Nonverbal Expressions of Dominance and Power in Human Relationships

Chapter · January 2006

DOI: 10.4135/9781412976152.n15

2 authors:

Judee K Burgoon
The University of Arizona
315 PUBLICATIONS **13,849** CITATIONS
SEE PROFILE

Norah Dunbar
University of California, Santa Barbara
77 PUBLICATIONS **1,258** CITATIONS
SEE PROFILE

15

NONVERBAL EXPRESSIONS OF DOMINANCE AND POWER IN HUMAN RELATIONSHIPS

◆ Judee K. Burgoon
University of Arizona

◆ Norah E. Dunbar
California State University, Long Beach

Fundamental to all social species is the negotiation and expression of dominance and power relationships. Whether it is establishing a pecking order or a marching order, proclaiming privileges or prohibitions, exercising leadership or intimidation, humans, like other mammals, have evolved intricate means of signaling in any social encounter who are "one up" or "one down," who can "have" or "have not," who "goes before" or "goes after." Such signaling is a necessity for creating

Authors' Note: Preparation of this manuscript was supported by funding from the U.S. Air Force Office of Scientific Research under the U.S. Department of Defense University Research Initiative (Grant No. F49620-01-1-0394). The views, opinions, and/or findings in this report are those of the authors and should not be construed as an official Department of Defense position, policy, or decision.

and maintaining social order. And, as with so many other aspects of social behavior, much of this work is done nonverbally. It is the nonverbal signals of dominance-submission and power-powerlessness that constitute the focus of this chapter.

The social significance of nonverbal expressions of dominance and power is underscored by the panoply of scientific research and commentary it has attracted. Ellyson and Dovidio (1985) note such diverse tributaries as Charles Darwin's *The Expression of Emotion in Man and Animals* (1872/1965), Sigmund Freud's psychoanalytic treatises, works by personality and social psychologists in the early 1900s, and anthropological works by Ray Birdwhistell (1970) and Edward Hall (1959, 1966). A confluence of research on such interrelated constructs as status, authority, rank, control, influence, expertise, leadership, domineeringness, assertiveness, and aggressiveness has galvanized interest further in this fundamental social dimension. Though these various constructs are not synonymous, they all fall under what Edinger and Patterson (1983) referred to as the *social control* aspects of interaction and what Hall, Coats, and Smith LeBeau (2005) labeled the *vertical dimension* of human relationships.

In this chapter, we conceptualize dominance and power as incorporating not only reflexive, fixed action patterns that are under the control of external stimuli but also deliberate, adaptive, and changeable ones that are under the control of actors themselves (consistent with some ethologists and behavioral ecologists, e.g., Bernstein, 1980; Fridlund, 1991a, 1991b; Liska, 1992). Greater emphasis on the strategic aspects of dominance squares with our writings on interpersonal dominance as social, interactional, situational, intentional, and dynamic (Burgoon & Dunbar, 2000; Burgoon, Johnson, & Koch, 1998). This chapter is meant to further that discussion.

♦ *Conceptualizing Power, Dominance, and Status*

Decades of scholarly debate on what constitutes power have produced a consensual view of *power* as the capacity to produce intended effects, and in particular, the ability to influence the behavior of another person (Berger, 1994; Burgoon et al., 1998; Dunbar, 2004; French & Raven, 1959). Power takes many forms, and its multidimensional nature is reflected in the classification of power into three domains: power bases, power processes, and power outcomes (Olson & Cromwell, 1975). *Power bases* refer to resources such as rewards or knowledge that form the foundation for control over others (French & Raven, 1959). Several of the nonverbal display patterns to be discussed in this chapter are linked to these bases of power. *Power processes,* on the other hand, are the specific strategies (often nonverbal) used to exert power in interactions. *Power outcomes* are the compliance, conformity, cooperation, or obedience that one secures; that is, they are the actual influence that is achieved over others' beliefs and actions (Wheeless, Barraclough, & Stewart, 1983).

The conceptualization of *dominance* has varied according to disciplinary perspective. For personality psychologists, dominance is considered an enduring individual trait that designates one's characteristic temperament and behavioral predispositions (e.g., Cattell, Eber, & Tatsuoka, 1970; Ridgeway, 1987). Social skills are part of this equation, as the ability to be forceful, to take initiative, and to be expressive yet relaxed and poised are all facets of dominance displays that

correspond with characterizations of a skillful communication style (Burgoon & Dunbar, 2000). For biologists and sociobiologists, dominance designates a pattern of imbalance in interactions within a dyadic relationship (Hinde, 1978) or an organism's position in a social hierarchy (Sebeok, 1972), which accords it preferential access to resources (Omark, 1980). For sociologists, power and dominance are intertwined with *status,* which designates one's position in a socially agreed-upon hierarchy, something that is prevalent in all types of societies (Lips, 1991). A person's social position is often based on possession of commodities valued by the society (e.g., money, occupation, good looks) or position within a prestige hierarchy of relations in a social unit.

Communication and social psychology scholars largely view dominance as a social rather than organismic variable but *one that is defined at the interpersonal level* (i.e., in relation to another actor). Dominance constitutes one of two superordinate topoi of relational communication (Burgoon & Hale, 1984). Whereas power may remain latent, dominance is manifest and behavioral, referencing those communicative acts by which one actor's assertion of influence and control is met with acquiescence from another (Burgoon & Dunbar, 2000; Rogers-Millar & Millar, 1979). Moreover, even though dominance-submission is conceptualized as a universal dimension along which all social relationships can be arrayed, dominance displays may be instigated by a combination of individual temperament and situational features that encourage dominant behavior (Aries, Gold, & Weigel, 1983; Burgoon & Dunbar, 2000) and that are responsive to changing goals, interlocutors, situations, and time, among other factors. Thus, within the same episode, individuals may adjust their dominance-submission displays to changing circumstances.

Overall, power, dominance, and status are best conceptualized as interrelated though not synonymous. High status often gives the appearance of power and may facilitate dominance because one is endowed with legitimate authority, and legitimate authority confers on the individual the potential for greater influence (Rollins & Bahr, 1976). But high status does not guarantee the exercise of power or the display of dominant behavior, and dominance displays in the absence of legitimate power may fail to achieve influence (Ridgeway, Diekema, & Johnson, 1995). In this chapter, we focus on "power" and "dominance" and use them as shorthand for the dimensions of *dominance-submission* and *power-powerlessness.* We ask the reader to interpret dominance and power, not as discrete categories, but as continua that span the extremes of each dimensional pole and all points in between.

♦ *Operationalizing Power and Dominance*

Power and dominance can be understood more concretely through their typical operationalizations. Power is often operationalized as *potential* influence and measured as a perceptual variable, despite claims that perceptions do not necessarily constitute "real" power differences (e.g., Olson & Cromwell, 1975). Measures range from self-reports and overlapping circles that represent various levels of equality in a relationship, to role-plays, projective tests, and story writing (e.g., Berger, 1994; Dunbar & Burgoon, 2005a; Neff & Harter, 2002). Such measures often make little or no mention of nonverbal behavior.

