Thousand Oaks, CA: Sage.

udykunst, W. B., & Gumbs, L. I. (1989). Social cognition and intergroup communication. In M. K. Asante & W. B. Gudykunst (Eds.), *Handbook of international and intercultural communication*. Newbury Park, CA: Sage.

udykunst, W. B., & Hammer, M. R. (1983). Basic training design: Approaches to intercultural training. In D. Landis & R. W. Brislin (Eds.), *Handbook of intercultural training, Vol. I: Issues in theory and design*. Elmsford, NY: Pergamon.

udykunst, W. B., & Nishida, T. (1986). Attributional confidence in low- and high-context cultures. *Human Communication Research*, 12 (4), 525-549.

udykunst, W. B., & Nishida, T. (1987). The influence of cultural variability on perceptions of communication behavior associated with relationship terms. *Human Communication Research,* 13 (2), 147-166.

udykunst, W. B., & Ting-Toomey, S. (1988). Culture and affective communication. *American Behavioral Scientist*, 31, 384-400.

udykunst, W. B., Guzley, R. M., & Hammer, M. R. (1996). Designing intercultural training. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed.). Thousand Oaks; Sage.

udykunst, W. B., Hammer, M. R., & Wiseman, R. L. (1977). An analysis of an integrated approach to cross-cultural training. *International Journal of Intercultural Relations*, 1, 99-110.

udykunst, W. B., Nishida, T., & Morisaki, S. (1992). *Expectations for interpersonal and intergroup encounters in Japan and the United States*. Paper presented at the international communication association convention, Miami.

udykunst, W. B., Nishida, T., & Schmidt, K. L. (1988). *The influence of cultural variability on uncertainty reduction in ingroup vs. outgroup and same- vs. opposite-sex relationships*. Paper presented at the international communication association convention, New Orleans.

ullahorn, J. E., & Gullahorn, J. T. (1966). American students abroad: Professional vs. personal development. *Annals*, 368, 43-59.

alberstadt, A. G. (1983). Family expressiveness styles and nonverbal communication skills. *Journal of Nonverbal Behavior*, 8, 14-26.

alberstadt, A. G. (1986). Family socialization of emotional expression and nonverbal communication styles and skills. *Journal of Personality and Social Psychology*, 51, 827-36.

alberstadt, A. G. (1991). Toward an ecology of expressiveness: Family socialization in particular and a model in general. In R. S. Feldman & B. Rime (Eds.), *Fundamentals of nonverbal behavior*. Cambridge: Cambridge University Press.

all, E. T. (1959). *The silent language*. New York.: Doubleday.

all, E. T. (1976). *Beyond culture*. Garden City, NY: Doubleday.

all, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin*, 68, 807-816.

all, J. A. (1979). Gender, gender roles, and nonverbal communication skills. In R. Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences*. Cambridge, MA: Oelgeschlager, Gunn & Hain.

Hall, J. A. (1984). *Nonverbal sex differences: Communication accuracy and expressive style.* Baltimore, MD: Johns Hopkins University Press.

Hammer, M. R. (1989). Intercultural communication competence. In M. K. Asante & W. B. Gudykunst (Eds.), *Handbook of international and intercultural communication.* Newbury Park, CA: Sage.

Hammer, M. R., Gudykunst, W. B., & Wiseman, R. (1978). Dimensions of intercultural effectiveness: An exploratory study. *International Journal of Intercultural Relations*, 2, 382-393.

Hargie, O. (1986). Communication as skilled behaviour. In O. Hargie (Ed.), *A handbook of communication skills.* New York: Croom Helm.

Hargie, O. (Ed.) (1997). *The handbook of communication skills* (2nd ed.). London: Routledge.

Hargie, O., & Dickson, D. (1991). Video-mediated judgements of personal characteristics based upon nonverbal cues. *Journal of Educational Television*, 17, 31-43.

