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World without Words: Messages from Face and Body

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INTRODUCTION

Communication is powerful: It brings companions to our side or scatters our rivals, reassures or alerts our children, and forges consensus or battle lines between us. The power of communication to draw others near or to drive them away derives as much from how we appear as from the language we deploy. Applied either artfully or naively, nonverbal expressions, gestures, and signs can complement language or swamp it. These silent messages, expressed through face and body, can communicate true motives and thoughts, or they can embellish, minimize, and disguise them.

Nonverbal communication has taken place if a behavior, signal, or sign emitted by person A has a systematic influence on person B. If A smiles and B smiles back, communication has occurred. The correct information need not always be delivered. What if A was smiling past B at C? By our definition, communication occurred between A and B, even though B was misinformed by it. If A then

gives "the finger" and B smiles back, we may have an additional type of communication problem—A and B may not share the same gesture meaning system! Notice that communication is no slave to a communicator's intentions. If A's finger gesture, which was directed at B, is inadvertently detected by C, C may move further away from A, even though A didn't intend for that to happen! If A then blushes, C may detect the embarrassment awash on A's face, regardless of A's attempt to look "cool" and disguise it.

Our broad definition of communication permits study of a wide range of nonverbal phenomena that, intuitively, appear communicative. By avoiding constraints posed by standards for verbal language, our definition allows us to examine human nonverbal communication within evolutionary and cross-species contexts, as well. This line of inquiry may ultimately reveal common denominators in the nature of human communication and sociability.

In this chapter we ask why some expressions, gestures, and appearances characterize people around the globe and why others are peculiar to specific cultures. We will not review every facial or body movement or sign that ever communicated anything to anyone. Rather, with our "*whys*" in mind, we will concentrate on theoretically-driven research endeavors that address our questions and our ultimate goals.

With this purpose in mind, we begin with an analysis of expressions of emotions, which reveal remarkable commonality across cultures. Next we probe gestures that are not necessarily linked to

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emotional states. Some of these signaling systems appear to have global dimensions but others reveal plenty of cultural specificity, including the kind that can get you into some pretty awkward social situations if you are not privy to a particular gesture meaning system. Thirdly, we investigate how people's orientation in space and facial appearance (physiognomy) convey important social messages. We will discover that theorists have had some explanatory success in attributing cross-cultural commonalities to our evolutionary origins but provide little guidance for understanding the rich overlay of cultural differences in nonverbal communication.

EXPRESSION AND EMOTION

Emotions overlap to some degree with essential fight or flight responses characteristic of species besides the human kind. But human emotion is understood to be more than a basic response system providing for quick getaways and effective defensive or aggressive responses. Feelings of happiness and sadness, surprise and interest, as well as anger and fear are considered to be "basic" human emotions by many Western researchers.

Part and parcel of the feeling-state part of emotion is expressive behavior. Charles Darwin (1872, 1965) recognized this in 1872 when he studied the expression of emotion in humans and animals. Darwin proposed that humans, like other species, evolved to express emotions in a stereotypical way and provided illustrative, pictorial records revealing similarities in human expressive behavior from New Guinea to London. A century later, researchers began to explore the full impact of Darwin's thesis for human emotional expression.

Current work has concentrated on facial expressions of emotion. In his neurocultural theory of emotion, Ekman (1972) proposed that a distinctive facial expression was associated with each basic feeling state, it being "hardwired" into the human emotion system. Therefore, facial expressions of emotion, as well as the emotion categories themselves and the physiological state they are associated with, should be culturally universal and convey the same information everywhere on the globe.