By contrast, dominance is operationalized commonly in ways that incorporate nonverbal behavior, whether through self-reports of

an individual's own dominance, partner or observer perceptions of another person's dominance, or trained coders' ratings of particular markers of dominance (Dunbar & Burgoon, 2005b). Measurements can be made at the microlevel, in which case they entail objective physical behaviors, or at the macrolevel, in which case they entail holistic interpretations of whether an actor appears dominant or submissive (see Dunbar & Burgoon, 2005b, for samples of both types in separate studies and Burgoon & Le Poire, 1999, or Moscowitz, 1988, 1990, for examples of both measurement approaches in the same study). Dominant microbehaviors that have been measured include talk time, loudness, gaze, eyebrow raise, posture, arm and leg positions, physical assertiveness, smiling, threat gestures, proximity, and touch (e.g., Aries et al., 1983; Schwartz, Tesser, & Powell, 1982).

In contrast to examinations of particular behaviors made by an individual, relationally based measurement examines dominance at the dyadic level. A relational perspective distinguishes between *domineeringness*—individual attempts to control the interaction—and dominance. The former is assessed as an individual-level characteristic; the latter is defined according to pairs of adjacent conversational turns by which interlocutors position themselves as "one up" or "one down" vis-à-vis the other. Specifically, dominance is said to occur when one individual's assertive actions elicit complementary acquiescence by another. Hence, dominance or submission is defined according to "interacts" (pairs of acts) rather than individual acts (Rogers-Millar & Millar, 1979; for an incorporation of nonverbal cues and the application in group settings, see Siegel, Friedlander, & Heatherington, 1992). Overall, however, the operationalizations of power and dominance reflect their definitional differences. Power is often measured through an individual's perceptions based on his or her relationship to another, whereas dominance is measured by the behavioral manifestations of that power, whether recorded by third parties or the interactants themselves.

♦ *Theoretical Perspectives*

There is an array of theories and models that provide the foundation for principles of nonverbal dominance, power, and status. Organismic approaches view dominance and power as inhering in characteristics or behavioral patterns of individuals, and status as associated with classes of individuals. More social models envision dominance and power as transacted between actors at dyadic or group levels. Uniting these respective perspectives on social conduct is an interest in socially acquired behavioral routines. Several of these models are discussed in the following sections.

PERSONALITY AND EVOLUTIONARY PSYCHOLOGY

The history of personality assessment is rife with constructs that are linked explicitly or implicitly to dominance and power: *n*Dominance, *n*Power, authoritarianism, locus of control, and Machiavellianism, among others. Because personality is expected to be fairly stable, nonverbal indicators associated with personality traits should form stable behavioral profiles by which individuals could be typed. In support of this view, Gifford (1994) used a Brunswikian lens model to analyze 27 behaviors and concluded that eight were valid indicators that accounted for 30% of the variance in ambitious-dominant personality and 39% of the variance in lazy-submissive personality. Other research,

discussed in detail below, points to a fairly stable behavioral profile associated with expressivity, which some (e.g., Gallaher, 1992) have viewed as a personality style that would be associated closely with dominance or extraversion.

Ethology and evolutionary psychology perspectives, on the other hand, focus on physiological, anatomical, and behavioral features that are adaptive in responding to survival-related problems (see Floyd, this volume). Within the ethological perspective is a bifurcation between viewing dominance-submission as (1) inborn attributes possessed by individual organisms that confer on them greater or lesser survival success than other species mates or (2) emergent properties of social interaction that entail the ability to manipulate others and form alliances. Those who subscribe to the former viewpoint see in many intraspecific and interspecific displays vestiges of inborn tendencies to exert power and domination, to elicit deference and acquiescence, or to appease and submit to a stronger conspecific (see Andrew, 1972; Keltner, 1995; Smith, 1974; Thorpe, 1972). Displays such as fight-flight, or more abbreviated intention signals of approach-avoidance, are thought to be universal and innate, the result of natural selection leading to *ritualized* displays. Behaviors such as sprawling, relaxed postures and sweeping gestures that signal lack of fear among humans find parallels in the expansive posture or tail-in-the-air gait of other warm-blooded creatures.

Yet many behaviors that appear to be homologs across species do not necessarily share a genetic origin. Some signals may actually be *conventionalized,* the result of learning at critical periods in an animal's development (Fridlund, 1991a). Contemporary ethological work is shifting away from viewing dominance strictly as an innate pattern based on aggressiveness, toward one in which dominance is also socially negotiated; away from partitioning variance into separate individual and social components, toward understanding the interaction between organisms and their social environment (Burgoon & Dunbar, 2000). Representative of this view is the behavioral ecology perspective, a term coined by Fridlund (1991a, 1991b), that acknowledges the fundamentally social and communicative nature of these dominance displays, their inborn origins notwithstanding. Display forms and intensity are seen as responsive to the relationship between sender and receiver and no longer viewed as primitive reflexes but rather as inclinations, because unequivocally announcing one's intentions would risk heightened resistance and therefore be detrimental to survival.

Appeasement displays are linked closely to the submissive end of the dominance-submission continuum. Keltner, Young, and Buswell (1997) conjecture that emotional states such as modesty, shyness, embarrassment, and shame have all evolved from appeasement systems in other species and serve appeasement-related functions in humans. Appeasement signals are intended to placate or pacify others when social relationships are disrupted and conflicts arise. Violations of social rules or breeches of expected social distance may prompt appeasement gestures in the form of submissiveness, affiliative displays, or inhibitions of other actions. Acceptance of an appeasement gesture may take the form of reduced aggressiveness and increased social approach.

SOCIAL EXCHANGE MODELS

Social exchange models move dominance, power, and status from the personality or biological into a social arena and share the assumption that individuals will

act to maximize their interpersonal rewards and minimize their interpersonal costs (Rusbult & Arriaga, 1997; Thibaut & Kelley, 1959). Social exchange theories view power as a characteristic *of a relationship,* not an individual. Power is achieved dyadically when a person is valued as an exchange partner and there are few alternatives; people depend more on partners who hold high exchange value (Emerson, 1962). This power-dependence relationship may be expressed nonverbally through influence strategies related to making oneself appear more attractive as a partner or signaling one's interest or disinterest in an exchange relationship (Burgoon, Dunbar, & Segrin, 2002).

One social exchange theory that focuses on nonverbal cues specifically is *dyadic power theory* (DPT) (Dunbar, 2004; Rollins & Bahr, 1976). It proposes that perceptions of legitimate authority and access to resources increase individuals' perceptions of power compared with interaction partners. Perceptions of power, in turn, influence the use of dominant communication to control the interaction, which results in greater influence over decisions. In DPT, the relationship between power and dominance is theorized to be curvilinear, because power is sometimes latent rather than overt (Komter, 1989). For example, *powerless* individuals may remain silent if they fear retaliation or termination of the relationship from their more powerful partner (Cloven & Roloff, 1993; Leung, 1988). On the other hand, extremely powerful individuals may maintain control without ever having to initiate any control attempts (Bugental & Shennum, 2002; Christensen & Heavey, 1990; Dunbar, 2004). In a test of DPT, Dunbar and Burgoon (2005a) found that the most powerful individuals (i.e., with the most influence) were the most facially and gesturally expressive, the least controlled in their body actions, and perceived by their partners as nondominant.

