Cultural Influences on Facial Expressions of Emotion

David Matsumoto

Research demonstrates that facial expressions of emotion are both universal and culturally-specific, but our theoretical understanding of how cultures influence emotions has not advanced since Friesen's (1972) conception of cultural display rules. This article offers a theoretical framework by which to understand and predict how and why cultures influence the emotions. The model combines the cultural dimensions known as individualism and power distance with the social distinctions of ingroup-outgroup and status. Major issues in future theoretical and empirical work are also discussed.

DAVID MATSUMOTO is Assistant Professor of Psychology at San Francisco State University, San Francisco, CA 94132. The author wishes to thank Katia Cattaneo, Andrea Chang, Erika Font, Liz Schloss, Karen Supanich, and Jarrett Tom for their assistance, and the National Institute of Mental Health for a research grant (MH 42749-01). Special thanks to Masami Kobayashi.

Research has shown that cultures can affect nonverbal behaviors. Morris and his colleagues' (1980) work on gestures, for example, points to how cultures transform simple behaviors into many different messages. In our interactions with, and observations of, people from different cultures, we witness nonverbal displays with special meanings unique to their own culture or subculture.

Cross-cultural work on nonverbal behavior has centered on facial expressions of emotion because of their importance in social interaction (Ekman, 1982; Matsumoto, Wallbott, & Scherer, 1989). Research on facial expressions has shown how they are simultaneously universal and culturally-specific, resolving the debate concerning the universality of emotion. Facial expressions convey discrete emotions, making them the most specific and precise nonverbal signal system. Facial expressions also illustrate speech, regulate conversation, and provide social impressions.

Our theoretical understanding of how and why cultures influence facial expressions is limited. Ekman (1972) and Friesen's (1972) work on *cultural display rules* greatly extended our knowledge of the dual influence of biology and culture; but there is still no theory that predicts cultural differences and facial displays of emotion.

This article offers a theoretical framework for understanding cultural differences in emotional behavior. Its purpose is to expand ways of thinking about cultures, emotions, and facial expressions. I draw upon examples from the American and Japanese cultures; however, they are only two examples within a larger theoretical perspective that incorporates other cultures. The article also discusses key methodological points that should be given serious consideration in empirical work.

CROSS-CULTURAL RESEARCH ON THE EMOTIONS

Background[1]

For over 100 years, scientists argued whether facial expressions are universal

and pan-cultural or culture-specific. Darwin (1872) first suggested that emotional expressions were biologically innate and evolutionary adaptive, and those who agreed with Darwin were called *universalists (e.g., Eibl-Eibesfeldt, 1972; Lorenz, 1965; Tomkins, 1962); those who disagreed were called cultural relativists* (e.g., Birdwhistell, 1970; Klineberg, 1940; LaBarre, 1947; Leach, 1972; Mead, 1975). Convincing research from the past 20 years has provided evidence for both universal *and* culture-specific influences on the expression and perception of emotion.

The Universality of Facial Expressions of Emotion

The universal *recognition* of emotion by literate cultures was first documented by Ekman and Izard (Ekman & Friesen, 1971; Ekman, Sorenson, & Friesen, 1969; Izard, 1971). In their studies, facial expressions were shown to observers in different cultures who described the emotion portrayed. Universality was documented when all cultures agreed on the specific emotions portrayed in the faces. These findings have been replicated many times by other researchers using different stimuli (see review in Matsumoto, in press; Matsumoto et al., 1989).

Some writers argued that a shared visual input (such as the mass media) among the cultures sampled confounded these results. To answer these criticisms, Ekman and Friesen went to two preliterate tribes in New Guinea and asked them to select the facial expression, from three alternatives, that best conveyed the emotion depicted in short stories. The New Guineans selected the same expressions as did the members of the literate cultures, thereby replicating the earlier universality results.

The universal *expression* of emotion has likewise been documented. In a separate part of the New Guinea experiments, Ekman and Friesen (1971) read stories that described elicited emotions (e.g., "you feel sad because your child died"), and filmed the New Guineans as they showed what their facial expressions would be. These clips were shown to observers in the United States who were able to identify correctly which emotional contexts the expressions portrayed. This study is important because the expressions were posed by members of a visually-isolated culture with whom the observers had no previous exposure.

