Eysenck's BIG THREE and Communication Traits: Three Correlational Studies

James C. McCroskey, Alan D. Heisel, and Virginia P. Richmond

Over the past decade, communication scholars have increasingly considered biological contributions to the ways in which we communicate. One approach to exploring the links between biology and communication involves analysis of relationships between communication variables and variables containing strong biological underpinnings. The present study was designed to provide an examination of the relationship between Eysenck's personality dimensions and communication variables. This essay reports the results of three separate studies that encompass more than a dozen communication variables. The results seem to indicate that non-neurotic extraverts are not shy or apprehensive about touch, tend to perceive themselves as more competent, view themselves as assertive and responsive, and express greater degrees of self-acceptance. Neurotic introverts report apprehension about communication, perceive themselves as less immediate, rate themselves as having a lower affect orientation, and somewhat higher levels of verbal aggressiveness. Neurotic participants report less self-acceptance. Neurotic non-psychotics report a greater degree of affect orientation, more apprehension about communication, and lower verbal aggression. Neurotic psychotic extraverts tend to be compulsive communicators and report greater tolerance for disagreement. Psychotics are non-responsive, and tend to report higher levels of verbal aggressiveness, argumentativeness and assertiveness. Finally, psychotic non-neurotics tend to have a greater tolerance for disagreement and are less likely to identify themselves as compulsive communicators. Possible directions for future research are suggested.

Over the past decade, communication scholars have increasingly considered biological contributions to the ways in which we communicate (Beatty, McCroskey, & Valencic, 2001; Cappella, 1991, 1993; Horvath, 1995; Knapp, Miller, & Fudge, 1994). One approach to exploring the links between biology and communication involves analysis of relationship between communication variables and variables containing strong biological underpinnings (Beatty et al., 2001). Eysenck's (1947, 1990) BIG THREE personality structure (extraversion, neuroticism, and psychoticism) has been widely, albeit not universally, adopted as a theoretical framework for such studies. This is principally due to the correspondence between the three dimensions of personality derived through higher order factor analysis and Gray's (1991) tripartite organization of neurobiological systems. The precise linkages between Gray's neurobiological systems and Eysenck's personality factors have been discussed in detail elsewhere (Beatty et al., 2001). Some research has already shown strong associations between Eysenck's BIG THREE and communication variables (Beatty, McCroskey, & Heisel, 1998; Valencic, Beatty, Rudd, Dobos, & Heisel, 1998; Weaver, 1998). The present study was designed to provide a more comprehensive examination of the relationship between Eysenck's personality dimensions and communication variables. Specifically, this essay reports the results of three separate studies that encompassed over a dozen communication variables.

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Eysenck's Big Three and Communication Traits

Study 1

Sample and Trait Measures

Study 1 sampled 216 college students enrolled in basic communication courses at a large Mid-Atlantic University. Participants received a self-report inventory that included the short-form temperament measures of extraversion (Eysenck & Eysenck, 1985), neuroticism (Eysenck & Eysenck, 1985), and psychoticism (Eysenck, Eysenck, & Barrett, 1985) along with indices of communication traits including argumentativeness (Infante & Rancer, 1982), assertiveness-responsiveness (Richmond & McCroskey, 1990), self-acceptance (Berger, 1952), and shyness (McCroskey & Richmond, 1982). Descriptive and univariate analyses were conducted on each of the measures.¹

Results

Pearson correlation coefficients were calculated for each communication trait and corresponding temperament scores. Significant attenuated correlations range from -.67 to .14 while disattenuated correlations were as high as -.77. Each of the three temperament scores were related to the communication traits investigated. Extraversion was significantly related to each of the communication traits with the strongest associations with shyness ($r = - .67, p < .01$) and assertiveness ($r = .43, p < .01$). Neuroticism was significantly related with three of the five communication traits to the strongest association ($r = -.58, p < .01$) with self-acceptance. Finally, Psychoticism was significantly related to three of the five communication traits with the strongest associations with responsiveness ($r = -.35, p < .01$) and argumentativeness ($r = .28, p < .01$). A complete listing of attenuated and disattenuated correlations appears in Table 1.