GENDER POLITICS

Another social model of power is what has become known as the "gender politics hypothesis" (Henley, 1977, 1995; LaFrance & Henley, 1993; also see Hall, this volume). In this model, nonverbal behaviors are a primary means by which those in positions of power (usually men) exercise social control and interpersonal dominance. Henley argued that many behaviors that may seem unimportant are actually reflections of societal biases founded in power differences. For example, she claimed that women are more likely to exhibit circumspect demeanor, tense posture, gaze aversion or vigilant watching, more smiling, touch avoidance, and greater emotional expressivity. Henley drew a parallel between the behaviors associated with status and the behaviors associated with sex: "The same behaviors exhibited by superior to subordinate are those exhibited by men to women; and women exhibit to men the behaviors typical of subordinate to superior" (Henley, 1977, p. 180). Undergirding the gender politics hypothesis are three key premises: (1) that nonverbal differences between men and women are substantial; (2) that observed nonverbal patterns reflect social disparities; that is, nonverbal patterns are systematically correlated with degree of power or dominance; and (3) those who occupy the subordinate role (usually women) are more socially perceptive and vigilant by virtue of their position of greater weakness and vulnerability.

Research has documented large sex or gender differences in nonverbal behavior. For example, several reviews by Hall (1998, this volume; Hall et al., 2005) and others (e.g., Andersen, 1998; Burgoon & Dillman,

1995; LaFrance, Hecht, & Levy Paluck, 2003; Riggio, this volume) have found that, compared with men, women generally smile, gaze, nod, and gesture more; use more direct body orientation; receive but do not give more touch; are less relaxed posturally but also exhibit less shifting of body and feet; have more speech errors, and give more back-channel responses. Women are also more skilled decoders and encoders of nonverbal and emotional communication and exhibit nonverbal behaviors indicative of docility and openness to others.

Nevertheless, many of the empirical findings do not comport with the gender politics hypothesis. For example, the meta-analysis by Hall et al. (2005) found only four behaviors that were associated with higher actual verticality (their term for dominance, status, and power): closer physical distances to others, using more open body postures, interrupting more, and speaking more loudly (see also, Hall, Rosip, Smith LeBeau, Horgan, & Carter, 2006; Snodgrass, Hecht, & Ploutz-Snyder, 1998). The great heterogeneity in results and lack of parallelism between nonverbal gender differences and power, dominance, or status have led many scholars to conclude that research results on the gender politics hypothesis are equivocal, that there are more commonalities than differences between the sexes in dominance displays, that purported sex differences are often based on stereotypes, and that observed differences may not be attributable to women holding more subservient roles (Burgoon & Dillman, 1995; Dindia & Canary, 2006; Hall et al., 2005).

EXPECTANCY THEORIES

Other models of power draw upon expectations. For example, expectation states theory, which focuses on influence and task performance in groups, revolves around expectations that establish a "power and prestige order" (Berger, Conner, & Fisek, 1974; Ridgeway & Berger, 1986; Ridgeway & Walker, 1995). According to this theory, group members develop expectations about others' likely contributions to the task based on status characteristics, and these performance expectations confer an "expectation advantage or disadvantage," depending on whether the individual is expected to contribute favorably or unfavorably to successful task completion.

Status characteristics within this model involve any quality of actors around which evaluations of and beliefs about them come to be organized (e.g., age, sex, race, ethnicity, education, occupation, physical attractiveness, and intelligence; Berger, Rosenholtz, & Zelditch, 1980). Furthermore, expectation states theory differentiates between specific and diffuse status characteristics. *Specific* status characteristics are socially valued skills, expertise, or social accomplishments that imply a specific and bounded range of competencies, such as computer or mathematical skills. *Diffuse* status characteristics, such as gender or race, not only are associated culturally with some specific skills but also carry general expectations for competence that are diffuse and unbounded in range (Ridgeway & Walker, 1995). Many of these characteristics are signaled nonverbally through demeanor and appearance, making this theory especially relevant to nonverbal dominance. Those who possess status-valued external characteristics "are more likely (1) to have chances to perform, (2) to initiate problem-solving performances, (3) have their performances positively evaluated, and (4) are less likely to be influenced when there are disagreements" (Berger, Ridgeway, Fisek, & Norman, 1998, p. 381) than those lacking such characteristics or those who possess negatively valued ones.

Related to performance expectations are *reward expectations:* expectations

about whether the status characteristics are more or less likely to create benefits for individual perceivers or the group. Three classes of reward structures that have been identified are categorical, ability, and outcome (Ridgeway & Berger, 1986). *Categorical structures* are related to diffuse social status characteristics such as age, gender, or physical strength. These expectations are like the physical attractiveness stereotypes discussed earlier in their ability to engender attraction and confer credibility. *Ability structures* are associated with the specific task to be performed. Speaking with an authoritative voice or using dramatic gestures may imply greater confidence and expertise (i.e., greater ability). *Outcome structures* are associated with actual accomplishments during the group task. Those with high expectation advantages not only are more likely to take the initiative (talking first, establishing seating arrangements, etc.) and to be more participative but also are likely to be accorded more deferential treatment by others. In this manner, they will have more of their recommendations acknowledged and accepted.

Another expectancy-based theory is expectancy violations theory (EVT), which addresses the effects of noticeable deviations from both societal and individual expectations for nonverbal communication (Burgoon, 1978, 1995; Burgoon & Burgoon, 2001). EVT is relevant to nonverbal dominance and power in several respects. Nonverbal behaviors are the locus of the expectations (or their violations). Interpretations of nonverbal behavior may include dominance connotations, and effects may include perceived power and actual influence. Additionally, effects may be moderated by characteristics of the actor that include his or her status, dominance, and power.

In EVT, *expectancies* are enduring patterns of anticipated behavior for a particular individual that are appropriate, desired, or preferred. Deviant or unexpected behaviors, by virtue of their novelty, can heighten attention to the violation and the communicator committing the violation. *Reward valence* refers to whether interactions with the communicator are viewed as desirable or not. Someone who is physically attractive, has high status, controls valued resources, or gives positive feedback, for instance, should be more positively regarded than someone who is physically repulsive, has lower status, controls nothing of value, or gives negative feedback. Tests of EVT have demonstrated that for highly rewarding communicators, *violations* of expectancies can engender more positive interpretations of ambiguous or polysemic nonverbal behaviors, such that positive violations produce more favorable outcomes than expectancy confirmations. The same act committed by low-reward communicators can backfire, eliciting uncharitable evaluations that make it a negative violation. For low-reward communicators, expectancy *confirmation* is therefore best (Burgoon, 1991; Burgoon, Newton, Walther, & Baesler, 1989; Le Poire & Burgoon, 1994). Nonverbal indicators of status, power, and dominance may be understood in many contexts from an EVT frame to the extent that they impinge on reward valence, constitute expectancy violations, or are the result of violations.