To provide evidence for his theory, Ekman (1972) photographed Euro-American adults who posed six "basic" emotions and presented this collection of pictures to individual members of different national/cultural groups, including Swedes,

Kenyans, Japanese, and people native to the highlands of New Guinea. Individuals viewing the photographs were asked to match each posed expression with an emotion label (anger, fear, happiness, sadness, disgust, or surprise) or story (i.e., in New Guinea, "... a woman sees a wild pig at her door...") descriptive of the facial expression displayed in the photograph (in this case, fear!). There emerged remarkable agreement in the matching responses, both within and between cultures: Just about everywhere, happy labels or stories were matched with the happy poses, anger labels or stories were matched with the anger poses, and so on. Furthermore, college students in the United States were able to match the photographed expressions of New Guinea highlanders with appropriate emotion labels.

Although agreement across cultures is generally high when individuals are asked to match emotion labels or stories with photographed expressions, more detailed studies of emotional expression have detected cross-cultural variability in peoples' responses to facial expressions. For example, researchers like Janet Kilbride and Matt Yarczower or, more recently, Aaron Wolfgang and Michelle Cohen, have found that agreement declines when perceivers judge expressions portrayed by individuals from relatively unfamiliar cultural backgrounds. Paul Ekman and his colleagues now report that perceptions of the intensity with which an emotion is expressed is also culturally variable. So far, these wrinkles in the fabric of cross-cultural agreement in emotion identification and expression have escaped a coherent explanation.

There are reasons why we should expect cross-cultural variability in the way emotions are expressed and interpreted. For one thing, the emotion categories construed as "basic" by Western behavioral scientists may not seem so "basic" to non-Westerners, as Wierzbicka (1986), an anthropologist, has recently argued. If asked, denizens of other places in the world might offer "embarrassment" or "chagrin" or "pain" or some sad-anger mix (the equivalent of "sanger?") as a "basic" emotion. Perhaps they would reject a "categories" approach to emotion altogether, insisting, like earlier Western researchers, that emotions would be best represented by "shades" along an emotion "wheel," similar to what is used to represent color.

Even if cultures resign themselves to the category approach currently proposed in the West, labels for the "basic" emotion categories may not translate readily into every language or dialect

around the world. "Basic" or prototypical exemplars of all sorts of things (e.g., color hues, chairs, tastes, faces), when accompanied by unambiguous verbal labels, tend to be more readily identifiable than relatively atypical versions with fuzzier, more subtle relationships to categories. Thus cultures that do not share the Western ideal of basic emotion categories may operate at somewhat of a disadvantage in the standard recognition task invoked by researchers who do.

Considering all these reasons to expect cross-cultural variability, the amount of agreement in the interpretation of posed emotions around the world is all the more impressive. Let's put this into common context: If you sat and watched foreign soap operas and did not understand any spoken words, do you think you could tell what was going on between the characters based on their expressions alone? If you predict "yes," you are probably right! Research by Krauss, Curran, and Ferleger (1983) revealed that college students from the United States, who did not speak a word of Japanese, nevertheless understood the emotional content of Japanese soap operas merely by watching the facial expressions of Japanese actors.

Why does emotion have a communicative aspect to it anyway? Why don't we just experience our internal feelings and not waste time transmitting our inner state to others? What possible advantage could there be in making our private emotional experience a social event? It turns out that emotions are contagious—your emotional expressions can in-

fect or imbue others with feeling states compatible with your own. The evolutionary advantage of instantaneous, reliable, vicarious transmission of emotional states for most social species probably relates to its function as an alarm system. Among ungulates, for example, the display of fear in reaction to the detection of a predator by one member

of a herd has the effect of physiologically readying each member for a flight to safety. Species more closely related to humans also transmit information about their internal states. If you observe monkeys, for example, you will discover that the emotional tenor of their social groups resembles a sea of feelings. Emotional responses ripple through a troop like waves: Expressions of calm begets calm, excitement instills excitement, and fear creates splashes of monkeys up against the trees.