| TABLE 1                                                                 |
|---------------------------|-----------------|-----------------|-----------------|
|                           | Extraversion    | Neuroticism     | Psychoticism    |
| Communication Traits      | $r$             | $\sigma$        | $r$             | $\sigma$        | $r$             | $\sigma$        |
| Argumentativeness         | .16*            | (.19)           | -.10            | -.28**           | (.36)           |
| Assertiveness             | .43**           | (.52)           | -.18** (.21)    | .14* (.18)       |
| Responsiveness            | .26**           | (.30)           | -.10            | -.35** (.40)     |
| Self-acceptance           | .17*            | (.20)           | -.38** (.66)    | -.04             |
| Shyness                   | -.67**          | (-.77)          | .24** (.27)     | -.08             |

Note: Disattenuated correlations are reported in parentheses.  
*Indicates correlation is significant ($p < .05$).  
**Indicates correlation is significant ($p < .01$). Nonsignificant correlations are not corrected for attenuation.

Canonical correlation yielded three significant roots (see Table 2). The first root ($C_{1} = .73, F = 24.09, p < .01$) indicated that the temperament set, principally defined by extraversion (.95) and neuroticism (-.51) was significantly associated with the communication trait set, which was mostly defined by shyness (-.88), assertiveness (.55), responsiveness (-.46), and self-acceptance (.40). These results suggest that stable extraverts tend to be nonshy, assertive, responsive, and accepting of self.

The temperament set in root 2 ($C_{2} = .54, F = 16.61, p < .01$) was dominated by neuroticism (.86) and the communication trait set was defined primarily by self-
TABLE 2
CANONICAL CORRELATION ANALYSIS FOR STUDY 1

<table>
<thead>
<tr>
<th>Set</th>
<th>Variables</th>
<th>Canonical Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>V1</td>
</tr>
<tr>
<td>Temperament</td>
<td>Extraversion</td>
<td>.95</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>-.51</td>
</tr>
<tr>
<td></td>
<td>Psychoticism</td>
<td>-.04</td>
</tr>
<tr>
<td>Communication</td>
<td>Argumentativeness</td>
<td>.15</td>
</tr>
<tr>
<td></td>
<td>Assertiveness</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>Responsiveness</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td>Self-acceptance</td>
<td>.40</td>
</tr>
<tr>
<td></td>
<td>Shyness</td>
<td>-.88</td>
</tr>
<tr>
<td>Adjusted canonical correlations</td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>F values</td>
<td></td>
<td>24.09</td>
</tr>
<tr>
<td>p &lt;</td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

acceptance (−.91). Root 3 (Cr₃ = .42, F = 14.68, p < .01) indicated that psychoticism dominated the temperament set and the communication trait set was defined by responsiveness (−.81), argumentativeness (.69), and to a lesser extent assertive (−.37).

Study 2

Sample and Trait Measures

The sample consisted of 219 college students enrolled in basic communication courses at a large Mid-Atlantic University. Participants received a self-report inventory that included the short-form temperament measures of extraversion (Eysenck & Eysenck, 1985), neuroticism (Eysenck & Eysenck, 1985), and psychoticism (Eysenck, Eysenck, & Barrett, 1985) along with indices of communication traits including affect orientation (Booth-Butterfield & Booth-Butterfield, 1990), communication apprehension (McCroskey, 1982), self-perceived immediacy (Richmond & McCroskey, 2000), other-perceived immediacy (McCroskey, Richmond, Sallinen, Fayer, & Barraclough, 1995) and verbal aggressiveness (Infante & Wigley, 1986). Univariate and descriptive analyses were conducted on each of the measures (see Footnote 1).

Results

Pearson correlation coefficients were calculated for each communication trait and corresponding temperament scores. Significant attenuated correlations range from −.47 to −.19 while disattenuated correlations were as high as −.54. In this study, temperament scores were related to all of the communication traits investigated except other-perceived immediacy. Extraversion was significantly related with affect orientation (r = .29, p < .01), communication apprehension (r = −.47, p < .01), and self-perceived immediacy (r = .43, p < .01). Neuroticism was significantly correlated with communication apprehension (r = .39, p < .01) and self-perceived immediacy (r = −.19, p < .01). Finally, psychoticism was significantly related to only verbal aggression (r = .41, p < .01). A complete listing of attenuated and disattenuated correlations is reported in Table 3.