SUMMARY

Scholars have identified many theoretical explanations for differences in status, dominance, or power. Whereas some theorists place the emphasis on personality or individual characteristics, many scholars consider perceptions of power and the resultant dominance displays to be interpersonal or relational in nature. They are often

influenced by context in that interactants' past experiential history or larger societal norms can influence the dynamic interplay of dominance-submission. This view allows us to examine the particular ways in which power-powerlessness or dominance-submission are typically manifest in interaction. The next section introduces three general principles for the nonverbal expression of dominance and power.

♦ *Nonverbal Strategies for Signaling Dominance-Submission and Power-Powerlessness*

Based on an extensive survey of the empirical nonverbal literature, Burgoon and colleagues (Burgoon, Buller, & Woodall, 1996; Burgoon & Hoobler, 2002) have proposed a number of principles (rules or abstractions) underlying the nonverbal expression of dominance and power. We group these principles into three general categories: (1) physical potency, (2) resource control, and (3) interaction control.

PHYSICAL POTENCY

Physical potency represents most closely the stereotypic views of what it means to signify dominance or submission, power or powerlessness. The components that are included within the general conception of potency are (1) threat, (2) size or strength, and (3) expressivity.

Threat. Perhaps the most obvious signals of dominance and submission recognized in the ethological literature (e.g., Keltner, 1995; Smith, 1974; Thorpe, 1972) are threat and fright displays, the former to intimidate and the latter to show timidity. These displays map onto the most primitive fight-flight and approach-avoidance response patterns (Keltner, Gruenfeld, & Anderson, 2003). Threats may signal not only readiness to strike but also the ability to fight if provoked (Maynard Smith, 1982). Less indicative of impending physical aggression, but still intimidating, are threat stares and penetrating gazes (Ellsworth, Carlsmith, & Henson, 1972; Exline, Ellyson, & Long, 1975; Le Poire & Burgoon, 1994). Although Hall et al. (2005) found that actual gaze was not associated with their dimension of verticality, it is possible that distinguishing among glares, stares, and timing of breaks in eye contact might produce differences. Hinde (1978, 1985) proposed that threat displays show conflicting intentions to attack and to escape. Such ambivalence and the likely development of finely graded rather than crude signals of threat may account for mixed empirical findings.

Another symbolic form of threat comes from silence, which can convert its target from personhood to nonperson (or object) status, with concomitant loss of belongingness and protection accorded members of the same social unit. As explained by Bruneau (1973), the "silent treatment" can force

> subordinates into awkward positions whereby they exhibit behaviors detrimental to their own cause—because their frustration is aggravated by silent response to their efforts. Silence as absence of response to or lack of recognition of subordinates may very well be the main source of protection of power in socio-political orders where physical restraint has lost repute. (p. 39)

Other signals intended to show subordination, supplication, and appeasement include stooped and contractive postures,

crouching, drawing the head into the shoulders, a hesitant gait, a slow and tentative approach, retreating body orientations, and exposing vulnerable body regions such as the jugular vein or palm (Mehrabian, 1981). Targets of impending attack may rely on these fright signals to show submission symbolically. Those low in power and in subservient roles may also exhibit far less expressivity due to a host of inhibitory and avoidant tendencies associated with the position of vulnerability (Keltner et al., 2003).

Size and Strength. All species appear to respond to speed, agility, and energy expenditure as indicators of potency. By contrast, lethargy and torpidity are associated typically with weakness and ineffectualness. Thus, any nonverbal action that entails a high degree of intensity and dynamic action is likely to connote power and to secure avoidance, flight, or submission from less dominant others. In the human repertoire, height, weight, bulk, and muscularity may signal sufficient physical strength and endurance to render the displayer victorious in a physical conflict. Other nonverbal behaviors that connote size or strength are rapid gait, erect postures, firm stances, animated gesturing, loud and deep-pitched voices, rapid speaking tempo, clear articulation, and clothing or hair styles that create a bulky appearance (Apple, Streeter & Krauss, 1979; Burgoon, Birk, & Pfau, 1990; Hall et al., 2006; Mehrabian, 1981; Schwartz et al., 1982). Size and strength can be signaled also by "strength in numbers," such as a celebrity's entourage, a gang member's comrades, or an army battalion's compatriots.

Implicit signals of strength or weakness are facial and vocal maturity or babyishness. Nonverbal appearance features that connote maturity or immaturity, and actions that emphasize or deemphasize these features, may capitalize on innate responses to visible physical attributes of potential harm or harmlessness that can be deciphered from a safe distance. Mature faces are broader ones with square jaws, larger noses, more prominent eyebrows, thinner lips, and smaller ratios of eye size to face size, whereas baby-faced features included more rounded and softer features, smaller noses, less pronounced brows and eyebrows, larger lips, and larger eye sizes relative to total face size (Keating, 1985, this volume; Rhodes & Zebrowitz, 2002; Zebrowitz, Fellous, Mignault, & Andreoletti, 2003). Baby-faced and smiling faces are seen as submissive, weak, and helpless; mature and unsmiling or frowning faces with furrowed brows are seen as dominant, threatening or aggressive. Similarly, high-pitched, thin voices are babyish; deep-pitched, louder, and more resonant ones are considered mature (Montepare & Zebrowitz-McArthur, 1987).

Expressivity. In addition to threat and size, dominance has been associated with more energetic and animated behavior such as variable facial expressions, inflected speech, high-pitched voice, head shaking and nodding, frequent and broad gestures, wide smiles peppy, not sluggish or lethargic movement, erect posture quick movement, upright torso, vertical sitting posture, more expansive and emphatic postures and vocalizations, loud voice, vigorous behaviors, heavy step, legs wide apart, elbows akimbo, hands away from body, emphatic and centrifugal gestures and movements, and more coordinated nonverbal behavior (e.g., smooth voice, fluid and graceful walk, rhythmic speech, flowing voice and speech) (Gallaher, 1992). These behaviors connote a high degree of actual or potential energy expenditure.

Gifford (1994) found several behaviors associated with *perceptions* of individuals

as more dominant-ambitious (direct head orientation, lack of forward head tilt, more head shaking, direct trunk orientation, less arm wrap, more gestures, more self-manipulations, right leg orientation, more right leg lean, and more leg extension). Additionally, gregarious-extraverted individuals, who also might be regarded as dominant, displayed more nods, less arm wrap, more gestures, and more left leg lean; those individuals *perceived* as gregarious-extraverted displayed most of the same behaviors as associated with dominance plus more nods, smiles, forward lean, and hand extension and less left-hand verticality, leg openness, and leg movement. In general, then, behaviors that connote a high degree of actual or potential energy expenditure are associated with dominance and power.