Humans pass their emotions along, too, partly via unconscious, facial-muscle mimicry that occurs when we observe the expressive behavior of others. We may even stimulate emotions in ourselves to some extent by "putting on a face." These subtle muscle movements, though not always detectable by the naked eye, apparently cue felt emotion through some kind of feedback to the central nervous system. This kind of emotion communication may form the basis of the human capacity to empathize: By mimicking the expressions of others, we may generate similar feelings in ourselves. Even infants reveal a subtle form of empathic, emotional communication: Infants become upset and cry at the sound of another crying infant.

All over the world, adults access the capacity to communicate emotion for practical purposes. Trobriand Island, Yanomamo, Greek, German, Japanese, and U.S. mothers intuitively use emotion communication to regulate the moods of their infants: They "infect" babies with happy moods by displaying happy expressions (Kanaya, Nakamura, & Miyake, 1989; Keller, Schlomerich, & Eibl-Eibesfeldt, 1988; Termine & Izard, 1988). Thus for social species (like humans), the benefits of emotion communication are considerable!

In much of human communication, however, revealing truly felt emotion could compromise your goals. Sumo wrestlers know this. The introductions to these wrestling matches comprise ritualized, nonverbal displays of threat and strength designed to instill fear in worthy opponents and to privatize any anxiety about the outcome of the game. Keeping emotions secret and even feigning them are decisive elements in a wrestler's victory or defeat. Similarly, mothers who attempt to cheer their wailing infants may not feel as happy as they try to look! In truth, pure, spontaneously-felt emotion is rarely seen and rarely studied. For example, the photographed expressions used for the study of emotion communication around the world comprise mostly posed—not felt—emotions. Thus the study of human emotional expression may tell us

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more about the emotion system Western researchers propose to be universal than it tells us about everyday human nonverbal communication.

Cultures, in fact, regulate everyday emotional expression by inculcating norms for nonverbal behavior. These norms vary from place to place. For instance, Japanese college students inhibited negative expressions when they viewed a film which graphically portrayed a circumcision ritual—but only when an experimenter watched with them. Without an experimenter present, Japanese expressions resembled those of U.S. college students who reacted overtly negatively while viewing the film. Apparently, Japanese cultural “display rules” required the disguise of negative emotional expression when in another’s presence (Ekman, 1972).

Cultural display rules are prevalent. Women in the West are expected to smile frequently, regardless of how happy they may feel at the time. Young men from traditional Masai society in East Africa are encouraged to appear stony-faced and produce long, unbroken stares. It is considered appropriate for Muslim men from some West African communities to reveal only muted emotional reactions all around.

The bulk of human nonverbal communication appears to circumvent displays of truly felt emotion. What we know about the central nervous system’s control of emotions and expressions supports this view. Were you to tease out the systems in the brain that determined how you felt and how you looked, say, for example, at a funeral, you would wind up with nearly the whole brain unraveled in your lap; emotional, motor, perceptual, and cognitive systems included. Culture’s opportunity to influence the transmission of emotion begins as stimulus events (say, the death of a loved one) are appraised for emotional value (grief) and experienced. Facial muscle movements compatible with feeling states are refracted or reflected by the cultural lens (German? Irish?) fit to a cultural context (funeral? wake?). Culture thereby filters or “gates” what gets revealed on the face (sadness? happiness?).

GESTURES, SPACES, AND FACES

Like bumper stickers on cars, nonverbal messages proclaim one’s social rank (e.g., “A Woman’s Place Is In The Mall”), willingness to engage in (or avoid)

conflict (e.g., “This Vehicle Protected By A Pit Bull With AIDS”), age (e.g., “World’s Greatest Grandpa”), and sexuality (e.g., “Honk if Horny”). They do this via many different expressive modes or “channels”; for example, through facial and body movements, postures, orientations in interpersonal space, touch, voice pitch and tone, and even through static, morphological characteristics alone.