The results of canonical correlation produced three significant roots (see Table 4). The first root (Cr₁ = .58, F = 12.27, p < .01) indicated the temperament set comprised of extraversion (−.93) and neuroticism (.58) was significantly associated
with the communication trait set primarily defined by communication apprehension (0.88) and self-perceived immediacy (−0.73). These results suggest that nonstable introverts tend to be more apprehensive about communication and perceive themselves to be less immediate.

The temperament set in root 2 (\(\text{Cr}_2 = 0.42, F = 9.10, p < 0.01\)) dominated by psychoticism (0.92) was significantly associated with the communication trait set defined mostly by verbal aggressiveness (0.81). The third canonical root (\(\text{Cr}_3 = 0.31, F = 7.56, p < 0.01\)) indicated that the temperament set defined mostly by neuroticism (0.78) was significantly associated with the communication set defined primarily by affect orientation (0.86) and to a lesser extent, communication apprehension (0.40).

### Table 3
**Correlations Among Eysenck’s Big Three and Communication-Related Traits for Study 2**

<table>
<thead>
<tr>
<th>Communication Traits</th>
<th>Extraversion</th>
<th>Neuroticism</th>
<th>Psychoticism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r (r)</td>
<td>r (r)</td>
<td>r (r)</td>
</tr>
<tr>
<td>Affect orientation</td>
<td>.29** (−.34)</td>
<td>.10</td>
<td>−.05</td>
</tr>
<tr>
<td>Communication apprehension</td>
<td>−.47** (−.54)</td>
<td>.39** (.46)</td>
<td>−.01</td>
</tr>
<tr>
<td>Self-perceived immediacy</td>
<td>.43** (.52)</td>
<td>−.19** (−.23)</td>
<td>−.07</td>
</tr>
<tr>
<td>Other-perceived immediacy</td>
<td>.08</td>
<td>−.08</td>
<td>.03</td>
</tr>
<tr>
<td>Verbal aggression</td>
<td>−.13</td>
<td>−.11</td>
<td>.41** (.55)</td>
</tr>
</tbody>
</table>

Note: Disattenuated correlations are reported in parentheses.
*Indicates correlation is significant (\(p < 0.05\)).
**Indicates correlation is significant (\(p < 0.01\)). Nonsignificant correlations are not corrected for attenuation.

### Table 4
**Canonical Correlation Analysis for Study 2**

<table>
<thead>
<tr>
<th>Set</th>
<th>Variables</th>
<th>Canonical Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>V1</td>
</tr>
<tr>
<td>Temperament</td>
<td>Extraversion</td>
<td>−.93</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>Psychoticism</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>Affect orientation</td>
<td>−.36</td>
</tr>
<tr>
<td></td>
<td>Communication apprehension</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td>Self-perceived immediacy</td>
<td>−.73</td>
</tr>
<tr>
<td></td>
<td>Other-perceived immediacy</td>
<td>−.18</td>
</tr>
<tr>
<td></td>
<td>Verbal aggressiveness</td>
<td>.33</td>
</tr>
<tr>
<td>Adjusted canonical correlations</td>
<td></td>
<td>.58</td>
</tr>
<tr>
<td>F values</td>
<td></td>
<td>12.27</td>
</tr>
<tr>
<td>(p&lt;)</td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

### Study 3

**Sample and Trait Measures**

A sample of 205 college students enrolled in basic communication courses at a large Mid-Atlantic University was used in study 3. Participants received a self-report inventory that included the short-form temperament measures of extraversion (Eysenck & Eysenck, 1985), neuroticism (Eysenck & Eysenck, 1985), and psychoticism (Eysenck, Eysenck, & Barrett, 1985) along with indices of communication traits including communication competence (McCroskey & McCroskey, 1988), compulsive communication (McCroskey & Richmond, 1993), tolerance for disagreement (Teven, McCroskey, & Richmond, 1998), and touch apprehension (Richmond &
McCroskey, 2000). Descriptive and univariate analyses were conducted on each of the measures (see Footnote 1).