RESOURCE CONTROL

In addition to the displays of potency just described, nonverbal cues signaling dominance and power do so because they constitute displays of "resource holding potential" (Fridlund, 1991a). Animals signify privileged access to such valued resources as food, protective shelter, or fecund females. In humans, these may be signified through (1) command of space, (2) precedence, (3) prerogative, and (4) possession of other valued commodities. We discuss each of these briefly.

Command of Space. Powerful people have access to more space, larger territories, and more private territories (Remland, 1981), which also afford their occupants or owners greater insulation from intrusion by others and more space in which to display other visible indications of their status and power. They may display more territorial markers (i.e., tangible objects that signify a space is "taken"), have easy access to others, and may have others' access regulated by gatekeepers—people such as receptionists who can prevent intrusions. In addition to access to space, dominance may also be expressed by taking up more physical space (i.e., a combination of enlarging one's size and occupying more space). Dominant individuals often sit in more open body positions (as opposed to defensive positions), adopt stances with arms akimbo, and use more expansive gestures. Submissive people take up less space by contracting their postures, sitting with closed arm and leg positions, and using diminutive, if any, gestures (Burgoon, Buller, Hale, & deTurck, 1984).

Precedence. Precedence refers to "who gets to go first" and likely extends from an evolutionary basis (Burgoon & Hoobler, 2002). Just as alpha males in the animal kingdom are the first to feast on prey, so dominant humans are the first to appropriate the spoils of war. High-ranking personages also have the first right of refusal on acquiring socially valued goods and services. The principle of precedence is reinforced through rituals that symbolically signify one's social position, such as entering a space first, walking ahead of others of lower rank, going to the head of the line, leading a parade, or being given a first turn.

Prerogative. People may mark their power through having the "right" to behave in certain ways. Consistent with EVT (Burgoon, 1978; Burgoon & Burgoon, 2001; Burgoon & Ebesu Hubbard, 2005) and the gender politics hypothesis, dominant, powerful, and high-ranking personages are free to deviate from norms and expectations, and may actually accrue more power by doing so, compared with those in subordinate positions, who must

conform to social norms or risk adverse consequences. Dominant individuals have the prerogative to initiate touch as well as to determine the frequency, intensity, and intimacy of touch (Burgoon, 1991; Burgoon et al., 1989; Burgoon & Hale, 1988), and people high in verticality commonly interact at closer interaction distances than those low in verticality (Hall et al., 2006).

Possession of Valued Commodities. Beyond the survival-related resources of food, shelter, and safety are the goods and services that every society designates as status symbols. Those who can afford luxuries and other status symbols, or who can appropriate such valued intangibles as another's time, should accrue both rank and influence. Thus, symbolic actions that mark one's position explicitly or implicitly in a status hierarchy may be socially ritualized extensions of an evolutionary-based principle of resource control. Together with the other means just mentioned, the possession of valued items works to reflect people's power, dominance, and status.

INTERACTION CONTROL

Like the prerogative to control resources, powerful people are able to control interactions with others (e.g., by summoning others to their home turf, calling for and adjourning meetings, and changing the direction of a conversation). They can dictate that interactions take place in their territory, which may elicit deferential and submissive behavior from visitors, especially if the territory is personalized with plaques, framed degrees, elegant furnishings, and other symbolic markers of status (Edney, 1976). Those who interact on their "home court" gain greater confidence typically from the familiarity of their surroundings. This territorial advantage is so universally recognized that international diplomacy and other serious negotiations are slated to take place on neutral ground to prevent any one party from having a territorial advantage. Among the principles that enable interaction control are (1) centrality, (2) elevation, (3) initiation, (4) nonreciprocation, and (5) task performance cues.

Centrality. Centrality of position in a social setting arguably affords the central figure not only insulation from threats on the perimeter of the group but also maximal capacity to monitor and influence the actions of those in immediate proximity. Within social interactions, leaders sit or stand in more central positions in a group, such as the head of a table or wherever visual access to the most people is maximized (Sommer, 1971). Centrality may also be marked by gaze patterns. Submissive or low-status individuals look at superiors more when they are listening (as a sign of attention and respect) than when they are speaking, whereas powerful people show relatively more gaze at others when speaking than when listening. This produces what is called a *visual dominance ratio* (Exline et al., 1975). Central positioning can also confer status on those whose offices, workspaces, parking spaces, and the like are centrally located. For example, offices that are located closer to the "center of power" are typically inhabited by higher-status organizational members, with the center of power defined by the office inhabited by the highest-ranking member of all. Interestingly, however, this principle is overridden by the principle of privileged access. Where the central territory has been "contaminated" (Lyman & Scott, 1967), as in deteriorating inner cities and graffiti-ridden neighborhoods, powerful and dominant individuals seek and secure more protected spaces. Thus, centrality can be

associated with the most *and* least powerful in a society.

Elevation. Like physical mass and size that convey control of the horizontal sphere, height may convey control of vertical space. Elevated perches give predators an advantage over their prey; raised thrones, daises, theater "box seats," pedestals, penthouses, top-floor offices, and prison guard posts give people greater surveillance and control over others. The power bias toward height "is deeply embedded in the visual grammar of western civilization. For a speaker, it has functional advantages. The elevation . . . gives him or her a much larger field of vision. Elevation gathers and keeps attention" (King, cited in Jaworski, 1993, p. 14). Behaviors that increase height differentials, such as standing over another person or "looking down at someone," likewise function as dominant behaviors. It follows, then, that tall people would be seen as more powerful than short people (Frieze, Olson, & Good, 1990). Social rituals, such as bowing to the higher status individual in Japan (Nixon & West, 1995), have evolved to accord elevation symbolically to individuals of higher rank.

Initiation. A corollary to the principle of precedence discussed earlier is initiation. Deciding where people will sit or stand, changing interactional distances, initiating touch, starting or stopping conversation, and setting interaction rhythms are all interaction-based extensions of the "going first" principle. For example, dominant individuals may initiate handshakes, dictate conversational distancing, and set the pattern for seated or standing interaction. Sheer proximity to, and surveillance of, more individuals enables a powerful person to dictate who talks to whom and when. By being accorded the privilege of speaking first, they then can nominate the next speaker through eye contact, gesturing, or direct verbal address. They also may control the conversational floor by initiating and switching topics, picking up conversational turns more rapidly, interrupting others, and talking longer (Hall et al., 2005; Wiemann, 1985), which results in them talking more, influencing others more, and being perceived as leaders (Leffler, Gillespie, & Conaty, 1982).

Nonreciprocation. Another form of conversational control is *nonreciprocation* of others' nonverbal behavior patterns. Whereas people on an equal plane may signal their equality through matching and mirroring of another's kinesic, proxemic, and vocalic patterns, dominant individuals may meet another's smile with a blank expression or counter an expressive voice with a bored one. Dominant individuals may also become the *zeitgeber,* the one who sets the interactional pace and to whom others orient as they attempt to establish interactional synchrony (Burgoon, Stern, & Dillman, 1995). All these patterns work to reflect the lack of power symmetry.