Harris, P. L., & Gross, D. (1988). Children's understanding of real and apparent emotion. In J. W. Astington, P. K. Harris, and D. R. Olson (Eds.), *Developing theories of mind.* New York: Cambridge University Press.

Harris, P. L., Donnelly, K., Guz, G., & Pitt-Watson, R. (1986). Children's understanding of the distinction between real and apparent emotion. *Child Development*, 57, 895-909.

Harrison, R., & Hopkins, R. L. (1967). The design of cross-cultural training: An alternative to the university model. *Journal of Applied Behavioral Science*, 3, 431-460.

Hastorf, A. H., Schneider, D. J., & Polefka, J. (1970). *Person perception.* Reading, MA: Addison-Wesley.

[echt, M. L., Andersen, P. A., & Ribeau, S. A. (1989). The cultural dimensions of nonverbal communication. In M. K. Asante & W. B. Gudykunst (Eds.), *Handbook of international and intercultural communication*. Newbury Park: Sage.

[eider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.

[iguchi, K. (1994). *Nihonjin to Ninjyo (Japanese and thier nature)*. Tokyo: Daiwashobo.

[ofstede, G. (1979). Value systems in forty countries. In J. Deregowski, S. Dzuirawiec, & R. Annis (Eds.), *Explications in cross-cultural psychology*. Lisse, The Netherlands: Swets & Zeitlinger.

[ofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Newbury Park, CA: Sage.

[ofstede, G. (1984). *Culture's consequences*. Beverly Hills, CA: Sage.

[ofstede, G., & Bond, M. (1984). Hofstede's culture dimensions: An independent validation using Rokeach's value survey. *Journal of Cross-Cultural Psychology*, 15, 417-433.

[oneycutt, N., & Belcher, J. R. (1991). Schizophrenia and social skills: An "identity and train" approach. *Community-Mental-Health-Journal*, 27 (1), 57-68.

[oopes, D. S. (1975). *Readings in intercultural communication. Vol. 1: The Intercultural Communication Workshop*, Pittsburgh: Intercultural Communication Network.

[orike, K. (1988). The concept of self-monitoring and its assessment. *Tohoku Fukushi Daigaku Shinrigakka Ronshu,* 11, 185-199.

vey, A., & Authier, J. (1978). *Microcounselling, innovations in interviewing, counselling, psychotherapy, and psychoeducation.* Springfield: C.C. Thomas.

vabuchi, C., Tanaka, K., & Nakasato, H. (1982). A study of the Self-Monitoring Scale. *Japanese Journal of Psychology*, 53, 54-57.

Jablin, F. M. (1985). Task/work relationships: A life-span perspective. In M. L. Knapp & G. R. Miller (Eds.), *Handbook of interpersonal communication*. Beverly Hills, CA: Sage.

Jecker, J. D., Maccoby, N., & Breitrose, H. S. (1965). Improving accuracy in interpreting non-verbal cues of comprehension. *Psychology in the Schools*, 2, 239-44.

Jensen, L., & Young, J. (1972). Effect of televised simulated instruction on subsequent teaching. *Journal of Educational Psychology*, 63 (4), 368-373.

John, O. (1989). *The BFI-54*. Unpublished test, Institute of Personality and Social Research, Department of Psychology, University of California, Berkeley.

Jonsson, C. O., & Sjostedt, A. (1973). Aural perception in schizophrenia, a second study of the intonation test. *Acta Psychiatrica Scandinavica*, 49, 558-600.

Juffer, K. A. (1982). *Technical description of CSAI, I*. Unpublished manuscript, Western Illinois University, Macomb.

Kagitcibasi, C. (1994). A critical appraisal of individualism and collectivism: Toward a new formulation. In U. Kim, H. C. Triandis, C. Kagitcibasi, S.-C. Choi, & G. Yoon (Eds.), *Individualism and collectivism*. Thousand Oaks, CA: Sage.

Kayano, J (1988). Synthetic approach to social skill research. *Ningen Kagaku*, 31, 1-16.