**Results**

Pearson correlation coefficients were calculated for each communication trait and corresponding temperament scores. Significant attenuated correlations ranged from .19 to −.42 while disattenuated correlations were as high as −.50. As in study one, temperament scores were related to all of the communication traits investigated. Extraversion was significantly related to each of the four communication traits. The strongest relationships were produced by extraversion with touch apprehension ($r = −.42, p < .01$), communication competence ($r = .37, p < .01$), and compulsive communication ($r = .36, p < .01$). Neuroticism was significantly related to competence ($r = −.25, p < .01$) and touch apprehension ($r = .33, p < .01$). Finally, the only significant correlation for psychoticism was with tolerance for disagreement ($r = .19, p < .01$). A complete listing of attenuated and disattenuated correlations is reported in Table 5.

**Table 5**

**Correlations Among Eysenck’s BIG THREE and Communication-Related Traits for Study 3**

<table>
<thead>
<tr>
<th>Communication Traits</th>
<th>Extraversion</th>
<th>Neuroticism</th>
<th>Psychoticism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r$</td>
<td>(η)</td>
<td>$r$</td>
</tr>
<tr>
<td>Competence</td>
<td>.37**</td>
<td>(45)</td>
<td>−.25**</td>
</tr>
<tr>
<td>Compulsive communication</td>
<td>.36**</td>
<td>(43)</td>
<td>−.09</td>
</tr>
<tr>
<td>Tolerance for disagreement</td>
<td>.23**</td>
<td>(28)</td>
<td>−.08</td>
</tr>
<tr>
<td>Touch Apprehension</td>
<td>−.42**</td>
<td>(−.50)</td>
<td>.33**</td>
</tr>
</tbody>
</table>

Note: Disattenuated correlations are reported in parentheses.
*Indicates correlation is significant ($p < .05$).
**Indicates correlation is significant ($p < .01$). Nonsignificant correlations are not corrected for attenuation.

Implementing canonical correlation analyses yielded three significant roots (see Table 6). The first root ($Cr_1 = .60, F = 12.19, p < .01$) indicated that the temperament set defined mostly by extraversion (.93) and neuroticism (−.53) was

**Table 6**

**Canonical Correlation Analyses for Study 3**

<table>
<thead>
<tr>
<th>Set</th>
<th>Variables</th>
<th>Canonical Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V1</td>
<td>V2</td>
</tr>
<tr>
<td>Temperament</td>
<td>Extraversion</td>
<td>.93</td>
</tr>
<tr>
<td></td>
<td>Neuroticism</td>
<td>−.53</td>
</tr>
<tr>
<td></td>
<td>Psychoticism</td>
<td>−.12</td>
</tr>
<tr>
<td></td>
<td>Competence</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td>Compulsive communication</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>Tolerance for disagreement</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td>Touch apprehension</td>
<td>−.81</td>
</tr>
<tr>
<td>Communication</td>
<td>Adjusted canonical correlations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$F$ values</td>
<td>12.19</td>
</tr>
<tr>
<td></td>
<td>$p &lt;$</td>
<td>.01</td>
</tr>
</tbody>
</table>
be less apprehensive about touch, perceive themselves to be more competent communicators, and have a somewhat greater tendency toward compulsive communication.

The second canonical root ($C_r^2 = .35, F = 6.17, p < .01$) indicated that the temperament set defined primarily by neuroticism (.67), psychoticism (.55), and to a lesser extent, extraversion (.37) was significantly associated with the communication trait set primarily composed of compulsive communication (.80) and to a lesser extent, tolerance for disagreement (.41). These results indicate that nonstable psychotic extraverts are more likely to engage in compulsive communication and have a higher tolerance for disagreement. The third canonical root ($C_r^3 = .18, F = 3.61, p < .01$) indicated that the temperament set dominated by psychoticism (.82) and neuroticism (−.51) was significantly associated with the communication trait set comprised mostly of tolerance for disagreement (.86) and compulsive communication (−.32). These results suggest that stable psychotics are more likely to tolerate disagreement and less likely to compulsively communicate.