Task Performance Cues. A final principle of conversational control is a culmination of many of the foregoing principles applied to a task context. Task performance cues are nonverbal indicators of status and task-related ability from which group members infer one's potential to contribute effectively to a group's task performance (Berger et al., 1980; Ridgeway & Walker, 1995). High-status apparel, possession of artifacts that are culturally defined status symbols (e.g., an expensive briefcase or pen), and actions indicative of centrality, privileged access, precedence, and prerogative, connote likely expertise, experience, and leadership. These set up expectations for the person to contribute favorably to a group's task and set into motion a self-fulfilling

prophecy whereby such individuals are accorded more and longer speaking turns, are allowed to initiate or change topics, and thus exert more influence on the group, which then reinforces their prestige and position of power. In this manner, the "strong" may become stronger and the "weak," weaker.

♦ *Conclusions*

The expression of dominance-submission and power-powerlessness is a form of communication that has a universal vocabulary. The theories, lines of research, and principles for nonverbal display of dominance and power that we have reviewed here point to a strong grounding in ethological and related behavioral ecology perspectives. Even those forms of expression that have clear social derivations and constitute symbolic rather than sign behavior often have more primitive biological analogs. Thus, the study of nonverbal expressions of dominance, power, and status offer insights more generally into societal hierarchies and social functioning.

Notwithstanding the evidence of universality and possible innate foundations for many power and dominance displays, we share with Hall et al. (2006) a conviction that such displays are also responsive to culture, context, relationships, social motives, and the psychological makeup of actors. This responsivity to a panoply of antecedent factors helps explain what might otherwise seem to be a dismal record of nonverbal expressions of status, power, and dominance in predicting the vertical dimension of human relationships. The need for flexibility and adaptability for all species argues for behavioral repertoires that are rich in alternative forms of expression and that can be adjusted or substituted as circumstances demand. We, therefore, should not expect simple and unidimensional behavioral profiles of status, dominance-submission, or power-powerlessness. Moreover, because human actors are not bundles of instincts but rather active agents who choose among alternative strategies to accomplish their goals, variability in forms of dominance and power expressions is to be expected.

The nonexhaustive review we have presented here illustrates the various ways in which nonverbal behaviors can be enacted to accomplish these ends. These include principles for displaying physical potency, signifying resource holding potential, and accomplishing interaction control. We hope this review promotes insights into what behavioral patterns carry dominance-submission and power-powerlessness connotations as well as what theoretical explanations can be advanced for understanding their meanings and impact. It provides a template for future research into the critical role played by nonverbal behavior in negotiating this elemental facet of social life.

♦ *References*

Anderson, J. R. (1998). *Cognitive psychology and its implications*. New York: Freeman.

Andrew, R. J. (1972). The information potentially available in mammal displays. In R. A. Hinde (Ed.), *Non-verbal communication* (pp. 179–204). Cambridge, UK: Cambridge University Press.

Apple, W., Streeter, L. A., & Krauss, R. M. (1979). Effects of pitch and speech rate on personal attributions. *Journal of Personality and Social Psychology, 37,* 715–727.

Aries, E. J., Gold, C., & Weigel, R. H. (1983). Dispositional and situational influences on dominance behavior in small groups. *Journal of Personality and Social Psychology, 44,* 779–786.

Berger, C. R. (1994). Power, dominance, and social interaction. In M. L. Knapp & G. R. Miller (Eds.), *Handbook of interpersonal communication* (2nd ed., pp. 450–507). Thousand Oaks, CA: Sage.

Berger, J., Conner, T. L., & Fisek, M. H. (1974). *Expectation states theory: A theoretical research program.* Cambridge, MA: Winthrop.

Berger, J., Ridgeway, C. L., Fisek, M. H., & Norman, R. Z. (1998). The legitimation and delegitimation of power and prestige orders. *American Sociological Review, 63,* 379–405.

Berger, J., Rosenholtz, S. J., & Zelditch, M., Jr. (1980). States organizing processes. *Annual Review of Sociology, 6,* 479–508.

Bernstein, I. S. (1980). Dominance: A theoretical perspective for ethologists. In D. R. Omark, F. F. Strayer, & D. G. Freedman (Eds.), *Dominance relations* (pp. 71–84). New York: Garland.

Birdwhistell, R. (1970). *Kinesics and context: Essays on body motion communication.* Philadelphia: University of Pennsylvania Press.

Bruneau, T. J. (1973). Communicative silences: Forms and functions. *Journal of Communication, 23,* 17–46.

Bugental, D. B., & Shennum, W. (2002). Gender, power, and violence in the family. *Child Maltreatment, 7,* 56–64.

Burgoon, J. K. (1978). A communication model of personal space violations: Explication and an initial test. *Human Communication Research, 4,* 129–142.

Burgoon, J. K. (1991). Relational message interpretations of touch, conversational distance, and posture. *Journal of Nonverbal Behavior, 15,* 233–258.

Burgoon, J. K. (1995). Cross-cultural and intercultural applications of expectancy violations theory. In R. L. Wiseman (Ed.), *Intercultural communication theory* (International and intercultural communication annual, Vol. 19, pp. 194–214). Thousand Oaks, CA: Sage.

Burgoon, J. K., Birk, T., & Pfau, M. (1990). Nonverbal behaviors, persuasion, and credibility. *Human Communication Research, 17,* 140–169.

Burgoon, J. K., Buller, D. B., Hale, J. L., & deTurck, M. (1984). Relational messages associated with nonverbal behaviors. *Human Communication Research, 10,* 351–378.

Burgoon, J. K., Buller, D. B., & Woodall, G. W. (1996). *Nonverbal communication: The unspoken dialogue.* New York: McGraw-Hill.

Burgoon, J. K., & Burgoon, M. (2001). Expectancy theories. In P. Robinson & H. Giles (Eds.), *Handbook of language and social psychology* (2nd ed., pp. 79–101). Sussex, UK: Wiley.

Burgoon, J. K., & Dillman, L. (1995). Gender, immediacy and nonverbal communication. In P. J. Kalbfleisch & M. J. Cody (Eds.), *Gender, power, and communication in human relationships* (pp. 63–81). Hillsdale, NJ: Erlbaum.

Burgoon, J. K., & Dunbar, N. (2000). An interactionist perspective on dominance-submission: Interpersonal dominance as a dynamically, situationally contingent social skill. *Communication Monographs, 67,* 96–121.

Burgoon, J. K., Dunbar, N. E., & Segrin, C. (2002). Nonverbal influence. In M. Pfau & J. P. Dillard (Eds.), *The persuasion handbook: Theory and practice* (pp. 445–473). Thousand Oaks, CA: Sage.

Burgoon, J. K., & Ebesu Hubbard, E. (2005). Expectancy violations theory and interaction adaptation theory. In W. Gudykunst (Ed.), *Theorizing about intercultural communication* (pp. 149–171). Thousand Oaks, CA: Sage.

