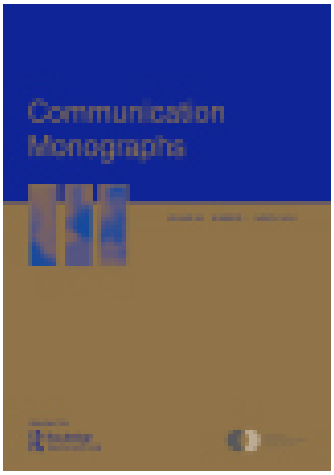

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The nature and measurement of interpersonal dominance

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The Nature and Measurement of Interpersonal Dominance

Judee K. Burgoon, Michelle L. Johnson, and Pamela T. Koch

The construct of dominance has been utilized in a variety of ways in scholarly research, which has led to conceptual confusion and operational problems. Particularly problematic has been a stereotypically narrow and pejorative conceptualization. Grounded in a review of literature from several different disciplines, this essay advances a broader conceptualization that focuses on dominance as an interpersonal communication construct. It also reports two alternative measurement strategies and initial validational work, as well as offers recommendations for operationalizing dominance in communication work. **Key words:** Dominance, Power, Interpersonal Influence

The construct of dominance holds an indisputably primary place in understanding the actions of both humans and other species. Intertwined with power, not only is it central to many theories and typologies that explain and predict interaction behaviors and their consequences (French & Raven, 1959; Kelley & Thibaut, 1978), but it also defines the very nature of interpersonal relationships. From a synthesis of literatures ranging from the ethological and anthropological to the psychotherapeutic, linguistic, and sociological, Burgoon and Hale (1984) positioned dominance-submission (also variously labeled as power and relational control) as one of two superordinate dimensions among twelve fundamental topoi of relational communication by which people come to define and understand their interpersonal relationships.

One would think that such centrality would imply a high degree of theoretical and operational consensus on what is meant by dominance, but such is not the case. The construct suffers from ambiguity and conflicting characterizations because researchers have frequently side-stepped formal definitions and relied instead on implicit understandings of the construct. For example, related concepts, such as power and status, are often used interchangeably with dominance. The problem is compounded by the fact that dominance is frequently equated with aggressiveness and threat. For example, Ridgeway (1987) defines dominance as "behavior directed toward the control of another through implied or actual threat" (p. 685), and Omark (1980) describes dominance relations as ones in which an aggressive act is followed by submissive one. From this perspective, dominance is an undesirable communication style to be tempered or eschewed. We contend that this unduly restrictive perspective is biased toward the negative.

These definitional dilemmas, which are by no means confined to the field of interpersonal interaction (see, e.g., Bernstein, 1981), are compounded by an array of operationalizations. Some measures are oriented toward establishing pecking or rank orders in nonhuman species. Others, designed for humans, are oriented toward assessing dominance as an individualized, psychological trait rather than an interactional and situational variable. As a result, interpersonal researchers interested in

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dominance are faced with utilizing measures not specifically designed to assess dominance in interaction or creating ones that fit their particular needs. Using an existing non-interaction based measure has the obvious pitfall of being a poor assessment of the phenomenon of interest. Creating an ad hoc measure to fit the needs of one particular study adds to the already fragmented set of measures. A third option is clearly needed.

The purposes of the present research were to remedy this lack of clear definition, at least within the interpersonal communication domain, to create instruments suitable for measuring interaction dominance that tap into a richer conceptualization of the construct, and to test these measures empirically. We first review several bodies of literature that have offered varying perspectives and operationalizations of dominance, with an eye toward proposing a broader conceptualization of interpersonal dominance. We then present results of two studies developing different scaling approaches to measuring dominance and its conceptual opposite, submission. The first is a macro-level, impressionistic measure that reflects the attributes associated with dominance and is intended to serve as a benchmark against which communication-based measures can be tested. The second is a behaviorally oriented, meso-level measure, appropriate for capturing general dominance strategies, which can also be used to cross-validate more objective, micro-level measures. We believe the second measure, which is a reliable, multidimensional, factor-based instrument, is superior to other available instruments for measuring interaction-based dominance.

Distinguishing Dominance from Related Constructs

Before elaborating the conceptual domain and defining properties of dominance, we draw preliminary distinctions between dominance and such interrelated terms as aggressiveness, argumentativeness, assertiveness, status, and power, in light of the "considerable ambiguity surrounding the meanings of these constructs and their relationships to each other" (Berger, 1994, p. 451).

Aggressiveness refers to a particular class of destructive, attacking behavior that may include displays of hostility, verbal abuse, and physical violence. Although some equate dominance with the ability to stress another (see, e.g., Ridgeway, Berger, & Smith, 1985), dominant individuals may, but need not, resort to the extremes of aggressiveness. Argumentativeness and assertiveness refer to more constructive means of advancing one's own objectives–in the former case, by defending one's position on issues or refuting others' stance on those issues and in the latter case, by expressing one's rights, feelings, beliefs, and interests in a legitimate, honest, and nonoffensive manner. (See Infante & Rancer, 1995, and Stern, 1990, for elaboration of these constructs.) All three forms of expression can be subsumed under dominance, as will be discussed shortly, but are not isomorphic with it, inasmuch as dominance may be expressed and displayed in other ways.

Although status is sometimes confused with power and dominance, it generally refers to one's position in a social hierarchy (Ellyson & Dovidio, 1985). Status may accord one a degree of power and the "right" to exercise dominance, but high-status individuals are not inevitably powerful or dominant, nor do displays of dominance inevitably place one higher in a status hierarchy.

Power and dominance are even less clearly differentiated from one another. Being highly correlated (Harper, 1985), they are frequently grouped under a single heading (Ellyson & Dovidio, 1985) and often used synonymously with one another.

A survey of some of the varying definitions illustrates the substantial variety and conceptual overlap within and across the two concepts. Power has been variously defined as (1) a quality possessed by an individual or system, such as freedom from subjugation (Blau, 1964), a motive for "for having impact on others, arousing strong emotions in others, or maintaining reputation and prestige" (Winter, 1988, p. 510), or the ability to access valued resources, to influence others, and to affect social outcomes (e.g., Burr, Ahern, & Knowles, 1977; Henley, 1977, 1995; Raven, 1965), (2) the means or interaction processes through which power is manifested (e.g., Collins & Raven, 1969; Rogers-Millar & Millar, 1979); and (3) the outcomes of those interaction processes, including such indicators as actual acquisition of prized resources or reproductive success (Shively, 1985). Likewise, definitions of dominance have variously emphasized it as (1) a quality of an individual, such as holding a preeminent or ascendant position (*American Heritage Dictionary,* 1973); (2) an interactional and relationally-based process that lessens the communication role of another (e.g., Markel, Long, & Saine, 1976; Millar & Rogers, 1987); or (3) a label for exercising the most interpersonal control or influence (Dillard, Palmer, & Kinney, 1995; Liska, 1992). None of these definitions clearly delimits the distinctive qualities of these related concepts.

One remedy to the conceptual and operational problems that arise from conflating dominance with power is to view power as the regnant construct (Berger, 1994). In support of this approach, Burgoon and Dillman (1995) write that, "Because *power* is broadly defined as the ability to exercise influence by possessing one or more power bases, dominance is but one means of many for expressing power" (p. 65). Dominance, then, is not the exclusive route to power, but rather only one of several alternative means by which power is effectuated. Neither are powerful individuals inevitably expected to behave in dominant ways. A further distinction is that power often refers to mere potentialities for influence (as reflected in such concepts as power bases, power motives, and locus of control), whereas dominance more often is tied to actual behavior. Hence, while power enables the display of dominance, and dominant behavior may solidify power, dominance and power, though correlated, are not interchangeable concepts. (See Berger, 1994, and Burgoon & Dillman, 1995, for more elaboration on these distinctions.)

Alternative Perspectives for Defining the Interpersonal Dominance Construct

The most extensive theorizing and conceptual elaboration of dominance *as a communication construct* can be found in three relatively distinct bodies of literature, one emanating from sociobiological perspectives, one reflecting psychological or psychobiological approaches, and one originating in interactional and communication orientations. We review each in turn. In preface, our intention is not to represent the three as exhaustive or mutually exclusive perspectives on the construct of dominance-submission, but instead to bring to light the many facets of this fundamental dimension of human relations.