**Discussion**

A consistent pattern emerged across the three studies. Specifically, the results seem to indicate that non-neurotic extraverts are not shy or apprehensive about touch, tend to perceive themselves as more competent, view themselves as assertive and responsive, and express greater degrees of self-acceptance. Neurotic introverts report apprehension about communication, perceive themselves as less immediate, rate themselves as having a lower affect orientation, and somewhat higher levels of verbal aggressiveness. Neurotic participants report less self-acceptance. Neurotic non-psychotics report a greater degree of affect orientation, more apprehension about communication, and lower verbal aggression. Neurotic psychotic extraverts tend to be compulsive communicators and report greater tolerance for disagreement. Psychotics are non-responsive, and tend to report higher levels of verbal aggressiveness, argumentativeness and assertiveness. Finally, psychotic non-neurotics tend to have a greater tolerance for disagreement and are less likely to identify themselves as compulsive communicators.

These patterns are consistent with previous research (Beatty et al., 2001; Weaver, 1998). Moreover, the communication variables associated with each combination of personality traits are consistent with expectations for the underlying neurobiological systems and communication (Beatty et al., 2001). For instance, the pool of variables associated with psychoticism is consistent with theoretical expectations for Gray's fight/flight system (Beatty et al., 2001). The pattern of results observed in the present study are also consistent with theoretical expectations based on the extant commun-nobiological literature. However, supporting evidence from alternative methodological approaches such as twins studies, magnetic resonance imaging, and biochemical signatures of neurobiological functioning are needed to fully describe the biological link to communication. Although the results of the present study are informative, the bulk of future research should be directed at alternative methodologies such as those just mentioned.
Note

1For the sake of brevity, descriptive analyses for each of the measures are not reported. These statistics can be reviewed by contacting the senior author.

References


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Applying Reciprocity and Accommodation Theories to Supervisor/Subordinate Communication

James C. McCroskey and Virginia P. Richmond

ABSTRACT  Reciprocity and accommodation theories were applied to communication between supervisors and subordinates. It was reasoned that supervisors and subordinates informally (and not necessarily consciously) negotiate communication styles with each other which become significantly correlated over time. It was hypothesized that the supervisors' Socio-Communicative Style and the subordinates' Socio-Communicative Orientation would be positively correlated with each other and both would predict the subordinates' perceptions of the supervisors' credibility, attractiveness, and the subordinates' general attitude toward the supervisor and communicating with that supervisor. The results were consistent with the hypotheses.

KEY WORDS: supervisor-subordinate communication, organizational communication, socio-communication orientation, socio-communicative style, source credibility, interpersonal attraction

Individuals exhibit trait differences in their style of communication (Norton, 1983). These trait orientations manifest themselves in behavior patterns which are relatively consistent across contexts. Recent writers have argued that these communication traits are heavily influenced by genetic factors which make them resistant to change (Beatty & McCroskey, 1998; Beatty, McCroskey, & Heisel, 1998; Horvath, 1998; McCroskey, 1998). Research has provided strong empirical support for this argument (Horvath, 1995; Cole & McCroskey, 2000). While any given individual does not communicate in exactly the same ways in all contexts and with all other people, the strength of the genetic influence necessarily must establish an inverse relationship with the flexibility the individual has in adapting her/his communicative style while interacting with another—the stronger the genetic influence, the less flexibility in communication style the individual will have. Nevertheless, most theorizing about communication in relational development presumes individuals are able to adjust their communication in such ways as...

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to generate positive images in the minds of others. Whether theories based on such presumptions have application to relational development within contemporary organizations is the question for which this research sought at least a partial answer.