Burgoon, J. K., & Hale, J. L. (1984). The fundamental topoi of relational communication. *Communication Monographs, 51,* 193–214.

Burgoon, J. K., & Hale, J. L. (1988). Nonverbal expectancy violations: Model elaboration and application to immediacy behaviors. *Communication Monographs, 55,* 58–79.

Burgoon, J. K., & Hoobler, G. (2002). Nonverbal signals. In M. L. Knapp & J. Daly (Ed.), *Handbook of interpersonal communication* (pp. 240–299). Thousand Oaks, CA: Sage.

Burgoon, J. K., Johnson, M. L., & Koch, P. T. (1998). The nature and measurement of

interpersonal dominance. *Communication Monographs, 65,* 309–335.

Burgoon, J. K., & Le Poire, B. A. (1999). Nonverbal cues and interpersonal judgments: Participant and observer perceptions of intimacy, dominance, composure, and formality. *Communication Monographs, 66,* 105–124.

Burgoon, J. K., Newton, D. A., Walther, J. B., & Baesler, E. J. (1989). Nonverbal expectancy violations and conversational involvement. *Journal of Nonverbal Behavior, 13,* 97–120.

Burgoon, J. K., Stern, L., & Dillman, L. (1995). *Interpersonal adaptation: Interaction adaptation theory.* New York: Cambridge University Press.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). *Handbook for the sixteen personality factor questionnaire (16PF).* Champaign, IL: Institute for Personality and Ability Testing.

Christensen, A., & Heavey, C. L. (1990). Gender and social structure in the demand/withdraw pattern of marital conflict. *Journal of Personality and Social Psychology, 59,* 73–81.

Cloven, D. H., & Roloff, M. E. (1993). The chilling effect of aggressive potential on the expression of complaints in intimate relationships. *Communication Monographs, 60,* 199–219.

Darwin, C. (1965). *The expression of the emotions in man and animals.* Chicago: University of Chicago Press. (Original work published 1872)

Dindia, K., & Canary, D. J. (Eds.). (2006). *Sex differences and similarities in communication* (2nd ed.). Mahwah, NJ: Erlbaum.

Dunbar, N. E. (2004). Dyadic power theory: Constructing a communication-based theory of relational power. *Journal of Family Communication, 4,* 235–248.

Dunbar, N. E., & Burgoon, J. K. (2005a). Perceptions of power and interactional dominance in interpersonal relationships. *Journal of Social and Personal Relationships, 22,* 231–257.

Dunbar, N. E., & Burgoon, J. K. (2005b). The measurement of nonverbal dominance. In V. Manusov (Ed.), *Beyond words: A sourcebook of methods for measuring nonverbal cues* (pp. 361–374). Mahwah, NJ: Erlbaum.

Edinger, J. A., & Patterson, M. L. (1983). Nonverbal involvement and social control. *Psychological Bulletin, 93,* 30–56.

Edney, J. J. (1976). Human territories: Comment on functional properties. *Environment and Behavior,* 8, 31–47.

Ellsworth, P. C., Carlsmith, J. M., & Henson, A. (1972). The stare as a stimulus to flight in human subjects: A series of field experiments. *Journal of Personality and Social Psychology,* 33, 117–122.

Ellyson, S. L., & Dovidio, J. F. (1985). Power, dominance, and nonverbal behavior: Basic concepts and issues. In S. L. Ellyson & J. F. Dovidio (Eds.), *Power, dominance, and nonverbal behavior* (pp. 1–28). New York: Springer.

Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review, 27,* 31–41.

Exline, R. V., Ellyson, S. L., & Long, B. (1975). Visual behavior as an aspect of power role relationships. In P. Pliner, L. Krames, & T. Alloway (Eds.), *Nonverbal communication of aggression* (pp. 21–52). New York: Plenum.

French, J. R. P., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150–167). Ann Arbor, MI: Institute for Social Research.

Frieze, I. H., Olson, J. E., & Good, D.C. (1990). Perceived and actual discrimination in the salaries of male and female managers. *Journal of Applied Social Psychology, 20,* 46–67.

Fridlund, A. J. (1991a). Evolution and facial action in reflex, social motive, and paralanguage. *Biological Psychology, 32,* 3–100.

Fridlund, A. J. (1991b). Sociality of solitary smiling: Potentiation by an implicit audience. *Journal of Personality and Social Psychology, 60,* 229–240.

Gallaher, P. (1992). Individual differences in nonverbal behavior: Dimensions of style. *Journal of Personality and Social Psychology, 63,* 133–145.

Gifford, R. (1994). A lens-mapping framework for understanding the encoding and

decoding of interpersonal dispositions in nonverbal behavior. *Journal of Personality and Social Psychology, 66,* 398–412.

Hall, E. T. (1959). *The silent language.* Garden City, NY: Anchor/Doubleday.

Hall, E. T. (1966). *The hidden dimension* (2nd ed.). Garden City, NY: Anchor/Doubleday.

Hall, J. A. (1998). How big are nonverbal sex differences? The case of smiling and nonverbal sensitivity. In D. Canary & K. Dindia (Eds.), *Sex differences and similarities in communication* (pp. 59–81). Mahwah, NJ: Lawrence Earlbaum Associates.

Hall, J. A., Coats, E., & Smith LeBeau, L. (2005). Nonverbal behavior and the vertical dimension of social relations: A meta-analysis. *Psychological Bulletin, 131,* 898–924.

Hall, J. A., Rosip, J. C., Smith LeBeau, L., Horgan, T. G., & Carter, J. D. (2006). Attributing the sources of accuracy in unequal-power dyadic communication: Who is better and why? *Journal of Experimental Social Psychology, 42,* 18–27.

Henley, N. M. (1977). *Body politics: Power, sex, and nonverbal communication.* Englewood Cliffs, NJ: Prentice Hall.

Henley, N. M. (1995). Gender politics revisited: What do we know today? In P. J. Kalbfleisch & M. J. Cody (Eds.), *Gender, power, and communication in human relationships* (pp. 27–61). Hillsdale, NJ: Erlbaum.

Hinde, R. A. (1974). *Biological bases of human social behavior.* New York: McGraw-Hill.

Hinde, R. A. (1978). Dominance and role—two concepts with dual meanings. *Journal of Social and Biological Structures, 1,* 27–38.

Hinde, R.A. (1985). Expression and negotiation. In G. Zivin (Ed.), *The development of expressive behavior* (pp. 103–l16). Orlando, FL: Academic Press.

Jaworski, A. (1993). *The power of silence: Social and pragmatic perspectives.* Newbury Park, CA: Sage.

Keating, C. F. (1985). Human dominance signals: The primate in us. In S. L. Ellyson & J. F. Dovidio (Eds.), *Power, dominance, and nonverbal behavior* (pp. 89–108). New York: Springer.

Keltner, D. (1995). The signs of appeasement: Evidence for the distinct displays of embarrassment, amusement, and shame. *Journal of Personality and Social Psychology, 68,* 441–454.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110,* 265–284.