Kelly, C., & Meyers, J. E. (1992). *The cross-cultural adaptability inventory manual*. La Jolla, CA: C. Kelley and J. Meyers.

Kelly, J. A. (1982). *Social skills training: A practical guide for interventions*. New York: Springer.

Kendon, A. (1981). *Nonverbal communication, interaction and gesture*. Hague: Mouton.

Kikuchi, A. (1988). *Omoiyari o kagakusuru (The science of empathy)*. Tokyo: Kawashima Shoten.

Kim, Y. Y. (1986). Understanding the social context of intergroup communication: A personal network approach. In W. B. Gudykunst (Ed.), *Intergroup communication*. London: Edward Arnold.

Kim, Y. Y. (1988). On theorizing intercultural communication. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Theories in intercultural communication*. Newbury Park, CA: Sage.

Kim, Y. Y., & Gudykunst, W. B. (Eds.). (1988). *Theories in intercultural communication, international and intercultural communication annual,* Vol. 7. Newbury Park, CA: Sage.

Kim, Y. Y., & Ruben, B. D. (1988). Intercultural transformation: A system theory. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Theories in intercultural communication, international and intercultural communication annual,* Vol. 7. Newbury Park, CA: Sage.

Kitao, K., & Kitao, K. (1989). *Intercultural communication between Japan and the United States*. Tokyo: Eichosha.

Kline, P. (2000). *Handbook of Psychological Testing* (2nd ed.). London: Routledge.

Kluckhohn, F., & Strodtbeck, F. (1961). *Variations in value orientations*. New York: Row, Peterson.

Knapp, M. L., & Hall, J. A. (2002). *Nonverbal communication in human interaction*. London: Thomson learning.

Koester, J., & Olebe, M. (1988). The behavioral assessment scale for intercultural communication effectiveness. *International Journal of Intercultural Relations*, 12, 233-246.

Koester, J., Wiseman, R. L., & Sanders, J. A. (1993). Multiple perspectives of intercultural communication competence. In R. L. Wiseman & J. Koester (Eds.), *Intercultural communication competence*. Newbury Park, CA: Sage.

Kolb, D. (1987). *Learning style inventory*. Boston: McBer.

Kowner, R., & Wiseman, R. (2003). Culture and status-related behavior: Japanese and American perceptions of interaction in asymmetric dyads. *Cross-Cultural Research: The Journal of Comparative Social Science*. 37 (2), 178-210.

Kudo, C., & Nishikawa, M. (1983). Research on loneliness (1) - reliability and validity of loneliness scale. *Japanese Journal of Experimental Social Psychology*, 22, 99-108.

Kudo, T., & Matsumoto, D. (1985). Cross-cultural examination of the semantic dimensions of body postures. *Journal of Personality and Social Psychology*, 48, 1440-1446.

LaBarre, W. (1964). Paralinguistics, kinesics and cultural anthropology. In T. A. Sebeok (Ed.), *Approaches to Semiotics*. Hague: Mouton.

Landis, D., & Brislin, R. W. (Eds.). (1983). *Handbook of intercultural training, Vol. 2: Issues in training methodology*. Elmsford, NY: Pergamon.

Langer, E. J. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.

Langer, E. J. (1997). *The power of mindful learning*. Reading, MA: Addison-Wesley.

LaRusso, L. (1978). Sensitivity of paranoid patients to nonverbal cues. *Journal of Abnormal Psychology*, 87 (5), 463-471.

Latham, G. P., & Saari, L. M. (1979). The application of social learning theory to training supervisors through behavior modeling. *Journal of applied Psychology*, 64, 239-246.

Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.

Levenson, R. W., & Gottman, J. M. (1978). Toward the assessment of social competence. *Journal of Consulting and Clinical Psychology*, 46, 453-462.

Lewis, M., & Michalson, L. (1983). *Children's emotions and moods: Developmental theory and measurement.* New York: Plenum.

Lewis, M., & Saarni, C. (1985). Culture and emotions. In M. Lewis & C. Saarni (Eds.), *The socialization of emotion.* New York: Plenum.