Unlike expressions of emotions, gestures and other signaling systems of the face and body are not necessarily linked to emotion states. A display of lowered brows, for example, may convey an aggressive intent to observers, but whether the individual performing the display actually feels angry (or feels hurt or threatened and wishes to disguise it) is not key to understanding the meaning of that gesture. Following the logic of ethologists, the interpretation of a gesture is gleaned from its effect: If the effect of an individual’s lowered brows is to make interactants beat a hasty retreat, then the gesture can be construed as a threat or dominance gesture. Similarly, if a fleeing individual displays a grimace, the expression may be interpreted as signaling submission. Thus inquiry about underlying emotion states is supplanted by probes of the display’s function and effect.

Given their emancipation from implied, universal, biologically-based, emotion states, should we expect gestures to have interpretations that are arbitrarily assigned to them by cultures? If so, different gestures might mean different things in different cultures. Likewise, similar gestures may convey different meanings in different cultures. There is evidence (some potentially embarrassing!) that gestures and their meanings are arbitrary, cultural conventions. For instance, shaking your head “no” to convey disagreement in the West would convey agreement in India. Just as awkwardly, the three-fingers up, thumb and index finger circled, “OK” sign in the West signals “money” in Japan, and invites a sexual encounter in much of South America.

Other gestures and signals appear to be universal in form, function, and meaning. For example, ethologist Ireneaus Eibl-Eibesfeldt filmed social interactions around the world and discovered that the eyebrow flash, a 1/6th second raise of the brows, characterized the nonverbal greeting displays of such diverse peoples as the Samoans, Papuans, Bushmen, Balinese, Europeans, and Native South Americans. Universal facial displays for flirting and

others conveying embarrassment were also identified from the filmed records made in these countries. More recently, a pancultural, wrinkled-nose facial expression signaling "contempt" has been identified by Paul Ekman and his colleagues.

Is it true, as the Crosby, Stills, and Nash tune goes, that "the smile is something everybody everywhere does in the same language"? Together with colleagues from around the world, I tested for universality in the meaning of the smile. Rather than ask whether people looked happy when they smiled, we wanted to know whether smiling made people look powerful or weak. We also investigated eyebrow gestures. We compiled photographs of White, Black, Hispanic, and Asian women and men instructed to smile or not smile and to raise or lower their eyebrows. Copies of the photographs were secured in notebooks which contained standardized, readily translatable instructions for data collectors to use with the respondents they contacted.

Respondents were volunteers from farms, villages, high schools, and universities representing eight nations: Thailand, Brazil, Colombia, Kenya, Zambia, Spain, Germany, and the United States. Using native languages, we asked respondents to distinguish dominant or influential people in our photographs from those who appeared submissive. A few miscommunications occurred. Some respondents initially thought they were voting for officials in an election. A few suspected we were from the CIA and our photographed faces portrayed criminals. But after all was straightened out, respondents readily made dominance judgments. When our photographs revealed smiling individuals, rarely did respondents from any country choose them as dominant: Unlike raised-brows, smiles were associated with submissiveness in virtually every western and non-Western country (Keating, 1985). We concluded that smiles forecast a lack of threat. They invite others to approach and diffuse potentially threatening encounters. The next time you catch yourself smiling in a social situation, think: Are you really *feeling* happy, or are you signaling friendliness, submitting to social contact or engaging in an interaction with a superior? Smiles, you see, are often "polite" rather than heartfelt!

The fact that a common ballad depicts human evolutionary history may explain mutual gestural meaning systems like the smile. Jan van Hooff theorized that the "grin" nonhuman primates use to signal submissiveness ("I'm no threat!") is a geneti-

cally-based, signaling "program" so useful to social interaction that humans have inherited a gesture similar in both form and function—the smile. Thus the human smile and the nonhuman primate submissive grimace are believed to be homologous. The data we collected, showing that smiling faces appeared submissive to groups of people on five different continents, are consistent with Van Hooff's claim. Eibl-Eibesfeldt noted that the eyebrow flash greeting characteristic of many human groups has parallels among some nonhuman primate species. Carroll Izard and O. Maurice Haynes have argued that the wrinkled-nose, "contempt" expression common to many nations is homologous to the infrahuman snarl.