Within the context of contemporary organizations workers typically come in contact with a sizeable number of people on a regular basis. While many of these contacts are transitory and of little long-term consequence, others may be longer lasting contacts which actually develop into relationships which are important to the individual on the job or important in terms of a social relationship, or both. For many, the most important of the longer-term relationships is the one with their supervisor. While this relationship may or may not have a social component, the task relationship of a superior-subordinate pair may be critical to the subordinate’s career.

**Rationale and Hypotheses**

Two theories offer insight into what people are likely to do when they are in the process of building a supervisor/subordinate relationship. While neither of these theories were designed for application in this context, and the previous research employing the theories often were studies of interaction episodes, we believed they might have broader application than their creators apparently envisioned.

The older of the two, reciprocity theory (Gouldner, 1960), argues that the “principle of reciprocity” will manifest itself in any relationship. This principle suggests the people will tend to reciprocate the communication behaviors in which their interaction partner engages. Hence, if one partner initiates smiling, the other is likely to smile back. Similar reciprocation would be expected if one partner leans toward the other, looks at the other, expresses anger toward the other, etc. Hence, whoever initiates a communication behavior in an interaction is likely to receive a similar behavior back from the interaction partner. The lack of reciprocity in an interaction, in contrast, indicates a rejection of the previous behavior of the partner. If the partner reciprocates the alternate behavior of the rejector, it is much less likely that the previously rejected behavior will be engaged in subsequently. Hence, in most relationships cycles of positive or negative affect may be instigated by either partner in the relationship. This theory, then, suggests that supervisors and/or subordinates must be able to control their (possibly genetically driven) communication traits in order to appropriately reciprocate any positive or negative communication behaviors from their counterpart in order to build working relationships.

The newer theory which offers insight into the role of communication behaviors in the construction (or destruction) of relationships is speech accommodation theory (Giles, Mulac, Bradac, & Johnson, 1987). This theory suggests that, during communication, people adapt their communication style in order to gain approval from their partner or maintain a certain social position. “Convergent” (exhibiting behaviors similar to the partner’s) communication would be expected to gain more approval from the partner, while “divergent” (exhibiting behaviors different than the partner and suggesting one’s higher status) communication would be expected to establish and/or maintain psychological distance from the partner. Accommodation appears to be, in part, an adaptation to inequality in power in relationships. As noted by Littlejohn (1992), “In organizations, subordinates have been observed
to converge with superiors more often than the opposite" (p. 117). For the purpose of our research, however, who initiates accommodation is less important than that accommodation appears to regularly occur within supervisor/subordinate relationships in organizations. This suggests that supervisors and/or subordinates must be able to control their (possibly genetically driven) communication traits in order to accommodate their counterpart in building a working relationship.

While support for these theories has been found by their proponents and others in a variety of research contexts, none of this work has looked directly at supervisor/subordinate communication. On the bases of reciprocity and accommodation theories, therefore, we proposed the following hypothesis:

H1. Supervisors and subordinates adopt communication styles with each other which are significantly correlated.

This hypothesis presumes that there is sufficient flexibility in an individual's trait communication style to permit the person to engage in the behaviors predicted by reciprocity and accommodation theories. Before we provide more justification for our underlying presumption and advance other hypotheses, we need to examine communication style itself and the related genetic work.

SCO and SCS

The conceptual approach to communication style which we have chosen to employ is a blend of Norton's (1983) communicator style approach and various highly similar approaches which have appeared under differing names: personal style (Merrill and Reid, 1981), social style (Lashbrook, 1974), and psychological androgyny (Bem, 1974). These three approaches all stem from Jungian psychology and depend on simplified measures similar to the Myers-Briggs personality inventory. The approach we employ here distinguishes between socio-communicative orientation (SCO) which is measured by self-report of the way an individual sees her or his own style, and socio-communicative style (SCS) which is measured by reports of another person (or other persons) reporting on the way he/she/they see the person's actual behavior (Richmond & Martin, 1998; Thomas, Richmond, & McCroskey, 1994).