Libet, J. M., & Lewinsohn, P. M. (1973). Concept of social skill with special reference to the behavior of depressed persons. *Journal of Consulting and Clinical Psychology*, 40, 304-312.

Livesley, W. J., & Bromley, D. B. (1973). *Person perception in childhood and adolescence*. London: John Wiley & Sons.

Magill-Evans, J., Koning, C., Cameron-Sadava, A., & Manyk, K. (1995). The child and adolescent social perception measure. *Journal of Nonverbal Behavior*, 19 (3), 151-169.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98 (2), 224-253.

Marsella, A. J., DeVos, G., & Hsu, F. L. K. (Eds.). (1985). *Culture and self: Asian and Western perspectives*. New York: Tavistock.

Marzillier, J. S. (1978). Outcome studies of skills training: A review. In P. Trower, B. Bryant & M. Argyle (Eds.), *Social skills and mental health.* London: Methuen.

Marzillier, J. S., Lambert, C., & Kellett, J. (1976). A controlled evaluation of systematic desensitization and social skills training for socially inadequate psychiatric patients. *Behaviour Research and Therapy*, 14, 225-238.

Matson, J., & Stephens, R. (1978). Increasing appropriate behaviour of explosive chronic psychiatric patients with a social skills training package. *Behaviour Modification*, 2 (1), 61-76.

Matsumoto, D. (1989). Cultural influences on the perception of emotion. *Journal of Cross-Cultural Psychology*, 20, 92-105.

Matsumoto, D. (1991). Cultural influences on facial expressions of emotion. *Southern Communication Journal*, 56, 128-137.

Matsumoto, D. (1992). American-Japanese cultural differences in the recognition of universal facial expressions. *Journal of Cross-Cultural Psychology,* 23, 72-84.

Matsumoto, D. (1996). *Unmasking Japan: Myths and realities about the emotions of the Japanese.* California: Stanford University Press.

Matsumoto, D., Consolacion, T., Yamada, H., Suzuki, R., Franklin, B., Paul, S., Ray, R., Uchida, H. (2002). American-Japanese cultural differences in judgments of emotional expressions of different intensities. *Cognition and Emotion.* 16, 721-747.

Matsumoto, D., & Ekman, P. (1988). *Japanese and Caucasian Facial Expressions of Emotion (JACFEE)* (slides). San Francisco, CA: Intercultural and Emotion Research Laboratory, Department of Psychology, San Francisco State University.

Matsumoto, D., & Ekman, P. (1989). American-Japanese cultural differences in intensity ratings of facial expressions of emotion. *Motivation and Emotion*, 13, 143-157.

Matsumoto, D., Kasri, F., & Kooken, K. (1999). American-Japanese cultural differences in judgments of expression intensity and subjective experience. *Cognition and Emotion*, 13, 201-218.

Matsumoto, D., & Kishimoto, H. (1983). Developmental characteristics in judgments of emotion from nonverbal vocal cues. *International Journal of Intercultural Relations*, 7, 415-424.

Matsumoto, D., Kudoh, T., & Takeuchi, S. (1996). Changing patterns of individualism and collectivism in the United States and Japan. *Culture & Psychology*, 2 (1), 77-107.

Matsumoto, D., LeRoux, J., Wilson-Cohn, C., Raroque, J., Kooken, K., Ekman, P., Yrizarry, N., Loewinger, S., Uchida, H., Yee, A., Amo, L., & Goh, A. (2000). A new test to measure emotion recognition ability: Matsumoto and Ekman's Japanese And Caucasian Brief Affect Recognition Test (JACBART), *Journal of Nonverbal Behavior*, 24 (3), 179-209.

McFall, R. M. (1982). A review and reformulation of the concept of social skills. *Behavioral Assessment*, 4, 1-33.

McIntire, K. A., Danforth, M. M., & Schneider, H. G. (1999). Measuring cue perception: Assessment of reliability and validity. *North American Journal of Psychology*, 1 (2), 261-266.