Universality in emotional expressions was also shown in a study using Japanese and Americans while they watched stress-inducing (bodily mutilation) and neutral films (nature scenes). When the subjects viewed the films alone, a concealed camera recorded their facial expressions, which were later measured using the Facial Affect Scoring Technique (FAST: Ekman, 1972). Americans and Japanese displayed virtually the same facial responses of disgust, fear, and sadness.

The Neurocultural Theory of Emotion

Given the overwhelming evidence in favor of universality, it was perplexing why noted authors such as Margaret Mead (1967) and Ray Birdwhistell (1970) believed that emotions were culture-specific. Ekman and Friesen reasoned that the universal expressions may be modified depending on social circumstances by cultural learning, which would lead observers to believe that the expressions were indeed culture-specific. They tested this idea in the second part of the American-Japanese study described above. A scientist was present as the subjects viewed the stress films again and their facial reactions were filmed. Despite universality in the first part of the experiment, the Japanese in the second part invariably masked their negative emotions with smiles, while the Americans continued to show signs of their negative feelings.

Ekman and Friesen accounted for these findings by positing their Neurocultural Theory of Emotional Expression. They suggested that the facial prototypes of each of the universal emotions are stored in a biologically innate facial affect program. Culturally-learned display rules would dictate the modification of the expressions depending on social circumstance. Thus, the American and Japanese subjects dis-

played different emotions when the scientist was present because different cultural display rules were operative (i.e., Japanese culture discourages displays of negative emotions in the presence of higher status others). When alone, there was no reason for display rules to modify expressions, and both Americans and Japanese displayed unmodified universal emotional expression.

Cultures also differ in emotional *perception*. Ekman et al. (1987) asked observers in 10 different cultures to rate how intensely they perceived universal emotions, and significant cultural differences were found despite predictions of cultural similarity (e.g., non-Asian cultures rated emotions more intensely than Asian cultures). Matsumoto and Ekman (1989) replicated these findings in an American-Japanese comparison and demonstrated that they were not influenced by the race or sex of the posers of the photos or by the lexical differences in the emotion words. Instead, these differences were accounted for by the display-rule concept; people modify their perceptions of emotion in the same manner that they learn rules for modifying expressions. That is, display rules in Japan not only attenuate emotional expression, but similarly downplay how emotional others are seen.

TOWARD A CROSS-CULTURAL THEORY OF EMOTION

Defining Cultures

After the original universality studies, cross-cultural research on the emotions reached a hiatus. Some cross-cultural studies did appear in the literature, but researchers turned their attention largely to questions of development, personality, and psychophysiology. Our theoretical understanding of emotions cross-culturally did not advance beyond Ekman and Friesen's Neurocultural Theory. No study since Friesen's (1972) has examined spontaneous emotional expressions cross-culturally, and only two cross-cultural studies have examined display rules (Matsumoto, 1990a, b). Substantial work remains to be done.

The absence of theory in this area is due in part to the lack of a conceptualization of "culture" in ways that understand and predict differences. Culture is usually operationalized by country, equating culture with nation. Cultures, though, are not geo-political states; they are socio-psychological entities. A definition of culture should include shared behaviors, beliefs, attitudes, and values communicated from generation to generation (Barnouw, 1985).

Cross-cultural researchers and theorists need to incorporate new operations of culture. This "attitude" requires the search for, and use of, meaningful socio-psychological dimensions of cultural variability that would enable us to relate cultural similarities and differences to theoretically useful constructs that cut across countries and, to a certain extent, races. Our understanding of cultures and emotion would improve because theories could rely on a few relevant dimensions rather than the traditional exposition of anecdotal and sometimes stereotypic impressions and observations of cultures. Cross-cultural research that still operationalizes culture by country would need to include the exposition of differences on theoretically useful cultural dimensions.