Dominance from a Sociobiological Perspective

As a biological construct, both the definitions and the origins of dominance have yet to be clearly specified. Mitchell and Maple (1985) comment that, "Notions of this term still are not well formed, as reflected in the different definitions used by various

researchers in the field" (p. 49). Nevertheless, a unifying assumption in the ethological literature is that dominance represents a universal feature of social organization as reflected in rank or position in a social hierarchy (Sebeok, 1972) and preferential access to resources (Liska, 1988). It is also commonly assumed that dominance and submission are manifested behaviorally through a set of displays, naturally selected over the course of evolution, that humans share with other vertebrate species and that have come to function as distinctive communicative signals (Andrew, 1972; Keating, 1985; Smith, 1974). Burgoon and Hale (1984) note that dominance and submission may be located, respectively, toward the attack and surrender ends of the fight-flight continuum. Biologically speaking, a dominant animal is one "whose sexual, feeding, aggressive, and social behavior patterns are carried out without deference to its associates," whereas the subordinate animal's behavior is influenced or inhibited by its more dominant associates (Ng, 1980, p. 126). Dominance is rooted in innate drives for survival and in motives for "rank" and esteem (Eibl-Eibesfeldt, 1989). Among humans, striving for success and avoidance of failure may be homologous or analogous to dominance-striving in other primates (Weisfeld & Linkey, 1985).

Dominance and submission displays also undergird the process of social organization and promote survival of the species (Bernstein, 1981). Social organizations commonly arise in response to the desire for a particular resource (e.g., food, a mate, money, territory). When competition for priority access to the resource ensues between individuals or groups unfamiliar to each other, the dominance ranking of the individuals must be established and signalled (Gauthreaux, 1981). The universality of these signals is implicit in the fact that the social dominance hierarchies so common in primate groups (Shively, 1985) are also common in human groups. Members of primate and human groups both know where they stand and who has the highest status or most dominance (Hogan, 1979, as cited in Smither, 1993).

Two alternative forms of dominance have been identified in the literature. One associates dominance with such factors as heritability, age, and birth order that confer greater control or access to privileged resources (Cattell, Eber, & Tatsuoka, 1970). Liska (1988) refers to this as *vested dominance.* Among humans, vested dominance is often equated with social roles. It may be manifested through unchanging characteristics (static signals) or slowly changing indicators (slow signals) of such factors as position in a status hierarchy, age, maturity, kinship, birth order, and institutionalized roles. The second form is *social dominance* (Liska, 1988), which is acquired through demonstrated abilities, strategies, or potential for affiliation. In contrast to the unchanging character of vested dominance displays, social dominance may be manifested in such dynamic indicators as proximity, posture, gaze, facial expression, vocalizations, duration of talk, or language use (Bernstein, 1981; Keating, 1985; Liska, 1988). Of particular relevance to those interested in interpersonal communication, such displays may be bound by relationships, contexts, and time. Among nonhuman primates, research has linked dominance with social skills, with more socially experienced primates' obtaining higher rank than socially deprived primates (Mitchell & Maple, 1985). Dominance is thus not a static characteristic of an animal, but one that develops with age and experience and is based within the context of an interaction–hence, the characterization of it as a sociobiological variable.

One (but only one) of many means for establishing social dominance is aggressive

interaction. Research on nonhuman primates has shown that those primates described as dominant direct aggression to the greatest number of other animals in their group (Shively, 1985). After a period of such aggressive interactions, a particular individual or group will emerge as the most dominant, and the other(s) will yield to those individuals of a higher rank order (Gauthreaux, 1981). As to why some individuals will yield to others when they, too, need or desire the resource in question, Gauthreaux explains that a time comes when the costs of fighting for the resource outweigh the benefits of having the resource, which leads the less dominant individual to choose to do without or to seek the resource elsewhere. Also applying a costs-benefits rationale, Bernstein (1981) adds that both dominant and nondominant members must derive some benefit from asymmetrical relationships, because relationships are not readily formed without some kind of benefit for both. Dominance relationships may have beneficial consequences for subordinate members because established relationships reduce competition, and, thereby, diminish anxiety, ambiguity, stress, and the possibility of harm for the weak (Maxim, 1981).

A second way in which dominance relationships are established is through signals that have come to be ritualized dominance displays (Vessey, 1981). Keating and Heltman (1994), in a review of previous literature, concluded that the ability to produce manipulative communication is greater in dominant versus subordinate animals. The control once gained by aggressive behavior is thus brought under the control of, and maintained through, communication. Liska's (1988) analysis of dominance also points to a strong social skill component in the establishment of dominance hierarchies. Interestingly, individuals outside a given relationship may come to learn the meaning of the ritualized signals and may submit to the dominant individual or group without ever engaging in aggressive interactions. Communication, then, becomes a useful, powerful, and efficient way in which to manipulate and control others.

Dominance displays may also be governed by another biological factor: hormone levels. Dabbs (1994) has offered a provocative analysis of the connection between levels of the hormone testosterone and dominance behaviors. According to his studies, a high level of the hormone testosterone leads to displays of dominant behavior within the context of interactions, particularly when there are few controls governing those interactions. Based on extensive observation of cognitive, behavioral, and physical characteristics associated with dominance in humans and other species, Dabbs proposed five key features of a dominant behavior style: strength, energy, concrete thought, panache, and aggression. Dominant individuals are typically stronger, display high energy, and are inclined toward concrete rather than abstract thought and toward action rather than reflection. They have a dramatic and expressive communication style–something Dabbs refers to as panache–that may make them more attractive than their less dominant counterparts and may even enhance their sex appeal. And, like dominant individuals in other species, they are also more prone to aggressive behavior than are submissive individuals. These features are particularly germane to a fuller depiction of the dominance construct because they do not equate dominance with aggression but instead suggest some positive qualities associated with a dominant interaction style. They also form a foundation for our proposed multidimensional view of dominance.

To summarize, within the biological and ethological domain, there remains significant conceptual confusion as to what constitutes dominance and what gives

rise to dominant or submissive displays. Of special importance to communication are data suggesting that complete apprehension of the concept can only be achieved through the inclusion of social interaction. Hence, it is better thought of as a biosocial construct. Cattell et al. (1970) submit that each individual possesses a level of dominance that is in part genetically determined but which is primarily cultivated and becomes manifest through experientially determined social roles. Thus, dominance changes according to events such as increased social contacts. That is, it appears that there are particular communicative and social skills that one must acquire before one can achieve and maintain dominance, a point we take up again below.

Psychological Dominance

Whereas biological orientations tend to emphasize genetic, hormonal, physical, and environmental predisposing factors in the display of dominance and to search for commonalities within and across species in the establishment of dominance hierarchies, psychological literature shifts attention to individual differences in tendencies toward dominance. It regards dominance as a personality construct that includes a constellation of attributes, such as aggression, ambition, argumentativeness, assertiveness, boastfulness, confidence, and determination. Common adjectives used to describe the dominant person are assertive, aggressive, competitive, demanding, egotistical, and stubborn. More specifically, dominance as a personality variable "shows constant realistic adjustment to the individual's success and failure, health or sickness, capacities or disabilities, and the relative outside forces" (Cattell et al., 1970, p. 163).

Inherently tied to these conceptualizations of dominance is the idea that people often face social and material opposition. Those who have the determination to "beat" such oppositions are considered dominant. According to the author of one of the earliest psychological treatises on dominance (Murray, 1938), those who have a need for dominance want to control their environment as well as influence or direct the behaviors of others. Emmons and McAdams (1991) refer to such determination and need as "personal strivings"–motive systems that represent things individuals characteristically or typically strive to do (such as striving for achievement, affiliation, intimacy, or power). Individuals with high power motive are described as wanting to control and influence others, desiring fame or public attention, and having the ability to arouse emotion in others. In a similar vein, Gough and Heilbrun (1983) and Jackson (1984) describe a dominant person as one who seeks and maintains a role as leader in a group. These people take charge and guide group members toward the achievement of worthy objectives through influence tactics, environmental control maneuvers, and the forceful expression of opinion (Mudrack, 1993). Studies by McClelland (1975) and Stewart and Winter (1974) on office-holding and power show that those individuals who hold offices in social organizations score higher on need for power indexes than those individuals who do not hold office. Stated differently, aggressiveness, confidence, and cockiness, to name a few, are the social attitudes held by dominant individuals (Maslow, as cited in Lowry, 1973). Nondominant individuals, by contrast, are portrayed as cooperative, unassuming, and compliant, but also obsequious, meek, weak, insecure, and avoidant of situations that require self-assertion. Tangentially related research supports this portrayal in describing sexual assault victims as lacking self-confidence and engaging in submissive behaviors that reveal that lack (Amir, 1975; Selkin, 1978).