Mehrabian, A. (1969). Some referents and measures of nonverbal behavior. *Behavioral Research Methods and Instrumentation*, 1, 203-207.

Mehrabian, A. (1970). A semantic space for nonverbal behavior. *Journal of Counseling and Clinical Psychology*, 35, 248-252.

Mestenhauser, J. A. (1983). Learning from sojourners. In D. Landis & R. W. Brislin (Eds.), *Handbook of intercultural training, Vol. 2: Issues in training methodology*. New York: Pergamon.

Miller, J. G. (1984). Culture and the development of everyday social explanations. *Journal of Personality and Social Psychology*, 46, 961-978.

Montagner, H., Restoin, A., Ullman, V., Rodriguez, D., Godard, D., & Viala, M. (1984). Development of early peer interaction. In W. Doise & A. Palmonari (Eds.), *Social interaction in individual development*. Cambridge: Cambridge University Press.

Morrison, R. L., & Bellack, A. S. (1981). The role of social perception in social skill. *Behavior Therapy*, 12, 69-79.

Morsbach, H. (1988). Nonverbal communication and hierarchical relationships: The case of bowing in Japan. In F. Poyatos (Ed.), *Cross-cultural perspectives in nonverbal communication*. Toronto: C. J. Hogrefe.

Muzekari, L., & Bates, M. (1977). Judgement of emotion among chronic schizophrenics. *Journal of Clinical Psychology*, 33, 662-666.

Nabuzoka, D., & Smith, P. (1995). Identification of expressions of emotions by children with and without learning disabilities. *Learning Disabilities Research and Practice*, 10, 91-101.

Nakamura, M., & Matsutani, M. (1991). Affective communication ability and social skills. *Collective Abstracts of the Japanese Society of Social Psychology 32nd Annual Conference,* 318-321.

Nishida, H. (1985). Japanese intercultural communication competence and cross-cultural adjustment. *International Journal of Intercultural Relations*, 9, 247-269.

Oden, S., & Asher, S. (1977). Coaching children in social skills for friendship making. *Child Development*, 48, 495-506.

Okabe, R. (1983). Cultural assumptions of east and west: Japan and the United States. In W. B. Gudykunst (Ed.), *Intercultural communication theory: Current perspectives*. Beverly Hills, CA: Sage.

Olebe, M., & Koester, J. (1989). Exploring the cross-cultural equivalence of the Behavior Assessment Scale for Intercultural Communication, *International Journal of Intercultural Relations*, 13, 333-347.

Paige, R. M. (1996). Intercultural trainer competencies. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed.). Thousand Oaks, CA: Sage.

Paige, R. M., & Martin, J. N. (1996). Ethics in intercultural training. In D. Landis & R. S. Bhagat (Eds.) *Handbook of intercultural training* (2nd ed.), Thousand Oak, CA: Sage.

Pedersen, P. (1988). *A handbook for developing multicultural awareness*. Alexandria, VA: American Association for Counseling and Development.

Peterson, J., Fischetti, M., Curran, J. P., & Arland, S. (1981). Sense of timing: A skill deficit in hetero-socially anxious women. *Behavior Therapy*, 12, 195-201.

Phares, E. J. (1988). *Introduction to personality* (2nd ed.), Glenview, IL: Scott, Foresman & Co.

Philippot, P., & Feldman, R. S. (1990). Age and social competence in preschoolers' decoding of facial expression. *British Journal of Social Psychology*, 29, 43-45.

Porter, R. E., & Samovar, L. A. (1998). Cultural influence on emotional expression: Implications for intercultural communication. In P. A. Andersen & L. K. Guerrero (Eds.), *Handbook of communication and emotion: Research, theory, applications, and contexts*. San Diego, CA: Academic Press.

Pribyl, C. (2000). *An introduction to intercultural communication*. Tokyo: Nakanishiya shuppan.