Work from anthropology has already identified some relevant classifying dimensions. For example, Mead (1967), Kluckholn and Strodbeck (1961), Hofstede (1980, 1983), and Triandis (1972) have identified Individualism-Collectivism (I-C), the degree to which a culture encourages individual needs, wishes, desires, and values in relation to group and collective ones. Individualistic cultures encourage their members to become unique individuals; individual goals and desires take precedence over collective needs. Collective cultures, by contrast, emphasize the needs of groups, and individual goals are subordinated to group goals. Individual identification in collective cultures is through group affiliation.

Another important dimension of cultural variability is known as Power Distance (Hofstede, 1980, 1983). PD refers to the degree to which cultures maintain hierar-

chical, status, or power differences, among its members. Cultures high on PD maintain status differences, while cultures low on PD minimize power or status differences among individuals. PD is conceptually orthogonal to I-C, although Hofstede (1980) has reported quite high negative correlations across cultures between these two dimensions.[2]

Hofstede's (1980, 1983) work-related values survey illustrates how countries differ on I-C and PD. Across 40 countries, the United States, Australia, and Great Britain ranked highest on Individualism. Pakistan, Columbia, and Venezuela ranked last, indicating their strong tendency towards collectivism. The Philippines, Mexico, and Venezuela ranked highest on PD, suggesting that these countries, cultures maintain hierarchical power differences among their members, while Denmark, Israel, and Austria ranked lowest, tending to minimize status differences.

Because individuals learn to modify their behavior on the basis of various social differences within their culture, the relationship between culture and social structure also needs to be incorporated into cross-cultural models of emotion. In relation to emotion, the influences of I-C and PD are best understood through social roles and structures known as "Ingroups-Outgroups" and "Status," respectively. Both these distinctions exist in all cultures and are particularly relevant to understanding within-culture differences in emotional behavior.

A Theoretical Framework for Understanding Cultural Differences in Emotional Expression

The Role of I-C in Ingroup and Outgroup Interactions. Individuals distinguish their emotional behavior according to ingroups and outgroups (see Brewer & Kramer, 1985; Messick & Mackie, 1989; Tajfel, 1982, for reviews of ingroups-outgroups). The familiarity and intimacy of self-ingroup relations provide the safety and comfort to express emotions freely and to tolerate a broader spectrum of emotional behaviors. Self-outgroup relationships lack this flexibility and tolerance. For example, people feel more comfortable in expressing emotions to their families than to strangers in public. The familiarity, intimacy, and previous history of tolerance in the family provides a context where emotions may be expressed that does not exist with strangers. Part of emotion socialization involves the learning of just who are ingroup and outgroup members and the appropriate behaviors associated with them.

Of course, there may be variations to this consistency. Some families, for example, may allow for the expression of certain emotions but not others. Some individuals may express emotions in public the way they do in familiar quarters. Drawing lines of appropriate and inappropriate contexts must serve to describe the modal scenario of display rules, while fully acknowledging the existence of sometimes considerable individual, familial, or sub-cultural differences to the mode.

Cultural differences in the meanings of self-ingroup and self-outgroup relationships produce cultural differences in emotional behavior (Triandis, Botempo, Villareal, Asai, & Lucca, 1988). Individualistic cultures have more ingroups, and their members are not attached to any single ingroup because there are numerous ingroups to which they can be attached. The survival of societies in individualistic cultures depends to a large degree upon the efficiency of the individuals rather than groups within that society. Members of collective ultures, however, belong to fewer ingroups, and their commitment to ingroups is greater than in individualistic cultures. The survival of societies in collective cultures depends much more on the effective functioning of groups rather than individuals.

Thus, self-ingroup relationships differ in individualistic and collective cultures in the degree of harmony, cohesion, cooperation, and conformity between the self and the group. Collective cultures foster a greater degree of conformity within their ingroups and sanctions usually exist for non-conformity. A high degree of conformity insures that individuals are identified and bonded with their ingroups, thus allowing groups to function maximally. Subjugating personal goals in favor of collec-

tive ones is a necessity of collectivism. Individualistic cultures foster less conformity within groups because they do not rely as much on identification with groups nor the effective functioning of its groups for survival.