There are also signaling systems shared by nonhuman primates and humans but regulated and expressed differently by people from diverse cultures. For example, gaze and interpersonal distance (including touch) may express either intimacy (friendliness) or aggressiveness (unfriendliness). Across nonhuman primate species and human cultures, direct gaze for an extended period of time tends to be arousing or even threatening (except, perhaps, to intimate friends), and often serves as an aggressive challenge. Gaze aversion diminishes the arousal or threat. Just the "right" amount of gaze exchange and avoidance successfully carries a friendly, social interchange. Similarly, interindividual distances regulate and express the degree of intimacy and threat individuals experience.

Do you think you could predict peoples' relationships in any country merely by observing the distances between them? E. Gregory Keating and I thought so, and, based on earlier work by sociologist Allan Mazur, we launched a study in Kenya to test the idea. We limited our data collection to an available study population in a natural (nonlaboratory) setting; men frequenting public parks in Nairobi. Our attempts to quietly and unobtrusively photograph pairs of individuals on park benches were unsuccessful: Given Kenya's political climate at the time and its ubiquitous police force, men were suspicious of anyone taking photographs. We had unintentionally made people in the park anxious and uncomfortable because of our efforts to be discreet, which, in turn, altered the natural seating patterns we wished to observe.

So we devised a new approach. When we returned to the public parks, we sported Hawaiian shirts and Bermuda shorts. Camera bags bulged from our shoulders. We took turns photographing

each other. After initial glances, people in the park dismissed us as typical tourists and resumed their normal behavior. By using a telephoto lens, my co-researcher and I aimed over one another's shoulders and took photographs of pairs of men on benches, insuring the men's anonymity by photographing them from behind. We then determined if they were acquainted by observing whether they conversed. Based on our data and Mazur's, we concluded that you can successfully predict whether men are friends or strangers in such diverse cities as Nairobi, Seville, San Francisco, and Tangier by measuring the distance between them as they sit on park benches: In all these places, interpersonal distances are closer when individuals are acquainted than when they are not.

Generally speaking, too much "signal" or arousal produced by one nonverbal channel is compensated for by reductions in signal or arousal manufactured by other channels. Thus people who sit near each other typically avoid prolonged gazes. Nevertheless, cultures are differently tolerant of gaze exchanges and interpersonal distances. In the Middle East, relatively extended gaze exchanges are considered appropriate during interchanges between men. The comparatively abbreviated gazes of North Americans are sometimes interpreted as expressing a lack of interest and thus appear impolite, even to the British, who characteristically share longer gazes than citizens of the United States are comfortable with. In many cultures, women and children generally avert their gaze in deference to men or elders. The young Masai men of East Africa know how to take full advantage of the power of the stare by engaging in interminably long "stare-down" contests, which can be quite unnerving to outsiders.

Many societies are more tolerant of less interpersonal distance than are Europeans, Americans, and most Africans. If you observe couples frequenting restaurants in Puerto Rico, for example, you will find that the rate of touching between men and women is much higher than it is among couples frequenting restaurants in New York City. Similarly, the distance at which men in Muslim societies converse is typically closer than elsewhere. In fact, it is customary for Muslim men to hold hands with one another as they stroll. I experienced the consequences of cultural differences in interpersonal distance while walking with a Pakistani colleague of mine. As we began chatting and walking down the streets of Honolulu, I found myself clumsily step-

ping off the sidewalk. Without realizing it, the closer my Muslim colleague moved toward me (seeking the interpersonal closeness he was comfortable with) the more I moved over streetside (seeking the interpersonal distance I was comfortable with). Balanced precariously along the curb (and not being any kind of gymnast), I would suddenly disappear from his view, having fallen into the street; perhaps not "the ugly American," but a clumsy one!