The dominant personality is typically revealed through communication style. Thus, dominance is directly linked to communication. Building on five contemporary perspectives, Norton (1983) advanced a communicator style construct, one major subconstruct of which is dominance. He noted that "dominance, as a style variable, pervades the communication literature" and described the person who communicates in a dominant way as "more confident, enthusiastic, forceful, active, competitive, self-confident, self-assured, conceited, and businesslike" (p. 65). Other research has revealed numerous verbal and nonverbal indicators of dominant and submissive personalities. For example, among the nonverbal cues generally judged as displays of submissive personality types are body-concealing clothing, constricted movement, limited use of space, high amounts of gaze while listening but low amounts of eye contact while speaking, and shorter turns at talk. By contrast, dominant personalities are associated with such behaviors as use of hand and foot gestures and movements rather than arm and leg gestures, higher ratios of eye contact while speaking to eye contact while listening, increased talk time, more attempted interruptions and successful interruptions, more relaxation, greater use of space, initiation of touch, and less smiling (Dovidio & Ellyson, 1982; Henley, 1995; Lamb, 1981; Mehrabian & Williams, 1969; Richards, Rollerson, & Phillips, 1991; Rogers & Jones, 1975).

In summary, drives or motives for power and dominance are seen as powerful influences on human behavior although the intensity of those drives and motivations is assumed to be highly variable across individuals. Like the ethological literature, the psychological literature expands the concept of dominance beyond aggression and threat into more socially acceptable realms such as leadership, achievement, charisma, confidence, and persuasiveness (as well as adding negative qualities, such as being demanding, obstinate, and self-centered). Dominance and submission are also commonly identified through their behavioral and communicative manifestations, which underscores the central role that communication plays in the construct. Although the psychological perspective adds breadth to the construct of dominance, it nevertheless conceptualizes dominance or submission as a static personality trait rather than a fluid state situated within a particular interaction. As a result, the influences of context, situation, and relationship–factors of interest in the areas of interpersonal communication–are not directly examined.

Interpersonal Dominance

Work on dominance from an interpersonal perspective begins by viewing it as an interactional and relational phenomenon. That is, without ignoring its biological, sociological, and personality substrata, such a perspective centers on its socially constructed, variable, and situationally-contingent nature. Dominance and submission are seen as properties of an interpersonal relationship rather than of an individual, and emphasis is on the social skills and communication practices that contribute to dominance rather than on inherited, biologically determined, role-bound, or personality-dictated patterns of behavior.

Testifying to the elemental significance of dominance and submission in organizing and defining interpersonal relationships, Burgoon and Hale (1984) cite dominance-submission as one of the fundamental topoi, or themes, of relational communication through which people define their relationships. That is, all relationships are

implicitly or explicitly defined according to the degree of dominance, submissiveness, or equality that exists between partners. In a similar vein, Norton (1983) identifies dominance as one of the key dimensions of interpersonal communication. And, Kelley and Thibaut (1978) designate power, or dominance, as a central component of social exchange processes, such that those individuals who are dependent on their partners have less power (or dominance) in the relationship.

Because an interpersonal perspective most closely embodies the criterial attributes of interpersonal communication (i.e., as a symbolic, transactional, and dynamic process) and, thus, appears to hold the most promise for discerning the role of dominance-submission in interpersonal interaction, we next elaborate those qualities of interpersonal dominance that are especially germane to interaction dynamics and then report preliminary empirical work on two new instruments to measure dominance and submission in interpersonal contexts.

Construct Elaboration

Defining Interpersonal Dominance

Following the lead of Rogers and Farace (1975), Rogers-Millar and Millar (1979), and Burgoon and Dillman (1995), among others, we propose that interpersonal dominance be viewed as a relational, behavioral, and interactional state that reflects the actual achievement of influence or control over another via communicative actions.

First, dominance can "only be declared in relation to the response of another" (Burgoon & Dillman, p. 65). For one person to be considered dominant, there must be at least one other who is not. Without the presence of other interactants, dominance does not exist. This conceptualization of dominance is distinctly different from that current in the psychological literature, where it is defined as an individual trait. It places dominance and submission squarely within the context of multiple parties, which makes it at minimum a dyadic rather than monadic variable and defines it in accordance with the outcomes to which it relates. As Mitchell and Maple (1985) write, "[D]ominance is the outcome of an interaction of events and thus depends on the interactors and not on the focal individual alone" (p. 50).

Second, power and dominance must be clearly differentiated. Power refers to the ability and potential to influence others and may be exercised through a variety of resources, such as offering rewards, controlling information, using ingratiation, or appeasement. Dominance consists of expressive, relationally-based strategies and is one set of communicative acts by which power is exerted and influence exercised. That is, in contrast to power, which some view as a perceptual variable (see, e.g., Millar & Rogers, 1987), dominance is a behavioral variable, and interpersonal dominance is an interactional variable. In the parlance of relational control coding schemes, interpersonal dominance is "indexed by complementary transacts in which the assertion of definitions by one person is accepted by the other" (Millar & Rogers, 1987, p. 120), i.e., a one-up move is followed by a one-down move. It is effectuated through communicative displays.

Attributes, Dimensions, and Strategies

Inasmuch as dominance appears to be a multidimensional concept, part of construct elaboration is ascertaining what the distinctive attributes or dimensions are

that comprise it. One way to approach this task is to consider the general attributes or impressions that dominant (and submissive) individuals create through their communication and actions. Another approach is to look more specifically at behavior and the dimensions underlying different classes of dominant (and submissive) displays.

Turning first to general attributes associated with dominance, Dabbs (1994) in his analysis of high testosterone individuals associated dominance with *aggression, strength, energy, impulsivity, concrete thought,* and *panache.* Others have identified similar dimensions, such as effectiveness and aggressiveness (e.g., Liska, 1992), as well qualities of social success, self-confidence, sociability, and competitiveness that underlie dominance displays (e.g., Weisfeld & Linkey, 1985).

One of the more detailed analyses comes from Norton's work (1983) on communicator style. On the basis of his synthesis of five different perspectives on interpersonal behavior, Norton developed a dominance style subscale as part of his broader communicator style measure. Emerging from factor-analytic work on the measure were three dimensions: (1) *forcefulness* (e.g., coming on strong, directing the course of conversation, talking forcefully, and taking charge when with others), (2) *monopolizing* (e.g., talking often, talking for long periods, and not letting others talk), and (3) *involvement* (e.g., not hesitating to speak, being uninhibited, expressing oneself freely, not letting others start conversations, and not relying on others to keep conversation going). Evident in these factors are elements related to strength, conversational control, extroversion, expressivity, and taking precedence or initiative. Dominance, in turn, was correlated with self-esteem, self-acceptance, communication confidence, and another measure of dominance, providing not only cross-validation of this measure but also reinforcing the connection between dominance and conveying an air of confidence. Additionally, other features of Norton's communicator style construct appear to be close cousins to dominance and so too flesh out its character. Those styles that showed the highest correlations with dominance were (1) *dramatic* (e.g., manipulating others' moods, using laughter and teasing, entertaining others, energizing others, and being a performer), (2) *animated* (e.g., being highly expressive facially, vocally, and nonverbally and making one's emotions transparent to others), (3) *impression-leaving* (i.e., making a strong, memorable, but not necessarily positive first impression), (4) *relaxed* (i.e., being calm, collected, and relaxed, including when under pressure), (5) *open* (e.g., being disclosive and candid, revealing one's emotions), and (6) *contentious* (i.e., argumentative, combative, and quick to challenge others). The two other styles, attentive and friendly, had weaker correlations with the dominant style.

If we attempt a synthesis of these various attributes, some common threads emerge. One is *aggressiveness.* Dabbs (1994) and Liska (1988) both cite aggression as characteristic of dominant animals. Infante and Rancer (1995) argue that four basic types of aggression can be distinguished in humans: assertiveness, argumentativeness, hostility, and verbal aggression. Argumentativeness is a subset of assertiveness, which includes the characteristics of personal ascendance, dominance, and forcefulness. Argumentativeness and assertiveness are thought to create neutral or positive affect in receivers, whereas hostility and verbal aggression are more intense responses that typically engender negative affect. Stern (1990) confirmed that assertive and empathic assertive styles of confronting problems are evaluated more favorably

than an aggressive style, and all three styles are seen as more dominant than an unassertive style. An assertive style was operationalized as being verbally direct and confident yet nonthreatening. It included linguistic markers of powerful speech; a firm, loud, and fluent vocal style; steady eye gaze; and minimal extraneous body movement. The aggressive style and empathic style differed in the degree of accusatory language that was included.