It thus follows that *collective cultures will foster emotional displays of their members that maintain and facilitate group cohesion, harmony, or cooperation to a greater degree than individualistic cultures.* There are many ways by which this may be achieved, and their specification will require acknowledgment of the context and environment in which emotion is aroused, and the target of emotion. Consider three examples in which individuals may feel negative emotion when with a close colleague (ingroup). (1) If the emotion occurred in public (context), then it might be inappropriate to display it because of the ramifications to the group or individuals. (2) If the emotion occurred during a private conversation (context) and the target of the emotion was an ingroup member, then its display would be disharmonious to ingroup relations. (3) If, however, the target of the emotion was a rival group or individual (target), then its display may actually foster cohesion among the group members.

Cultures differ in the degree to which emotions are expressed depending on whether they facilitate or hinder group cohesion; collective cultures foster more emotions that produce cohesion than individualistic cultures. In the example above, Japanese would be more likely than Americans to suppress the negative emotion in example #2, because the Japanese culture (collective) fosters a greater degree of harmony within its ingroups. On the other hand, the Japanese would be more likely than Americans to express the negative emotion in example #3, because it would facilitate group cohesion.

Cultural differences also exist in self-outgroup relationships, although the differences may not be as pronounced as with self-ingroup relationships. Because their focus is on individuals rather than groups, self-outgroup realtionships in individualistic cultures are viewed more as one-to-one relationships (relationships among individuals). Thus, individualistic cultures foster cohesion among outgroup members. Collective cultures treat self-outgroup relationshiops differently than ingroup relationships because their focus is on groups rather than individuals. Collective cultures, therefore, will foster less cohesion-producing emotions to outgroup members.

For example, Americans are more likely than Japanese to display positive emotions (and not display negative emotions) to strangers or casual acquaintances, or even to new ingroup members. Americans consider the interaction with the individual on an individual basis (Triandis et al., 1987) and will not hesitate to display harmony-producing emotions. The Japanese, however, are very likely to display less of these emotions to outgroup members because they need not form cohesive bonds with them. This is a common experience among many "outsiders" who attempt to gain entrance to established ingroups in Japan.

Cultural differences in I-C suggest yet another difference in emotional expression as a function of ingroups-outgroups. Individualistic cultures allow (and encourage) their members to vary considerably in their degrees of emotional response. Members of individualistic cultures display a wider variety of emotional behaviors than members of collective ones. Collective cultures are not as tolerant of wide ranges of individual variation, and thus frown upon such variation.

These intra-cultural differences manifest themselves in the degree of difference between ingroups and outgroups. The difference in the amount of emotional behavior displayed between ingroups and outgroups in individualistic cultures will be quite large. Conversely, because collective cultures discourage such variation, the difference in the amount of emotional behavior displayed between ingroups and outgroups will be smaller.

For example, the emotional behaviors of both Americans and Japanese should differ depending on whether they were interacting with close friends (inqroup) or with strangers in public (outgroup). The difference between close friends and stran-

ers should be relatively large for Americans, because the American culture encourages a wider range of emotional response. Th difference between the same situations in Japan will be comparatively smaller because the Japanese culture tolerates less individual difference.

This section has presented hypotheses concerning two different aspects of emotion — between culture comparisons in the former case and between group (within culture) comparisons in the latter. For example, consider four hypothetical cells that represent the behaviors of individualistic and collective cultures with ingroups and outgroups (A = individualistic cultures and ingroups, B = individualistic cultures and outgroups, C = collective cultures and ingroups, and D = collective cultures and outgroups). The first set of hypotheses suggest a comparison between A vs. C and B vs. D. The second set of hypotheses involves comparisons between A vs. B and C vs. D.

Consider also some hypothetical data on the degree to which anger was expressed from an American (individualistic) and Japanese (collective) comparison of friends (ingroups) and strangers (outgroups). Americans may express anger at a level of 7.0 to their friends, but only 2.0 to strangers. The Japanese may express anger at a level of 5.0 to friends, but only 3.0 to strangers. The first set of hypotheses would suggest that the Japanese would express less anger than Americans with friends because it would threaten group cohesion (7.0 vs. 5.0). The first set of hypotheses would also suggest that the Americans express less anger with strangers than Japanese, because Americans are more likely to treat strangers as individuals rather than groups (2.0 vs. 3.0). The second set of hypotheses suggests that both Americans and Japanese would express less anger with strangers, and that the difference between friends and strangers for Americans (7.0 vs. 2.0) is larger than that for Japanese (5.0 vs. 3.0).