Cultures also differ in the way body movements are used to punctuate speech. For example, although both Italians and Jews embellish speech with circular motions of arms and hands, by measuring the radius of these movements you could predict whether the speaker was of Italian or Jewish descent: The larger the radius, the more likely it is that the speaker is Italian! Eyebrow movements also modulate spoken communication: Brow raises and frowns accentuate the content of speech. In some Asian countries, however, cultural practices resulting in the muting of brow movements date back centuries to Confucius, whose teachings about the acceptability of facial gestures were explicit. Confucius taught that dramatic brow movements were unattractive. In fact, women were instructed to inhibit brow movements so as not to give the appearance that "wriggling hairy caterpillars" bedecked their faces.

Without any movement at all, human faces can relay information that transcends culture. Similar to other species, the physiognomy or facial morphology characteristic of babyhood apparently has an innate appeal for us. According to ethologist Konrad Lorenz, infantile features like large eyes, large heads, small round chins, and rounded profiles serve as "releasing factors" and elicit caretaking responses by adults of the species. In essence, we evolved to see babies as "cute"! Moreover, these immature facial features convey the babylike messages of nonthreat, submissiveness, and weakness, whether they are displayed by babies or adults, as biologist R. Dale Guthrie observed. Thus, Leslie Zebrowitz McArthur and Diane Berry found that adults with babyish facial characteristics were perceived to have babylike psychological traits when judged by people in the United States and Korea. In contrast, my colleagues and I found that faces characterized by mature structures, like large jaws, bushy eyebrows, and small eyes, appeared dominant to raters in Thailand, Zambia, Kenya, Germany, Spain, the United States, Brazil, and

Colombia (Keating, 1985). Quite apart from any gestures or expressions, facial structures alone can convey messages of social submissiveness and dominance around the globe.

UNIVERSAL DIMENSIONS OF NONVERBAL MESSAGES

Is there a "deep structure" of meaning underlying all nonverbal communication? In other words, are there universal dimensions by which all nonverbal messages may be classified and understood? To resolve these questions, researchers typically recruit observers from diverse countries and ask them to rate different expressions and gestures on scales indexing a variety of psychological traits; for example, dominance, warmth, intelligence, aggressiveness, happiness, satisfaction, importance, and so on. Statistical measures determine whether trait ratings tend to cluster; that is, across expressions and gestures, if ratings for dominance are high, are ratings also high for aggressiveness and importance? If ratings for dominance are low, are they also low for aggressiveness and importance? If so, perhaps dominance-aggressiveness importance or "power" is a dimension along which meaningful distinctions between nonverbal messages are made.

Using these kinds of research strategies, Tsutomu Kudoh and David Matsumoto found that Japanese adults, similar to United States college students, assessed 40 body postures along three basic dimensions or themes: self-fulfillment, interpersonal positiveness, and interpersonal consciousness. However, different, "basic" dimensions have emerged from other studies. For example, William Gudykunst and Stella Ting-Toomey reported that the bulk of responses to affective nonverbal communication could be subsumed by these four dimensions: collectivistic-individualistic, uncertainty avoidance, masculine-feminine, and power distance. Two of these dimensions, power distance and individualism, successfully described cross-cultural appraisals of facial expressions of emotion, according to David Matsumoto. Then again, David Chan found that the "basic" dimensions used by Chinese students who rated facial expressions of emotions were different; positive versus negative emotions and open versus controlled styles of expressions. At present, there is no consensus as to whether universal meaning systems apply to non-

verbal communication and no consensus as to what their basic, underlying themes might be.