Thus, embedded within the rubric of aggression appear to be a *threat* component, a *strength* component, and a *persuasiveness* component. Whereas truly aggressive individuals may be prone to threats of physical force, to verbal abuse, to nonverbal displays of hostility, and in extreme cases, to physical violence, more benign forms of aggressiveness may merely reflect strength, forcefulness, assertiveness, and the ability to influence others through argumentation and persuasion skills. Under routine conditions and especially communicative ones, we should expect humans to rely more on the latter two forms rather than resort to threat.

A closely related component is *dynamism* or energy. Incorporating elements of forcefulness and animation or expressivity, it reflects the level of activity and energy exhibited by a dominant person. Submissive individuals, by contrast, may be seen as passive and retiring. Here we might also include Dabbs's (1994) categories of impulsivity and concrete thought in the belief that they apply to people more inclined to risk-taking and action than passive reflection. People who are able to direct their energies toward a particular task and are quick to act should be more likely actually to exert influence and gain the benefits associated with dominance, as compared to individuals who are easily distracted or hesitant in pursuing a course of action. In other words, dominant individuals may exhibit greater *focus* and concentration than their less effectual counterparts.

The qualities introduced so far tend to present a picture of the dominant individual as powerful, intimidating, and threatening. However, these are only one part of the dominance profile. Another facet that begins to introduce the more socially acceptable and desirable side of dominance is *social skills*. In the ethological literature, the notion that dominance is connected to social skill is prevalent (Liska, 1988, 1992; Mitchell & Maple, 1985). More socially skilled individuals are more effective in establishing relationships, influencing others, and exercising dominance in more socially acceptable ways. This may include persuading others, exerting leadership, taking the initiative in conversation, regulating conversation, and being expressive and charming. Social influence is typically equated with the ability to persuade others, to elicit compliance, and to move people to action. This is the prototypical description of leadership. Initiating and monopolizing conversation and regulating its course are also often equated with dominance–floor-holding and interruptions being two of the most commonly employed indicators of dominance in human interaction.

Dabbs's (1994) analysis of panache also draws the qualities of expressivity, dramatism, charm, and flamboyance into the circle of dominance. People who have panache are ones who have a flair for the dramatic, are animated and charismatic, and may have an impression-leaving style of communication. They are likely to command attention via vitality, nonverbal animation, and enthusiasm in their expression of ideas, which often elicits the cooperation and compliance of others. Thus, social skills may, in turn, be subdivided into such facets as *persuasiveness,*

conversational control, and *panache,* all more admirable qualities that may account for the ability of dominant individuals to exert influence without coercion or threats. Also relevant, socially skilled individuals are confident, poised, and high in self-esteem; they score low on social anxiety (see Burgoon, Buller, & Woodall, 1996 for a summary of personality qualities of socially skilled individuals.) Thus, we should expect dominance to be manifested through a style of *self-assurance.*

The foregoing dimensions doubtless do not exhaust the relevant qualities of interpersonal dominance but together begin to formulate a much richer depiction of dominance and one that does not inevitably equate it with negative, hostile, and socially undesirable behavior. This depiction may be further enriched by considering some of the strategies by which dominance (and submission) are expressed. Such forms of expression offer concrete illustrations of how the various dimensions of interpersonal dominance are realized interactionally.

Drawing on ethological and semiotic perspectives, Leach (1972), Speigel and Machotka (1974), and Schwartz, Tesser, and Powell (1982) propose several symbolic oppositions, or polarities, that together form a system for expressing social dominance through spatial behavior. Among the polarities they identify and that appear to be central organizing dimensions for the ritualized expression of social inequality are (1) *elevation* (higher-lower), (2) *precedence* (front-rear), (3) *postural contrast* (seated-standing-kneeling), and (4) *inversion of normality* (doing an action in the reverse of its normal temporal sequence). An expanded set of dimensions that is not confined to spatial behavior comes from Burgoon (1994), who, integrating extensive literature on nonverbal behavior, proposed at least eight nonverbal dominance strategies: (1) *threat,* which consists of physical size or actions that enlarge one's total personage or territory, threat gestures, deep voices, erect postures, and the like that imply the ability to inflict physical harm; (2) *elevation,* which includes physical height, sitting or standing postures, and occupying locations that convey symbolic hierarchical cues and accrue advantages of surveillance and protection; (3) *initiation and precedence,* which include initiating conversation, initiating touch and interactional distance, determining topics of conversation, leading rather than following, and front rather than rear placements; (4) *expectancy violations,* which entail the prerogative to engage in all manner of nonnormative and unexpected behavior, such as adopting closer or farther distances than normal; (5) *privileged access,* which includes access to scarce resources, preferential treatment, possession of status symbols, ability to impose on others' time, ability to intrude on others' space, and the like; (6) *activity,* which combines dynamic, expressive, and fast-paced messages of confidence and authority; (7) *relaxation,* which connotes the privilege to be at rest while others must be attentive, to "drop one's guard," so to speak, and includes postural and vocal relaxation that exceeds that of more subordinate individuals; and (8) *task performance cues,* which encompass indicators of social status, rank, prestige, or task-related ability that enhance an individual's prestige and likely influence in a work group. This latter category may correspond to the quality of focus.

Other linguistic and paralinguistic analyses of dominance and power have shown that dominant and powerful individuals talk more in a group or dyadic conversation, attempt more interruptions, are more successful with interruptions, use more declarative statements than questions, and use a variety of linguistic forms that are non-immediate, definitive, and concrete as compared to the hyperpolite, hyperfor-

mal, indirect, immediate, indecisive, intensified, and overly qualified forms used by less powerful individuals (see, e.g., Bradac & Mulac, 1984; O'Barr, 1982; L.E. Rogers & Farace, 1975; W.T. Rogers & Jones, 1975).

Additional insights can be extracted from French and Raven's (1959) five bases of power, which reflect alternative means by which dominance and power may be exercised in order to influence others. Those bases of power are reward, expert, coercive, referent, and legitimate. These reinforce earlier noted strategies in that use of communication skills to convey positive regard to others may act as a reward, leadership and task performance cues may signify one's expertise, threat cues are intended to be coercive, panache and social skills generate referent power, and status cues of authority symbolize one's legitimate power.

From these various analyses emerges the natural inference that dominance-submission is a multidimensional construct in terms of the general impressions it creates and the behavioral displays through which it is manifested. Fully capturing its role in communication, then, requires putting more flesh on its theoretical bones and operationalizing it in a more full-bodied manner than adopted previously. It is to this task that we now turn.

Measurement Issues

At present, interpersonal dominance is generally measured in one of four ways: questionnaires or checklists that measure dominance as a personality trait (e.g., Cattell et al., 1970); measures of specific nonverbal and verbal behaviors associated with dominance (e.g., Argyle, 1972; Burgoon, Buller, Hale, & deTurck, 1984; Burgoon, Buller, & Woodall, 1996; Dovidio & Ellyson, 1985; Lamb, 1981); analysis of relational control through coding of message sequences in interaction (e.g., Rogers & Farace, 1975); and quantification of outcomes, such as preferential access to food, consorts, and sleeping areas (Liska, 1992), or winning zero-sum games. Although each approach has its merits, we believe they fall short of accurately tapping into the interpersonal dominance concept.

Personality scales focus on measuring individual, trait-like dominance. For example, Gough, McClosky, and Meehl (1951) developed a list of descriptive statements that included such items as "is a talkative individual," "behaves in an assertive fashion," "emphasizes being with others; gregarious," and "characteristically pushes and tries to stretch limits; sees what he can get away with" (pp. 8–9). Contraindications of dominance, which presumably would convey submissiveness, included being apathetic, dreamy, dependent, fearful, inhibited, lazy, meek, mild, retiring, self-pitying, shy, spineless, unassuming, and unambitious. The extant personality measures represent an excellent beginning in specifying attributes of dominance that can serve as a global measure, but because no single instrument is sufficiently comprehensive to capture the attributes of dominance that we have identified or to reflect its relational and communicative character, our first instrument was intended to create a more complete measure.