The Role of PD in Higher- and Lower-Status Interactions. Status is another important variable to consider because individuals modify their emotional displays according to self-other status or power relationships. Cultures differ in how status is differentiated; in free market societies such as the U.S., power and status is often related to money. But status can be attributed to other resources as well, such as the ability to make decisions that affect others or the ability to engage in behaviors that others cannot. As with ingroups-outgroups, a large part of emotion socialization involves learning appropriate emotional responses according to self-other status differences.

Cultural differences in emotional behavior with respect to status occur because of cultural differences in PD. *High PD cultures will foster emotions that preserve status differences.* For example, this might involve displaying positive emotions to higher status others and negative emotions to lower status others (Collins, 1984). This display rule maintains the power/status differences between the interactants. Transgression of these rules would threaten power distances.

By comparison, *low PD cultures foster emotions that minimize power/status differences.* Members of low PD cultures will express more positive emotions to lower status others and more negative emotions to higher status others. In low PD cultures, individuals are freer to display negative emotions to superiors without fear of reprimand or sanction. The importance of suppressing emotions that threaten status differences is minimized because status differences themselves are minimized.

For example, status differs among retail clerks, department managers, store managers, and regional directors in the retail business. Japanese department managers would not hesitate to display negative emotions to their retail clerks (lower status). The retail clerks, meanwhile, would not dare display negative emotions back to the department manager. This combination of rules clearly differentiates status differences between the department manager and the clerks. American department managers, however, would be more likely to treat their clerks as equals, minimizing status differences by displaying less negative emotion and more positive emotion to reduce friction.

Cultures also differ in the degree of difference between self-higher and self-lower interactions. Interaction difference according to status should be large in high PD cultures and smaller in low PD cultures. For example, the difference in the interaction between a department manager and retail clerks (lower status) as opposed to store managers (higher status) in Japan would be quite large. The difference among the same interactions in the U.S., however, would be smaller. This type of within- culture difference provides another basis for future tests of this model, and is similar to the claims made earlier concerning the range of emotions expected with I-C differences and ingroups-outgroups.[5]

SUMMARY, LIMITATIONS, AND FUTURE DIRECTIONS

The model presented above provides four main hypotheses that can be tested in future research. These are:

1. In ingroup situations, members of collective cultures will display more emotions that maintain and facilitate group cohesion, harmony, or cooperation than members of individualistic cultures. The opposite would occur in outgroup situations, where members of individualistic cultures would display more of these emotions than members of collective cultures.

2. Within individualistic cultures, the degree of difference in emotional display between ingroups and outgroups will be larger than the degree of difference between the same groups in collective cultures.

3. Members of high PD cultures will display more emotions that preserve status differences. The opposite would occur in low PD cultures; members of these cultures would display more emotions that minimize status differences.

4. Within high PD cultures, the degree of difference in emotional display between high- and low-status interactions should be large. Within low PD cultures, however, the degree of difference between high- and low-status interactions should be smaller.

We have only begun to further our understanding of cultural influences on emotion. There remains substantial work that not only highlights the theoretical and methodological assumptions that require further consideration, but also the limitations of the present approach to understanding the culture-emotion relationship. The remainder of this section notes issues pertinent to this area of research.

Refining Social and Cultural Distinctions

Serious consideration needs to be given to the exact type of social differentiations necessary to predict differences in emotional display. Ingroups-outgroups and status are both related to stable cultural dimensions and are commonly used differentiators of social distinctions. Thus, they lend themselves readily to predictions of cultural differences. They are not, however, the only socially-relevant constructs. Others, such as familiarity or intimacy, may prove useful. Similarly, I- C and PD may not be the most relevant cultural dimensions of variability with respect to emotion. Other dimensions, such as Uncertainty Avoidance (Hofstede, 1980, 1983), for example, may account for additional variability in emotionality. Additional dimensions may be particularly useful for accounting for emotion- specific findings (e.g., cultural differences in fear displays accounted for by Uncertainty Avoidance). Cultural differences in the facilitation of gender differences (Masculinity-Femininity) also need to be studied.