UNSOLVED MYSTERIES

Can we produce and interpret nonverbal messages correctly when communicating with people from cultures other than our own? Even for signals rooted in our evolutionary past, the answer is, at best, a qualified yes. For example, we have found that the meanings of gaze, interpersonal distance, smiling, and the eyebrow flash seem universal, although local cultures reveal varied tolerances and expectations for their display. Facial expressions of emotions are interpretable cross-culturally, but depending on where you travel, it may be more appropriate to portray an emotion you do not feel than to reveal one that you do. Cultures even regulate the messages that parts of our anatomy convey. For example, in order to promote a youthful appearance and character, conventional Western women use make-up techniques to mimic babylike facial traits, lining eyes to make them look round and large, thinning eyebrows, and lengthening eyelashes.

But *why* these cross-cultural differences? What kind of explanatory lens can make the kaleidoscopic array of cross-cultural variations in nonverbal communication understandable? Can we resolve consistent patterns relating features of culture to features of nonverbal behavior, and its meaning, expression, and control?

Perhaps in societies where access to resources, power, and prestige is heavily dependent upon cooperation among adult males, nonverbal modes of communication have adapted to secure close male bonds. In such societies, interpersonal distances, gaze, and gesture would operate to reinforce bonds between men. What would you predict? Close interpersonal distances and tolerance for long gazes? Striking differences in the nonverbal habits of men and women?

What would you predict for societies in which the outcomes of competition between individuals orders the social hierarchy? Would gazes, distances, and gestures foster less intimacy between individuals and especially between individuals from different social classes? Detailed analyses of nonverbal behavior reveal that members of dominant social groups often treat those perceived as "outsiders" in a less friendly, more defensive manner. Whether

intended or not, members of a group sometimes discriminate against individuals from other groups through nonverbal channels.

Perhaps there is some degree of local, biocultural selection for emotional control, as Jerome Barkow boldly proposed in 1980. Among some groups, individuals who excel in the ability to manipulate their emotional expressiveness might acquire extra social and economic benefits. Some research suggests that dominant or influential people are particularly adept at portraying the kinds of expressive behaviors that make for convincing appearances—whether conveying the truth or disguising it (Keating & Heltman, in press). What features of the human/environment interaction would likely favor such emotional control over spontaneity? Would predictions be the same for all emotions? For women and men, boys and girls?

Answers to these and other questions about the nature of nonverbal communication offers an intriguing future for cross-cultural researchers with a penchant for puzzles.

REFERENCES

- Darwin, C. E. (1872; 1965) *The expression of emotions in man and animals*. Chicago: University of Chicago Press.
- Ekman, P. (1972) Universals and cultural differences in facial expression of emotion. In J. Cole (Ed.) *Nebraska Symposium on Motivation* (vol. 19). Lincoln: University of Nebraska Press.
- Kanaya, Y., Nakamura, C. and Miyake, K. (1989) Cross-cultural study of expressive behavior of mothers in response to their five-month-old infants' different emotion expression. *Research and Clinical Center for Child Development, Annual Rpt 11*, 25–31.
- Keating, C. F. (1985) Human dominance gestures: The primate in us. In S. L. Ellyson and J. F. Dovidio (Eds.) *Power, dominance, and nonverbal behavior*. New York: Springer-Verlag.
- Keating, C. F. and Heltman, K. (in press). Dominance and deception in children and adults: Are leaders the best misleaders? *Personality and Social Psychology Bulletin*.
- Keller, H., Schlomerich, A. and Eibl-Eibesfeldt, I. (1988) Communication patterns in adult-infant interactions in western and non-western cultures. *Journal of Cross-Cultural Psychology*, 19, 427–445.
- Krauss, R. M., Curran, N. M. and Ferleger, N. (1983) Expressive conventions and the cross-cultural perception of emotion. *Basic and Applied Social Psychology*, 4, 295–305.
- Termine, N. T. and Izard, C. E. (1988) Infants' responses to their mother's expressions of joy and sadness. *Developmental Psychology*, 24, 223–229.
- Wierzbicka, A. (1986) Human emotions: Universal or culture-specific? *American Anthropologist*, 88, 584–594.