Promnitz, J. (1992). Peer interactions in young children. In P. C. L. Heaven (Ed.), *Life span development*. Sydney: Harcourt Brace Jovanovich.

Pruegger, V. J., & Rogers, T. B. (1994). Cross-cultural sensitivity training: Methods and assessment. *International Journal of Intercultural Relations*, 18, 369-387.

Redmond, M. V. (2000). Cultural distance as a mediating factor between stress and intercultural communication competence. *International Journal of Intercultural Relations*, 24 (1), 151-159.

Redmond, M. V., & Bunyi, J. M. (1991). The relationship of intercultural communication competence with stress and the handling of stress as reported by international students. *International Journal of Intercultural Relations*, 17, 235-254.

Reichenbach, L., & Masters, J. C. (1983). Children's use of expressive and contextual cues in judgments of emotion. *Child Development*, 54, 993-1004.

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology*, 51 (3), 649-660.

Riggio, R. E., Tucker, J., & Widaman, K. F. (1987). Verbal and nonverbal cues as mediators of deception ability. *Journal of Nonverbal Behavior*, 11 (3), 126-145.

Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P. L., & Archer, D. (1979). *Sensitivity to nonverbal communication: The PONS test*. Baltimore, MD: Johns Hopkins University Press.

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortion in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, Vol. 10. New York: Academic Press.

Rotter, N. G., & Rotter, G. S. (1988). Sex differences in the encoding and decoding of negative facial emotions. *Journal of Nonverbal Behavior*, 12 (2), 139-148.

Ruben, B. D. (1976). Assessing communication competency for intercultural adaptation. *Group and Organization Studies*, 1, 334-354.

Ruben, B. D., & Kealey, D. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations*, 3, 15-48.

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39 (3), 472-480.

Rutter, D. R., & O'Brien, P. (1980). Social interaction in withdrawn and aggressive maladjusted girls: A study of gaze. *Journal of Child Psychology and Psychiatry*, 21, 59-66.

Saarni, C. (1988). Children's understanding of the interpersonal consequences of dissemblance of nonverbal emotional expressive behavior. *Journal of Nonverbal Behavior*, 12 (4), 275-294.

Samovar, L. A., & Porter, R. E. (1972). Intercultural communication: An introduction. In L. A. Samovar & R. E. Porter (Eds.), *Intercultural communication: A reader*. Belmont, CA: Wadsworth.

Sano, H. (1990). Research on social difficulties in cross-cultural adjustment: Social situational analysis. *Japanese Journal of Behavioral Therapy*, 16, 37-44.

Scherer, K. R., Koivumaki, J., & Rosenthal, R. (1972). Minimal cues in the vocal communication of affect: Judging emotions from content-masked speech. *Journal of Psycholinguistic Research*, 1 (3), 269-285.

Schimmack, U. (1996). Cultural influences on the recognition of emotion by facial expressions: Individualistic or Caucasian cultures? *Journal of Cross-Cultural Psychology*, 27 (1), 37-50.

Schroeder, J. E. (1996). Self-concept, social anxiety, and interpersonal perception skills. *Personality and Individual Differences*, 19 (6), 955-958.

Schwartz, S. (1994). Cultural dimensions of values: Toward an understanding of national differences. In U. Kim, H. C. Triandis, C. Kagitcibasi, S.- C. Choi, & G. Yoon (Eds.), *Individualism and collectivism*. Thousand Oaks, CA: Sage.

Shimoda, K., Argyle, M., & Ricci Bitti, P. (1978). The intercultural recognition of emotional expressions by three national racial groups: English, Italian and Japanese. *European Journal of Social Psychology*, 8, 169-179.

Shirts, G. (1973). *BAFA BAFA: A cross-cultural simulation*. Delmar, CA: Simile II.

Shrauger, S. (1967). Cognitive differentiation and the impression formation process. *Journal of Personality*, 35, 402-419.