The Interaction of Cultural Dimensions

Future work should also address the necessity of incorporating both I-C and PD

There is no measure of PD on the individual level. Some scales from the California Psychological Inventory, such as Capacity for Status or Dominance may approximate PD. Other scales from other inventories might also be used to assess PD. The development of an individual scale for PD using items from these, as well as other, scales will facilitate cross-cultural research on emotions.

Refining Notions of Display Rules and Emotional Expressions

Finally, we need to consider display rules and emotional expressions as separate phenomena. Because these have not been critically examined cross-culturally since Ekman (1972) and Friesen's (1972) work, their distinctions are infrequently made explicit. Display rules should be considered *values* concerning the appropriateness of emotional display and *attitudes* concerning the behavioral response in relation to appropriateness. Emotional expressions are actual emotional behaviors. Display rules can be communicated from generation to generation via language; emotional behaviors, however, are communicated via observation (and at a basic level, genetically).

Evaluations of a behavioral response relative to appropriateness are necessary in the definition of display rules because judgments of expression appropriateness are insufficient to characterize a culture's attitude toward display. For example, subjects in two cultures may believe that a certain emotion in a certain situation is inappropriate. Subjects in the first culture may further believe that that appropriate response is to show nothing, while subjects in the second culture believe that the appropriate response is to smile. The two cultures have agreed on expression (in)appropriateness but disagreed on the behavioral response. Future research may address interesting questions concerning discrepancies between display rules and actual display.

CONCLUSION

The original research by Ekman, Friesen, and Izard answered critical questions concerning cultural universality and specificity that were fraught with debate and conflict. Although the documentation of the existence of display rules and universal emotions was a breakthrough in our understanding, it now appears that we still have a long way to go in learning about cultures and their effect on emotions. Although dormant for some time, systematic programs of cross-cultural research are again beginning to unravel the complex mesh between culture and emotion.

NOTES

[1] For a fuller review of the cross-cultural research conducted to date, see Matsumoto, Wallbott, and Scherer (1989).

[2] Hofstede (1980, 1983) has identified other dimensions of cultural variability. Uncertainty Avoidance refers to the degree to which cultures develop institutions or rituals to cope with ambiguity or uncertainty about the future. Masculinity-Femininity refers to the degree to which cultures foster gender differences among its members. These dimensions are not considered here because of the general acceptance of I-C and PD as major dimensions of cultural variability and because of their ability to account for general cultural differences on emotion.

[3] Emotional behavior is not the only modification made on the basis of status, at least in the United States-Japan comparison. In Japan, language, terms of address, and a host of nonverbal behaviors (e.g., gesture, posture) other than facial expressions differ depending on status differences. One of the most important socialization targets in Japan, for example, is *keigo*, or the use of the polite or honorific form of the language to one's superiors.

REFERENCES

Barnouw, V. (1985). *Culture and personality*. Chicago: Dorsey Press.

Birdwhistell, R. L. (1970). *Kinesics and context.* Philadelphia: University of Pennsylvania Press.

Brewer, M. B., & Kramer, R. M. (1985). The psychology of intergroup attitudes and behavior. *Annual Review of Psychology, 36,* 219-243.

Collins, R. (1984). The role of emotion in social structure. In K. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 385-396). New York: Erlbaum.

Darwin, C. (1872). *The expression of emotion in man and animals.* New York: Philosophical Library.

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations, 2,* 129-152.

Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. R. Jones (Ed.), *Nebraska symposium on motivation* (pp. 275-319). Lincoln: University of Nebraska Press.

Eibl-Eibesfeldt, I. (1972). Similarities and differences between cultures in expressive movements. In R. A. Hinde (Ed.), *Nonverbal communication.* Cambridge: Cambridge University Press.

Ekman, P. (1972). Universals and cultural differences in facial expressions of emotion. In J. Cole (Ed.), *Nebraska symposium of motivation,* 1971 (Vol. 19) (pp. 207-283). Lincoln: University of Nebraska, Press.