Keltner, D., Young, R. C., & Buswell, B. N. (1997). Appeasement in human emotion, social practice, and personality. *Aggressive Behavior, 23,* 359–374.

Komter, A. (1989). Hidden power in marriage. *Gender & Society, 3,* 187–216.

LaFrance, M., Hecht, M. A., & Levy Paluck, E. (2003). The contingent smile: A meta-analysis of sex differences in smiling. *Psychological Bulletin, 129,* 305–334.

LaFrance, M., & Henley, N. M. (1993). On "oppressing hypotheses" or differences in nonverbal sensitivity revisited. In L. Radtke & H. Stam (Eds.), *Power/gender: Social relations in theory and practice* (pp. 287–311). London: Sage.

Leffler, A., Gillespie, D. L., & Conaty, J. C. (1982). The effect of status differentiation on nonverbal behavior. *Social Psychology Quarterly, 45,* 153–161.

Le Poire, B. A., & Burgoon, J. K. (1994). Two contrasting explanations of involvement violations: Expectancy violations theory versus discrepancy arousal theory. *Human Communication Research, 20,* 560–591.

Leung, K. (1988). Some determinants of conflict avoidance. *Journal of Cross-Cultural Psychology, 19,* 125–136.

Lips, H. M. (1991). *Women, men and power.* Mountain View, CA: Mayfield.

Liska, J. (1992). Dominance-seeking language strategies: Please eat the floor, dogbreath, or I'll rip your lungs out, okay? In S. A. Deetz (Ed.), *Communication yearbook 15* (pp. 427–456). New Brunswick, NJ: International Communication Association.

Lyman, S. M., & Scott, M. B. (1967). Territoriality: A neglected sociological dimension. *Social Problems, 15,* 236–249.

Maynard Smith, J. (1982). *Evolution and the theory of games.* Cambridge, UK: Cambridge University Press.

Mehrabian, A. (1981). *Silent messages: Implicit communication of emotions and attitudes* (2nd ed.). Belmont, CA: Wadsworth.

Montepare, J. M., & Zebrowitz-McArthur, L. (1987). Perceptions of adults and children with childlike voices in two cultures. *Journal of Experimental Social Psychology,* 23, 331–349.

Moskowitz, D. S. (1988). Cross-situational generality in the laboratory: Dominance and friendliness. *Journal of Personality and Social Psychology, 54,* 829–839.

Moskowitz, D. S. (1990). Convergence of self-reports and independent observers: Dominance and friendliness. *Journal of Personality and Social Psychology, 58,* 1096–1106.

Neff, K. D., & Harter, S. (2002). The role of power and authenticity in relationship styles emphasizing autonomy, connectedness, or mutuality among couples. *Journal of Social and Personal Relationships, 19,* 835–857.

Nixon, J. C., & West, J. F. (1995). Intercultural preparation for managers going to Japan. *Mid-American Journal of Business, 10,* 57–64.

Olson, D. H., & Cromwell, R. E. (1975). Power in families. In R. E. Cromwell & D. H. Olson (Eds.), *Power in families* (pp. 3–11). Beverly Hills, CA: Sage.

Omark, D. R. (1980). The group: A factor or an epiphenomenon in evolution. In D. R. Omark, F. F. Strayer, & D. G. Freedman (Eds.), *Dominance relations* (pp. 21–64). New York: Garland.

Remland, M. (1981). Developing leadership skills in nonverbal communication: A situational perspective. *Journal of Business Communication, 18,* 18–31.

Rhodes, G., & Zebrowitz, L. A. (Eds.). (2002). *Facial attractiveness: Evolutionary, cognitive, and social perspectives.* Westport, CT: Ablex.

Ridgeway, C. L. (1987). Nonverbal behavior, dominance, and the basis of status in task groups. *American Sociological Review, 52,* 683–694.

Ridgeway, C. L., & Berger, J. (1986). Expectations, legitimation, and dominance behavior in task groups. *American Sociological Review, 62,* 218–35.

Ridgeway, C. L., Diekema, D., & Johnson, C. (1995). Legitimacy, compliance, and gender in peer groups. *Social Psychology Quarterly, 58,* 298–311.

Ridgeway, C. L., & Walker, H. A. (1995). Status structures. In K. S. Cook, G. A. Fine, & J. S. House (Eds.), *Sociological perspectives on social psychology* (pp. 281–310). Boston: Allyn & Bacon.

Rogers-Millar, E. L., & Millar, F. E. (1979). Domineeringness and dominance: A transactional view. *Human Communication Research, 5,* 238–246.

Rollins, B. C., & Bahr, S. J. (1976). A theory of power relationships in marriage. *Journal of Marriage and the Family, 38,* 619–627.

Rusbult, C. E., & Arriaga, X. B. (1997). Interdependence theory. In S. Duck (Ed.), *Handbook of personal relationships* (2nd ed., pp. 221–250). Chichester, UK: Wiley.

Schwartz, B., Tesser, A., & Powell, E. (1982). Dominance cues in nonverbal behavior. *Social Psychology Quarterly, 45,* 114–120.

Sebeok, T. (1972). *Perspectives in zoosemiotics.* The Hague, The Netherlands: Mouton.

Siegel, S. M., Friedlander, M. L., & Heatherington, L. (1992). Nonverbal relational control in family communication. *Journal of Nonverbal Behavior, 16,* 117–139.

Smith, W. J. (1974). Displays and messages in intraspecific communication. In S. Weitz (Ed.), *Nonverbal communication: Readings with commentary* (pp. 331–340). New York: Oxford University Press.

Snodgrass, S. E., Hecht, M. A., & Ploutz-Snyder, R. (1998). Interpersonal sensitivity: Expressivity or perceptivity? *Journal of Personality and Social Psychology, 74,* 238–249.

Sommer, R. (1971). Spatial parameters in naturalistic research. In A. H. Esser (Ed.), *Behavior and environment: The use of space in animals* (pp. 281–290). New York: Plenum.

Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups.* New York: Wiley.

Thorpe, W. H. (1972). The comparison of vocal communication in animals and man.

In R. A. Hinde (Ed.), *Non-verbal communication* (pp. 27–48). Cambridge, UK: Cambridge University Press.

Wheeless, L. R., Barraclough, R., & Stewart, R. (1983). Compliance-gaining and power in persuasion. *Communication yearbook, 7* (pp. 105–145). Newbury Park, CA: Sage.

Wiemann, J. M. (1985). Interpersonal control and regulation in conversation. In R. L. Street Jr., & J. N. Cappella (Eds.), *Sequence and pattern in communicative behaviour* (pp. 85–102). London: Edward Arnold.

Zebrowitz, L. A., Fellous, J-M., Mignault, A., & Andreoletti, C. (2003). Trait impressions as overgeneralized responses to adaptively significant facial qualities: Evidence from connectionist modeling. *Personality and Social Psychology Review, 7,* 194–215.