Smith, H. J., Archer, D., & Costanzo, M. (1991). "Just a hunch": Accuracy and awareness in person perception. *Journal of Nonverbal Behavior*, 15 (1), 3-18

Smith, H. P. (1981). Territorial spacing on a beach revisited: A cross-national exploration. *Social Psychology Quarterly*, 44, 132-137.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30 (4), 526-537.

Spence, S. H. (1987). The relationship between social-cognitive skills and peer sociometric status. *British Journal of Developmental Psychology*, 5, 347-356.

Spitzberg, B. H. (1989). Issues in the development of a theory of interpersonal competence in the intercultural context. *International Journal of Intercultural Relations*, 13, 241-268.

Spitzberg, B. H., & Brunner, C. (1991). Toward a theoretical integration of context and competence inference research. *Western Journal of Speech Communication*, 55, 28-46.

Spitzberg, B. H., & Cupach, W. R. (1984). *Interpersonal communication competence*. Beverly Hills, CA: Sage.

Spitzberg, B. H., & Cupach, W. R. (1989). *Handbook of interpersonal competence research.* New York: Springer-Verlag.

Steffen, J. J., & Lucas, J. (1980). *Social strategies and expectations as components of social competence*. Unpublished manuscript.

Stephan, C. W., Stephan, W. G., Saito, I., & Barnett, S. M. (1998). Emotional expression in Japan and the United States: The nonmonolithic nature of individualism and collectivism. *Journal of Cross-Cultural Psychology*, 29 (6), 728-748.

wart, E. C. (1974). Definition and process observation of intercultural communication. In N. C. Jain, M. H. Prosser, & M. H. Miller (Eds.), *Intercultural Communication: Proceedings of the Speech Communication Association Summer Conference, X*. New York: Speech Communication Association.

ann, W. B., Jr. (1984). Quest for accuracy in person perception: A matter of pragmatics. *Psychological Review*, 91, 457-477.

ɜai, J., & Ota, H. (1994). Assessing Japanese interpersonal communication competence. *The Japanese Journal of Experimental Social Psychology*, 33 (3), 224-236.

ıg-Toomey, S. (1985). Toward a theory of conflict and culture. In W. B. Gudykunst, L. Stewart, & S. Ting-Toomey (Eds.), *Communication, culture, and organizational processes*. Beverly Hills, CA: Sage.

ıg-Toomey, S. (1999). *Communicating across cultures*. New York: The Guilford Press.

andis, H. C. (1972). *The analysis of subjective culture*. New York: Wiley.

andis, H. C. (1977). Theoretical framework for evaluation of cross-cultural training effectiveness. *International Journal of Intercultural Relations*, 1, 19-45.

andis, H. C. (1986). Collectivism and individualism. In C. Bagley & G. Verma (Eds.), *Personality, cognition, and values: Cross-cultural perspectives of childhood and adolescence*. London: Macmillan.

andis, H. C. (1989). The self and social behavior in differing cultural context. *Psychological Review*, 96 (3), 506-520.

andis, H. C. (1990a). Cross-cultural studies of individualism and collectivism. In J. Berman (Ed.), *Nebraska symposium of motivation*, 1989. Lincoln: University of Nebraska Press.

Triandis, H. C. (1990b). Theoretical concepts that are applicable to the analysis of ethnocentrism. In R. W. Brislin (Ed.), *Applied cross-cultural psychology: Cross-cultural research and methodology series* Vol. 14. Newbury Park, CA: Sage.

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54 (2), 323-338.

Trifonovitch, G. (1973). *On cross-cultural orientation techniques: Topics in culture learning,* 1, 38-47.

Trimboli, A., & Walker, M. (1993). The CAST test of nonverbal sensitivity. *Journal of Language and Social Psychology,* 12, 49-65.

Trower, P. (1980). Situational analysis of the components and processes of behavior of socially skilled and unskilled patients. *Journal of Consulting and Clinical Psychology*, 48, 327-339.