Relying on specific nonverbal traits as dominant is problematic, since perceptions of dominance are derived from combinations of nonverbal behaviors within the context of a particular relationship and situation and, therefore, may yield inadequate operationalization of the construct. For example, while Ferguson (1977, in Linkey & Firestone, 1990) found a positive correlation between interruptions and

Cattell's personality dominance measure, these interruptions were not significantly related to the confederate partner's ranking of dominance when defined in behavioral terms. Moreover, individual nonverbal and verbal behaviors often labeled as dominant are not necessarily understood as such by the participants within the context of the interaction. Wolski (1995) adds that interactions have both implicit and explicit components. Thus, measuring only explicit nonverbal behaviors defined as dominant while ignoring implicit rules based on things such as status or relational history that may be operating in the interaction gives the researcher only a partial picture of the interaction. Similarly, the commonly used relational control measure (Rogers & Farace, 1975) only taps verbal behavior and is confined to contiguous pairs of behaviors rather than longer or noncontiguous sequences. For these reasons, the second measure we developed aimed at a broader level and intended to capture a wide range of communicative actions associated with dominance.

Finally, measuring dominance by quantifying interaction outcomes presents a useful criterion against which interaction-based measures can be validated but fails to measure the actual dominant behaviors that effectuated those outcomes. Quantifying how much of a resource a dominant animal controls or examining the win/loss outcome of an encounter ignores the situational, relational, and dynamic nature of dominance. As Liska (1988) points out, individuals may have dominance or power in some contexts but not in others. Thus, we see such measures as serving a cross-validation function rather than as direct measures of interpersonal dominance.

Preliminary Scale Development

The goals of the first study were to create two separate measures, one attribute-based and one behavior-based, that would be relevant to interpersonal encounters. To do so, it was important to determine whether there were particular attributes typically considered to be dominant or submissive and whether there were certain interaction behaviors typically judged to be dominant or submissive. A two-part questionnaire was developed, the first part focusing on perceived attributes and the second part focusing on actual communication practices. It was expected that the qualities commonly associated with dominance would correlate highly with the interactive behavior through which dominance is accomplished.

Attribute-Based Instrument

To represent the attributes associated with dominance as fully as possible, we first generated a master list of dominance and submission characteristics from previous personality measures (e.g., Gough & Heilbrun, 1983; Grahm, 1987). To these, we added author-generated characteristics reflecting the broader conceptualization of dominance advanced above. We then supplemented this list with additional characteristics generated inductively by two upper-division classes of communication undergraduates ($N = 56$) at a large southwestern university. Respondents described "someone who is dominant" and identified the characteristics they associated with dominance. After their responses were recorded, they described "someone who is not very dominant" and the characteristics they associated with non-dominance. The compilation of these three adjective-generating tasks served as

the attribute-based instrument, which took the form of the 120-item adjective checklist below:

accommodating	diplomatic	impression-leaving	obedient	satisfied
adventurous	dissatisfied	impulsive	opinionated	self-centered
aggressive	docile	insincere	opportunistic	self-confident
ambitious	dynamic	indecisive	optimistic	serious
argumentative	easily led	independent	outspoken	shrewd
assertive	efficient	influential	overbearing	shy
authoritative	energetic	inhibited	passive	sincere
awkward	enterprising	takes initiative	patient	stern
boastful	ethical	intelligent	persevering	strong
bossy	expressive	intimidating	persuasive	stubborn
cautious	extroverted	introverted	playful	subdued
commanding	feminine	jolly	pleasant	submissive
compliant	flexible	kind	poised	successful
confident	fluent	lazy	possessive	talkative
conforming	forceful	loud	powerful	temperamental
competitive	friendly	masculine	prestigious	timid
considerate	generous	mature	quiet	tolerant
contented	gentle	mischievous	realistic	trusting
controlling	headstrong	meek	rebellious	unassuming
conventional	hesitant	methodical	relaxed	unconventional
curious	high-strung	meticulous	reserved	unresourceful
decisive	hostile	mild	resourceful	weak
demanding	humble	modest	retiring	withdrawn
depending	impatient		sad	zany
determined				

Behavior-Based Instrument

The objectives of the behavior-based instrument were to create a measure that was more faithful to the full bandwidth of the construct and appropriate for assessing dominance in actual interaction. A 32-item, Likert-format scale was created to rate a target person's communication. Of the 32 statements, 16 were adapted from Gough, McClosky, and Meehl (1951). The remainder were developed by the authors to represent the social skills, assertiveness, panache, and dynamism components identified earlier. Respondents were instructed to rate on a 1 (strongly disagree) to 7 (strongly agree) scale the extent to which they agreed or disagreed with the following statements as they related to the target person:

1. This person usually takes charge of conversations.
2. People often turn to this person when decisions have to be made.
3. This person rarely influences others.
4. This person is often responsible for keeping the conversation going when we talk.
5. This person usually does more talking than listening.
6. This person has very little skill in managing conversations.
7. This person never finds out what others think before taking a stand on an issue.
8. This person often stops to think about what to say in conversations.
9. It seems as if this person finds it hard to keep his/her mind on the conversation.

10. I am often influenced by this person.
11. This person often insists on discussing something even when others don't want to.
12. This person often makes his/her presence felt.
13. This person often wins any arguments that occur in our conversations.
14. This person is completely self-confident when interacting with others.
15. This person often acts nervous in conversations.
16. This person is often concerned with other's impressions of him/her.
17. This person has a natural talent for winning over others.
18. This person seems to have trouble concentrating on the topic of conversation.
19. This person is very expressive during conversations.
20. This person is often the center of attention.
21. This person has a dramatic way of interacting.
22. This person is usually relaxed and at ease in conversations.
23. This person often avoids saying things in conversations because he/she might regret it later.
24. This person is more of a follower than a leader.
25. This person often has trouble thinking of things to talk about.
26. This person has a way of interacting that draws others to him/her.
27. This person remains task oriented during conversations.
28. This person shows a lot of poise during interactions.
29. This person is not very smooth verbally.
30. This person often acts impatient during conversations.
31. This person is usually successful in persuading others to act.
32. This person has a memorable way of interacting.

Study One Method

Sample

Questionnaires were distributed to undergraduate students ($N = 219$; 61 males, 130 females, 28 unidentified) at the University of Arizona who were enrolled in a mass lecture course that draws students from across the university. None of these respondents had participated in the identification of dominance and submissive characteristics described above.

Procedure

Two different versions of the questionnaire were distributed randomly to two large sections of the introductory communication course. One version, completed by 118 students, asked respondents to think of the person in their circle of friends who was the most dominant. The second version, completed by 101 students, asked respondents to think of the person in their circle of friends who was the least dominant. After thinking of the appropriate person, the respondents were asked to put the initials of the target person in the blank provided, to identify the target person's gender, and to respond to all items with that target person in mind. Students completed the questionnaire prior to the beginning of class and were told that the material would be relevant to concepts to be covered in the lecture. Completion was voluntary and anonymous; students later were given the choice to make their questionnaire available for research purposes.

Results

Respondent and target demographics. Of the 219 responses, 88 target persons were male, 128 were female, and 3 were unidentified. Of the male targets, 51 were in the most dominant category, and 37 were in the least dominant category. Of the female targets, 66 were in the most dominant category, and 62 in the least dominant

category. Of the 130 female respondents, 34 chose male targets, and 96 chose female targets. Of the 61 male respondents, 44 chose male targets, and 17 chose female targets.

Attribution-based instrument. The percentage of respondents checking each of the 120 adjectives for most dominant and least dominant friends is shown in Table 1. Chi-square tests were performed on the 120 adjectives to determine which attributes were primarily being used to describe the most dominant people and which ones were being used to describe the least dominant people. Those adjectives used with comparable frequency (a difference of no more than 15%) in both the dominant and submissive conditions or were not used at least 40% of the time for either condition were eliminated from consideration as primary attributes. Based on these criteria, 80 items were eliminated. Of the remaining items, 31 were used more often in the dominant condition than the submissive condition, and 13 were used more often in the submissive condition than the dominant condition.

To assess whether or not these 44 attributes truly distinguished between dominant and submissive individuals, several correlational analyses and a multiple discriminant analysis were conducted. The 31 dominance adjectives were summed and correlated with the summed 13 submissive adjectives. As expected, the correlation between the two scores was negative and significant, $r(217) = -.51$, $p < .01$. The dominance sum and the submissive sum were then correlated with a unidimensional version of the behavior-based instrument (described below). The correlations between the two attribute-based measures and the behavioral measure were significant, dominant $r(217) = .70$, $p < .01$, submissive $r(217) = -.49$, $p < .01$. The 44 individual items were then correlated with the unidimensional behavior-based instrument. All correlations were in the proper direction (i.e., the dominant items were positively correlated and the submissive items were negatively correlated with the behavioral measure). All but three correlations were significant. The 41 items with significant correlations and the correlation coefficients are displayed in Table 2.