Ekman, P. (1982). *Emotion in the human face* (2nd edition). New York: Pergamon.

Ekman, P., & Friesen, W. V. (1971). Constants across cultures in face and emotion. *Journal of Personality and Social Psychology, 17,* 124-129.

Ekman, P., Friesen, W. V., O'Sullivan, M., Chan, A., Diacoyanni-Tarlatzia, I., Heider, K., Krause, R., LeCompte, W., Pitcairn, T., Ricci-Bitti, P., Scherer, K., Tomita, M., & Tzavaras, A. (1987). Universals and cultural differences in the judgments of facial expressions of emotion. *Journal of Personality and Social Psychology, 3,* 712-717.

Ekman, P., Sorenson, E. R., & Friesen, W. V. (1969). Pancultural elements in facial displays of emotion. *Science, 164,* 86-88.

Friesen, W. V. (1972). *Cultural differences in facial expressions in a social situation: An experimental test of the concept of display rules.* Unpublished doctoral dissertation, University of California, San Francisco.

Hofstede, G. (1980). *Culture's consequences.* Beverly Hills: Sage.

Hofstede, G. (1983). Dimensions of national cultures in fifty countries and three regions. In J. Deregowski, S. Dziurawiec, & R. Annis (Eds.), *Expiscations in cross-cultural psychology.* Lisse: Swets & Zeitlinger.

Izard, C. E. (1971). *The face of emotion.* New York: Appleton-Century-Crofts.

Kemper, T. (1984). Power, status, and emotions: A sociological contribution to a psychophysiological domain. In K. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 369-383). New York: Erlbaum.

Klineberg, O. (1940). *Social psychology.* New York: Henry Holt.

Kluckholn, F., & Strodbeck, F. (1961). *Variations in value orientations.* Evanston, IL: Row, Peterson.

LaBarre, W. (1947). The cultural basis of emotion and gestures. *Journal of Personality, 16,* 49-68.

Leach, E. (1972). The influence of cultural context on nonverbal communication in man. In R. A. Hinde (Ed.), *Nonverbal communication* (pp. 315-347). Cambridge: Cambridge University Press.

Levy, R. I. (1984). The emotions in comparative perspective. In K. Scherer & P. Ekman (Eds.), *Approaches to emotion.* New York: Erlbaum.

Lorenz, K. (1965). *Evolution and modification of behavior.* Chicago: University of Chicago Press.

Matsumoto, D. (in press). American-Japanese cultural differences in the recognition of universal facial expressions of emotion. *Journal of Cross-Cultural Psychology.*

Matsumoto, D. (1990a). *Cultural similarities and differences in display rules.* Manuscript submitted for publication.

Matsumoto, D. (1990b). *Culture and emotion: Display rule differences between the U.S., Poland, and Hungary.* Manuscript submitted for publication.

Matsumoto, D., & Ekman, P. (1989). American-Japanese cultural differences in judgments of facial expressions of emotion. *Motivation and Emotion, 13,* 143-157.

Matsumoto, D., Wallbott, H., & Scherer, K. (1989). Emotions in intercultural communication. In M. Asante & W. Gudykunst (Eds.), *Handbook of Intercultural and International Communication* (pp. 225-246). Beverly Hills: Sage.

Mead, M. (1967). *Cooperation and competition among primitive people.* Boston: Beacon.

Mead, M. (1975). Review of Darwin and facial expression. *Journal of Communication, 25,* 209-213.

Messick, D. M., & Mackie, D. M. (1989). Intergroup relations. *Annual Review of Psychology, 40,* 45-81.

Morris, D., Collett, P., Marsh, P., & O'Shaughnessy, M. (1980). *Gestures.* New York: Stein and Day.

Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology, 33,* 1-39.

Tomkins, S. S. (1962). *Affect, imagery, consciousness Vol. 1. The positive affects.* New York: Springer.

Triandis, H. C. (1972). *The analysis of subjective culture.* New York: Wiley.

Triandis, H. C., Botempo, 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, 4,* 323-338.