Trower, P. (1984). A radical critique and reformulation: From organism to agent. In P. Trower (Ed.), *Radical approaches to social skill training.* London: Croom Helm.

Trower, P., Bryant, B., & Argyle, M. (1978). *Social skills and mental health.* London: Methuen.

Turner, J. (1964). Schizophrenics as judges of vocal expressions of emotional meaning. In J. Daviz (Ed.) *The communication of emotional meaning.* New York: McGraw-Hill.

Van Hasselt, V., Hersen, M., & Milliones, J. (1978). Social skills training for drug addicts and alcoholics: A review. *Addictive Behaviour*, 3 (4). 221-232.

Van Hasselt, V., Hersen, M., Whitehill, M., & Bellack, A. (1979). Social skill assessment and training for children: An evaluative review. *Behaviour Research and Therapy,* 17, 413-437.

Wada, M. (1991). A study of interpersonal competence: Construction of nonverbal skill scale and social skill scale. *The Japanese Journal of Experimental Social Psychology*, 31 (1), 49-59.

Wagner, H. L., MacDonald, C. J., & Manstead, A. S. (1986). Communication of individual emotions by spontaneous facial expressions. *Journal of Personality and Social Psychology*, 50 (4), 737-743.

Walden, T. (1991). Infant social referencing. In J. Garber & K. A. Dodge (Eds.), *The development of emotion regulation and dysregulation.* Cambridge: Cambridge University Press.

Walker, E., Marwit, S., & Emory, E. (1980). A cross sectional study of emotional recognition in schizophrenics. *Journal of Abnormal Psychology*, 89, 428-439.

Ward, C., & Kennedy, A. (1993). Psychological and socio-cultural adjustment during cross-cultural transitions: A comparison of secondary students at home and abroad. *International Journal of Psychology*, 28, 129-147.

Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology*, 33, 448-457.

Weissman, M. M., & Paykel, E. S. (1974). *The depressed woman: A study of social relationships*. Chicago: University of Chicago Press.

Weldon, D., Carston, D., Rissman, A., Slobodin, L., & Triandis, H. (1975). A laboratory test of effects of culture assimilator training. *Journal of Personality and Social Psychology*, 32, 300-310

Wheeler, L., Reis, H. T., & Bond, M. H. (1989). Collectivism-Individualism in everyday social life: The middle kingdom and the melting pot. *Journal of Personality and Social Psychology*, 57, 79-86.

Wiemann, J. M. (1977). Explication and test of a model of communicative competence. *Human Communication Research*, 3, 195-213.

Wiemann, J. M., & Backlund, P. (1980). Current theory and research in communicative competence. *Review of Educational Research*, 50, 185-199.

Wiemann, J. M., & Giles, H. (1988). Interpersonal communication. In M. Hewstone, W. Stroebe, J. I. Codol, & G. Stephenson (Eds.), *Introduction to social psychology*, Oxford: Basil Blackwell.

Wiener, M., Shilkret, R., & Devoe, S. (1980). 'Acquisition' of communication competence: Is language enough? In M. R. Key (Ed.), *The relationship of verbal and nonverbal communication.* Hague: Mouton.

Wight, A. R. (1970). *Experiential cross-cultural training*. Estes Park, CO: Centre for Research and Education.

Woods, E. (1996). Associations of nonverbal decoding ability with indices of person-centered communicative ability. *Communication Reports*, 9 (1), 13-22.

Wright, J. C. (1976). A comparison of systematic desensitization and social skill acquisition in the modification of a social fear. *Behavior Therapy*, 7 (2), 205-210.

York, D. E. (1994). *Cross-cultural training programs*. Westport, CT: Bergin & Garvey.

Zuckerman, M., Koestner, R., & Alton, A. O. (1984). Learning to detect deception. *Journal of Personality and Social Psychology*, 46, 519-528.

Zuckerman, M., & Larrance, D. T. (1979). Individual differences in perceived encoding and decoding abilities. In R. Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences*. Cambridge, MA: Oelgeschlager, Gunn & Hain.