Finally, a multiple discriminant analysis, in which the individual attributes were predictors and target (most or least dominant friend) was the classification variable, yielded a significant discriminant function, Wilks' $\Lambda = .32$, $\chi^2(40) = 216.92$, $p < .0001$, $R = .82$. The summed dominance and submissiveness attributes also produced a significant discriminant function, Wilks' $\Lambda = .39$, $\chi^2(2) = 200.71$, $p < .0001$, $R = .78$ and correctly classified 91% of the cases, further confirming that the two sets of attributes successfully discriminated most and least dominant targets.

Behavior-based instrument. An initial reliability analysis was conducted to assess the viability of employing all items as a unidimensional scale against which to test the individual attributes. After dropping one item (7) because of its low item-to-total correlation, this scale achieved an acceptable Cronbach coefficient alpha reliability, $r = .93$. A multiple discriminant analysis in which the individual items were the predictors and the target (least or most dominant) was the criterion grouping variable, produced a significant discriminant function, Wilks' $\Lambda = .44$, $\chi^2(32) = 134.23$, $p < .0001$, $R = .75$, that successfully classified 88% of all cases. Items with the strongest correlations (>.50) with the discriminant function were 1, 20, 24, 12, 13, 19, 31, and 21. Analyses of variance of the individual predictors revealed that all items, except 7, 9, 16, and 30, significantly differentiated most and least dominant targets.

TABLE 1

PERCENTAGE OF PEOPLE MARKING EACH ATTRIBUTE BY CONDITION

Attribute	Study 1 Results		Study 2 Results	
	Least Dominant (n = 101) %	Most Dominant (n = 118) %	Instructor (n = 118) %	Roommate (n = 136) %
Accommodating	68	36	43	52
Adventurous	34	63	25	34
Aggressive	11	62	26	27
Ambitious	21	65	30	34
Argumentative	22	66	13	29
Assertive	20	72	42	35
Authoritative	6	54	43	21
Awkward	40	11	18	21
Boastful	8	31	3	21
Bossy	8	35	8	16
Cautious	55	25	16	28
Commanding	9	40	16	20
Compliant	50	17	16	32
Confident	35	81	61	46
Conforming	40	21	12	21
Competitive	19	67	11	45
Considerate	67	61	49	57
Contented	31	18	14	20
Controlling	6	36	19	19
Conventional	14	14	24	12
Curious	40	54	21	28
Decisive	14	43	24	31
Demanding	4	46	24	22
Dependent	41	32	12	26
Determined	30	66	39	44
Diplomatic	24	25	20	25
Dissatisfied	15	14	3	20
Docile	37	9	8	9
Dynamic	14	42	27	25
Easily led	50	14	6	21
Efficient	33	41	49	42
Energetic	34	73	56	48
Enterprising	7	25	8	17
Ethical	36	28	35	43
Expressive	26	60	42	43
Extroverted	10	52	29	29
Feminine	47	38	18	34
Flexible	42	42	33	39
Fluent	18	23	27	16
Forceful	7	44	9	14
Friendly	84	83	71	79
Generous	67	64	24	58
Gentle	64	39	25	38
Headstrong	21	59	24	38
Hesitant	41	8	14	15
High-strung	10	23	18	18
Hostile	3	17	1	9
Humble	47	25	21	20
Impatient	14	37	9	33
Impression-leaving	18	60	30	35
Impulsive	11	41	13	16
Insincere	7	9	6	15
Indecisive	34	12	9	20
Independent	30	63	35	48
Influential	16	56	23	25
Inhibited	21	5	3	15
Takes initiative	15	64	34	33
Intelligent	52	74	74	59
Intimidating	7	34	9	15
Introverted	34	6	7	14
Jolly	28	28	21	26
Kind	70	55	38	50
Lazy	32	20	3	27

TABLE 1

CONTINUED

Attribute	Study 1 Results: Least Dominant (n = 101) %	Study 1 Results: Most Dominant (n = 118) %	Study 2 Results: Instructor (n = 118) %	Study 2 Results: Roommate (n = 136) %
Loud	13	43	22	25
Masculine	12	27	24	25
Mature	37	50	45	46
Mischievous	19	37	5	22
Meek	23	2	11	8
Methodical	9	17	14	11
Meticulous	8	21	13	17
Mild	47	5	25	19
Modest	47	24	19	28
Obedient	29	12	3	21
Opinionated	23	71	27	52
Opportunistic	17	30	12	26
Optimistic	31	45	28	37
Outspoken	17	66	28	41
Overbearing	9	27	9	13
Passive	60	6	16	17
Patient	55	27	27	30
Persevering	12	24	12	19
Persuasive	11	66	21	33
Playful	37	56	24	43
Pleasant	61	50	45	47
Poised	27	37	27	23
Possessive	11	35	3	23
Powerful	5	39	21	20
Prestigious	7	21	9	9
Quiet	62	9	16	19
Realistic	38	45	34	34
Rebellious	13	36	6	16
Relaxed	49	36	40	43
Reserved	44	15	19	24
Resourceful	21	42	27	33
Retiring	2	0	4	0
Sad	14	3	1	5
Satisfied	24	26	20	26
Self-centered	5	33	4	27
Self-confident	30	75	46	49
Serious	24	33	35	28
Shrewd	5	15	6	17
Shy	53	7	7	15
Sincere	52	48	39	48
Stern	8	20	16	9
Strong	24	61	27	33
Stubborn	23	54	11	38
Subdued	21	1	3	9
Submissive	23	4	2	9
Successful	24	53	34	40
Talkative	24	77	39	52
Temperamental	16	33	6	33
Timid	38	3	9	10
Tolerant	42	35	26	36
Trusting	55	49	27	52
Unassuming	21	12	8	9
Unconventional	6	11	12	11
Unresourceful	5	3	8	9
Weak	17	2	9	8
Withdrawn	21	3	4	8
Zany	13	30	14	21

Note: In each of the four conditions, participants were asked to think of a particular target other and then check all of the adjectives that described that person. In the first condition, participants were asked to think of their least dominant friend. In the second condition, participants were asked to think of their most dominant friend. In the third condition, participants were asked to think of the instructor who taught their last class. In the fourth condition, participants were asked to think of their roommate.

TABLE 2

ATTRIBUTES ASSOCIATED WITH DOMINANT AND SUBMISSIVE (NONDOMINANT) TARGETS AND CORRELATIONS WITH BEHAVIORAL DOMINANCE MEASURE

Dominant Attributes	*r*	Submissive Attributes	*r*
Adventurous	.48**	Cautious	−.18**
Aggressive	.33**	Compliant	−.17*
Ambitious	.47**	Easily-led	−.44**
Argumentative	.28**	Hesitant	−.45**
Assertive	.41**	Mild	−.37**
Authoritative	.55**	Passive	−.44**
Confident	.38**	Quiet	−.46**
Competitive	.23**	Reserved	−.28**
Determined	.31**	Shy	−.49**
Energetic	.48**	Timid	−.44**
Expressive	.44**		
Extroverted	.41**		
Forceful	.24**		
Headstrong	.29**		
Impression-leaving	.51**		
Impulsive	.31**		
Independent	.41**		
Influential	.46**		
Takes Initiative	.57**		
Loud	.29**		
Mature	.32**		
Opinionated	.36**		
Outspoken	.39**		
Persuasive	.55**		
Playful	.38**		
Powerful	.32**		
Self-confident	.57**		
Strong	.48*		
Stubborn	.18*		
Successful	.31**		
Talkative	.52**		

**$p < .01$, *$p < .05$.
Note: Total number of dominant items = 31. Total number of submissive items = 10.

A factor analysis of the combined data from the two conditions was then conducted to examine the structure of the behavior-based items. Principal components analysis resulted in six factors with eigen values greater than 1 that collectively accounted for 62.7% of the variance. The Bartlett test of sphericity was significant at $p < .00001$ (Kaiser-Meyer-Olkin = .91). Varimax rotation also produced six factors with eigen values greater than 1. However, based on Cattell's scree test, a four- or five-factor solution appeared to be more appropriate. Criteria for retaining items in this factor analysis were liberal so as to identify the largest possible pool of items from which to create an instrument. The interest here lay not in supporting a theoretically grounded set of factors, but in determining whether the items could be used to create and subsequently measure the concept of dominance. The eigen values and percentage of variance accounted for by the four-factor solution, reparamaterized after dropping two items with weak primary loadings (3 and 7) are shown in Table 3, along with the rotated factor loadings.

The four factors identified represent the prominent aspects of dominance discussed earlier. Factor one largely represents *persuasiveness* (being influential) and social skills related to conveying *poise*. The second factor combines *conversational*

TABLE 3

ROTATED FACTOR LOADINGS FOR THE FOUR FACTOR SOLUTION ON THE MOST AND LEAST DOMINANT CONDITIONS

Item	Factor 1: Influence & Poise	Factor 2: Conversational Control & Panache	Factor 3: Task Focus	Factor 4: Self-Assurance
17	.794			
26	.790			
2	.734			
31	.750			
10	.690			
13	.676	.345		
14	.629			−.441
20	.625	.541		
19	.602	.476		
24	−.546	.327	.356	.381
28	.539		−.462	
6	−.538		.394	
27	.529			
32	.522			
22	.503			
5		.820		
1		.700		
11		.662		
21	.520	.620		
4	.401	.601		
12	.569	.594		
8		−.586		
9			.742	
18			.703	
29	.441		.550	
30		.444	.496	
25		−.313	.491	
16				.764
23		−.369		.623
15	−.448		.401	.481
Eigen value	11.5	3.4	1.5	1.4
Pct of Variance	35.9	10.6	4.8	4.5
Cum Percent	35.9	46.5	51.3	55.9

Note: Items 3, 6, 8, 9, 15, 16, 18, 23, 24, 25, 29, and 30 have been reverse-scored, i.e., 7 = 1, 6 = 2, 5 = 3, 3 = 5, 2 = 6, and 1 = 7. Higher scores on all dimensions should be associated with greater dominance.

control (i.e., floor dominance) with *panache* or dramatism, i.e., having a strong "presence" through expressiveness, a dramatic style, initiation of conversation, and floor-holding. Factor three captures the degree to which a person remains *focused* on the conversation and task at hand or is easily distracted. Factor four is amenable to several different labels but seems to tap a person's level of *self-assurance,* lack of concern with self-presentation, and perhaps arrogance or brashness.

Inspection of the five-factor solution revealed one new dimension lost by the four-factor solution: impulsivity. It also split the conversational control and panache factors into separate components. To determine if a conceptually driven five-factor solution would be viable, especially if the dimensions were allowed to be correlated, the data were entered into Hamilton and Hunter's (1988) PACKAGE program, which is a least squares, oblique multiple groups program for calculating confirmatory factor analysis, with five dimensions identified. The results after removing the only item not to achieve a primary loading of .50 or better (7) are displayed in Table

TABLE 4

CONFIRMATORY FACTOR ANALYSIS LOADINGS AND CORRELATIONS AMONG FACTORS FOR LEAST AND MOST DOMINANT TARGET

Item	Factor 1: Influence	Factor 2: Conversational Control	Factor 3: Focus & Poise	Factor 4: Panache	Factor 5: Self-Assurance
2	.81	.37	.57	.58	.52
3	.65	.29	.38	.43	.34
6	.64	.18	.48	.47	.36
10	.75	.27	.50	.51	.45
13	.74	.51	.40	.64	.55
17	.73	.32	.41	.62	.41
24	.76	.46	.58	.60	.64
31	.78	.44	.38	.66	.39
1	.64	.83	.36	.72	.49
4	.51	.75	.35	.62	.34
5	.31	.82	.02	.53	.24
8	.14	.63	.10	.29	.21
11	.19	.65	−.03	.30	.17
9	.33	.14	.66	.29	.33
18	.31	.12	.57	.19	.21
22	.36	.02	.56	.29	.30
25	.40	.37	.60	.39	.38
27	.47	.19	.57	.38	.36
28	.55	.30	.75	.49	.39
29	.52	.12	.74	.40	.42
30	.23	−.17	.57	.03	.18
12	.63	.65	.37	.82	.48
19	.62	.57	.47	.81	.43
20	.66	.62	.34	.85	.48
21	.54	.63	.28	.83	.44
26	.69	.39	.48	.73	.39
32	.51	.33	.43	.73	.36
15	.58	.34	.58	.53	.80
16	.27	.02	.17	.12	.69
23	.37	.36	.29	.37	.71
14	.64	.45	.49	.59	.79
Factor 1	1.00	.48	.63	.77	.62
Factor 2		1.00	.22	.67	.40
Factor 3			1.00	.49	.51
Factor 4				1.00	.54
Average correlation of items within cluster	.47	.43	.31	.55	.41

Note: Items 3, 6, 8, 9, 15, 16, 18, 23, 24, 25, 29, and 30 have been reverse-scored, i.e., 7 = 1, 6 = 2, 5 = 3, 3 = 5, 2 = 6, and 1 = 7.

4. The five respective dimensions and their standard score coefficient alpha reliabilities are: (1) *influence,* .88; (2) *conversational control and impulsivity,* .79; (3) *focus and poise,* .78; (4) *panache,* .88; and (5) *self-assurance,* .73.

Discussion

The results demonstrate that the construct of dominance-submission is rich. In terms of the attributes that are associated with it, it is clear that a reliable set of attributes, representing a broad spectrum of qualities, discriminates dominant from nondominant peers. In terms of its behavioral manifestations, it includes several components related to exercising actual influence over others, exerting control of conversations, maintaining poise and self-control, having an expressive, dramatic

communication style that might aptly be described as panache or flamboyance, being able to maintain a focus on the conversation or task at hand, and having sufficient self-assurance and lack of social anxiety to not worry about one's self-presentation. These findings warrant conceptualizing dominance in a more complete, nonjudgmental way.

At the same time, the two instruments offer means of measuring dominance in a more comprehensive manner. The attribute checklist offers a means of assessing dominance or submissiveness through use of impressionistic qualities; it would be suitable for more global or subjective judgments of who is most or least dominant in a social encounter. The behavioral measure allows for a more precise assessment of what dominant and nondominant individuals actually *do;* it can be used unidimensionally, if the objective is to obtain an overall assessment of actual enacted dominance, or its individual dimensions can be used to assess specific aspects of dominant behavior.

Because no single measurement study should be the basis for determining the validity and reliability of an instrument, we undertook a second study to replicate the first while broadening the nature of the targets to include both equal and unequal relationships and to include the full spectrum of dominance behavior rather than focusing on least and most dominant individuals.

Study Two: Replication

Sample and Procedure

Respondents were undergraduates ($N = 254$; 100 males, 123 females, 31 unidentified) enrolled in communication classes at a large southwestern university. They completed the same two-part questionnaire as the respondents in Study One; however, the target person for this second study was either the instructor for the respondent's previous class ($n = 117$) or the respondent's roommate ($n = 136$).

Results

The percentage of respondents checking each attribute for instructor and roommate targets is shown in Table 1.

The reliability for the behavior-based items treated as a unidimensional measure was again high, $r = .90$, after dropping one item (7) because of its negative item-to-total correlation. The correlation between the combined 31 dominance adjectives and the combined 10 submissive adjectives was significant and negative, as expected, in the instructor subsample, $r(95) = -.35$, $p < .001$, but nonsignificant in the roommate subsample, $r(104) = -.09$, $p > .10$. The respective correlations for the dominance attributes score with the behavioral measure were strong and positive, instructor $r(95) = .58$, $p < .001$, roommate $r(104) = .63$, $p < .001$; the correlations between the submissive adjectives and the behavioral dominance measure were significant and negative, instructor $r(95) = -.17$, $p < .05$, roommate $r(104) = -.30$, $p < .001$. Thus, measuring dominance through global attributes again showed strong correspondence to the behavioral measure; measuring submissiveness with global attributes yielded inverse but weaker relationships.

Principal components factor analysis of the data for both the instructor and roommate conditions yielded eight factors with eigen values greater than 1 that collectively accounted for 62.9% of the variance. The Bartlett test of sphericity was

TABLE 5

ROTATED FACTOR LOADINGS FOR THE FIVE FACTOR SOLUTION ON THE INSTRUCTOR AND ROOMMATE CONDITIONS

Item	Factor 1: Poise	Factor 2: Influence	Factor 3: Conversational Control	Factor 4: Panache	Factor 5: Self-Assurance
28	.761				
22	.638				
29	.618				
26	.560				
30	.548			.459	
14	.507		.355		
27	.456		.318	−.318	
10		.691			
17	.303	.660		.344	
3		.654			
31	.340	.582	.310		
2	.382	.556	.314		
9		.523			.490
6		.509			
1			.762		
5			.707		
13			.637		
4			.588		
11	−.384		.495		
21				.760	
32				.646	
12			.401	.627	
19		.340		.546	
20			.499	.509	
23					.708
16					.509
25	.373				.506
15	.435			.386	.447
18	.420	.346			.438
24		.436	.363		.438
Eigen value	8.3	3.1	1.8	1.6	1.2
Pct of Variance	26.9	10.1	5.9	5.1	4.0
Cum Percent	26.9	36.9	42.8	47.9	51.9

Note: Items 3, 6, 8, 9, 15, 16, 18, 23, 24, 25, 29, and 30 have been reverse-scored, i.e., 7 = 1, 6 = 2, 5 = 3, 3 = 5, 2 = 6, and 1 = 7. Higher scores on all dimensions should be associated with greater dominance.

significant at $p < .00001$ (Kaiser-Meyer-Olkin = .87). Based on Cattell's scree test, however, a five-factor solution appeared to be a more suitable fit. Criteria for retaining items were again liberal so as to identify a broad set of usable items in measuring dominance. The factor loadings for the rotated five-factor solution (re-parameterized after dropping item 7 because of its weak primary loading), eigen values, and percentages of variance accounted for are presented in Table 5.

The five factors resulting from this analysis reflect the same dimensions revealed in the five-factor solution for the most and least dominant conditions in Study One. Factor one represents items related to *poise.* Factor two captures the *persuasion* or *influence* dimension of dominance. Factor three primarily reflects *conversational control.* Factor four represents *panache,* and Factor five captures *self-assurance.* The respective coefficient alpha reliabilities were: *poise,* .77, *influence,* .82, *conversational control,* .71, *panache,* .80, and *self-assurance,* .65.

A final confirmatory factor analysis for combined data from all four conditions assigning the same items to factors as in the previous analysis again yielded an

acceptable five-factor solution with the following factors and reliabilities: (1) *influence,* .85; (2) *conversational control and impulsivity,* .70; (3) *focus and poise,* .79; (4) *panache,* .85, and (5) *self-assurance,* .68. The correlations for the first factor with the other four respective factors were .40, .62, .68, and .56; the second factor correlated with the remaining three at .12, .55, and .33. The fourth and fifth factors correlated at .51. These findings indicate high interdependence among most of the factors and justify using them as a unidimensional instrument.

Significance and Implications of the Research Findings

Dominance has a place of such prominence in the literature on human behavior that it is essential that a clear conceptualization of it be rendered. We have offered here a multidimensional and behavioral view—one that subordinates dominance to the overarching construct of power. We have argued that before further development of the concept of interpersonal dominance occurs, clarification of the nature of the construct must take place. To expedite this development, we have reviewed the literature and set forth a definition of interpersonal dominance that we believe captures its unique aspects within the dyadic and group interaction contexts, as well as differentiates it from prior psychological constructs that center solely on internal states while clarifying its relationship with its parent construct of power.

Interpersonal dominance is an interaction variable that can only be studied within the context of a dyad or group and can exist only in relation to the responses of another person. It is also but one of the means by which power is exerted and influence achieved. Our analysis foregrounds the communication facility needed to achieve dominance among humans. While several studies indicate that dominance, testosterone, aggression, and anti-social behaviors go hand in hand (Dabbs, Frady, Carr, & Desch, 1987; Dabbs & Morris, 1990; Ehrenkranz, Bliss, & Sheard, 1974; Kreuz & Rose, 1972), our theoretical analysis advances a richer depiction of the construct, one that includes and highlights several positive aspects of dominance in addition to the stereotypical negative ones. Our empirical results reinforce this depiction by showing that humans associate many non-violent, non-negative characteristics and actions with dominance.

We believe that the measures developed make it possible to gauge the degree of dominance or submissiveness exhibited by a communicator within the context of a particular interaction. These measures are based both on common conceptions of dominance and the attributions and behaviors associated with those conceptions. Importantly, these measures do not constitute a simple repackaging of dominance characteristics identified by previous researchers. Rather, the personality characteristics and interaction-based communicative indicators incorporated in our measures have been identified and verified by people involved in real communicative situations. Moreover, the collections of characteristics and behavioral indicators show high discriminant ability and reliability under varying replications. Thus, these measures should have great utility in assessing perceived and actual displays of dominance and submission in human interactions.

The multiplicity of qualities associated with dominance-submission highlights the complexity of this fundamental dimension of human behavior. At the same time, it reveals a kinship to the concept of social skills, which refers to, among other things, abilities to gain compliance and to create solidarity. Tannen (1994) argues that these two types of skills, although somewhat opposite in nature, are necessarily tied to

each other. Without relation to one another (solidarity), power cannot exist, and with the expression of solidarity comes the limiting of one's autonomy (power). Inasmuch as both imply a nuanced repertoire of interaction skills, it may be that the most skillful performance of dominance interlaces elements of submissiveness or solidarity and, hence, accounts for the association of many positive, appealing qualities with the dominant end of the continuum.

The Next Step

The next step in developing a more accurate measure of dominance as an interpersonal communication construct is to articulate particular forms of behavior that signify dominance. To move away from the heavy focus on psychological and biological indicators of dominance toward more interaction-based indicators, it is important that we identify specific verbal and nonverbal behaviors or packages of behaviors that represent dominance. A good exemplar of the kind of research needed is a recent study by Tusing and Dillard (1996), which focused on the role that vocal cues, such as fundamental frequency and amplitude, have on perceptions of dominance. Given its import in judgments of dominance, the vocal channel is one particular nonverbal channel that merits further attention (Burgoon et al., 1996).

It is also important that future work disentangle that which is dominant from that which is a stereotypical male pattern and ascertain whether males and females enact dominance in different ways. Gender differences in behaviors, such as interruptions, talk time, the use of space, gestures, and touch (e.g., Markel et al., 1976; Ridgeway et al., 1985), are utilized in the traditional classification of men as dominant and women as submissive, and some scholars have concluded that women are incapable of handling such dominance and power related roles as leadership and management (e.g., Offerman, 1986; Schein, 1975). However, other evidence (e.g., West, 1995) challenges not only whether stereotypical male behaviors are the appropriate markers of dominance, but also whether such behaviors are more frequently and clearly associated with men than women. Rather than being incapable of handling or engaging in dominance behaviors, it is more likely that women are utilizing communicative strategies not previously viewed as dominant because they are not associated with typical male styles of communicating. To the extent that women utilize a communicative style that attempts to integrate rather than separate others, their style may encourage willing compliance and obviate the need for more aggressive compliance-gaining strategies. If dominance includes achieving what a communicator wants from others, then this integrative style of communication may qualify as dominant.

Further evidence for the need for such research is found in a study of speech accommodation theory (Bilous & Krauss, 1988). It is generally assumed that submissive individuals are more likely to accommodate than dominant individuals and that females are more submissive than males. However, Bilous and Krauss (1988) argue that the simple explanation that females accommodate to males in cross-sex interactions fails to describe the complex pattern of behaviors that actually occurs. Whereas females converged to the males on interruptions and total number of words, males converged to females on long and short pauses. Perhaps most interesting, Bilous and Krauss found that in same-sex dyads, females engaged in more stereotypical male dominance behaviors than males in same-sex dyads did.

It is clear that researchers should work to uncover strategies for power and

dominance rather than identifying male and female communication styles. Strategies, such as the above-mentioned use of integration or similarly, the use of politeness, should not be dismissed out of hand from the constellation of dominance behaviors. As West (1995) points out, the use of politeness is often viewed as submissive, but it nevertheless can be very effective in achieving direction in a task-oriented group. If interpersonal dominance includes elements of social influence, then politeness behaviors may play a significant role in establishing or maintaining dominance. In fact, several of the compliance-gaining strategies forwarded by Marwell and Schmitt (1967) include elements of politeness. Future work may verify that tempered dominance–strong elements of assertiveness, energy, poise, task-focus and initiative peppered with vivacity, gregariousness, dramatism, and conversational facility–is the key to charismatic leadership, interpersonal attraction, and successful interpersonal influence.

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