SCO and SCS involve two relatively uncorrelated dimensions, assertiveness and responsiveness, and can be measured by the Assertiveness-Responsiveness Measure (ARM) developed by Richmond and McCroskey (1990) as well as a wide variety of proprietary instruments in wide use among organizational consultants. Assertiveness reflects a person's willingness to speak up for her- or himself in interaction and not letting others take advantage of her/him. Responsiveness involves being other-oriented, considering others' feelings, and listening to what others say. This is sometimes considered to be the "relational" aspect of SCO and SCS.

The genetic basis of Socio-Communicative Orientation, as measured by the ARM, has been examined. In recent work reported by Cole and McCroskey (2000) it was determined that the genetic bases of both dimensions were substantial. They were estimated to be approximately 56–57 percent for assertiveness and between 65 and 72 percent for responsiveness. While this suggests that both dimensions are largely genetically driven, it is clear that considerable room remains for reciprocity and/or accommodation to occur.
We believed that our first hypothesis was more likely to be supported on the responsiveness dimension than on the assertiveness dimension, even though responsiveness appears to be more genetically driven than assertiveness. First, in work reported by Kearney and McCroskey (1980) it was found that responsiveness and versatility (flexibility) were substantially correlated. Since a certain degree of versatility would need to be present for our first hypothesis to be correct in any case, it would be most likely that it would be correct for responsiveness. However, if our hypothesis were to be supported by the results on both assertiveness and responsiveness, we believed the relationship would be stronger for the responsiveness dimension. While responsiveness clearly has a socially desirable quality, and thus engaging in reciprocal behavior or converging through accommodation would be easier, assertiveness can have a less socially desirable quality. In fact, if a supervisor is assertive with her/his subordinate, it may even be considered inappropriate to respond assertively. Therefore reciprocity might be prevented or divergent accommodation (submissiveness) might be generated.

A final consideration must be addressed with regard to hypothesis 1. This hypothesis should only be expected to be demonstrably correct when SCO and SCS are measured within a specific context such as the supervisor-subordinate context. Previous research has provided no evidence of a correlation between self and other trait measures of SCO or SCS, nor should we expect any unless the measures are contextualized and employed to measure SCO and SCS within a specific relational context. Hence, we are hypothesizing a correlation between variables which specifically has not been found in previous research involving these variables. What we are hypothesizing here is that SCO and SCS within a specific context are sufficiently flexible that significant correlations can be generated through the processes described by reciprocity and accommodation theories. We do not believe that the general traits related to SCO and SCS are subject to such effects. We see the general traits as primarily genetically based (as noted previously). Hence, flexibility available for the organizational context, or any other context, should not represent more than around 30 percent for responsiveness or 45 percent for assertiveness.

Outcomes of Reciprocated/Accommodated SCO/SCS

Above we have described what we believe happens in the relational development between supervisors and subordinates. Over time, some relationships become more positive and some become more negative. Our first hypothesis suggests that in both kinds of dyads the partners will become more alike in their communication behaviors. As a result we should expect that both the supervisors' SCO (as perceived and reported by their subordinates) and the subordinates' self-reports of their own SCS should be predictive of the subordinates' perceptions of the supervisors' credibility and interpersonal attractiveness, as well as the subordinate's general attitude toward the supervisor and communicating with that supervisor. Hence, the following hypotheses were advanced:

H2. Supervisors' assertiveness will be positively correlated with subordinates' perceptions of the supervisors' credibility and attractiveness and the subordinates' general attitude toward the supervisor and communication with the supervisor.

H3. Supervisors' responsiveness will be positively correlated with subordinates' perceptions of the supervisors' credibility and attractiveness and the subordi-
nates' general attitude toward the supervisor and communication with the
supervisor.

**H4.** Subordinates' assertiveness will be positively correlated with their perceptions
of the supervisors' credibility and attractiveness and their general attitude
toward the supervisor and communication with the supervisor.

**H5.** Subordinates' responsiveness will be positively correlated with their perceptions
of the supervisors' credibility and attractiveness and their general attitude
toward the supervisor and communication with the supervisor.

Hypotheses 2 and 3 presume that positive perceptions of supervisors on the part
of their subordinates are positively associated with perceptions of increased
assertiveness and responsiveness on the part of supervisors. Previous research
(Martin & Richmond, 1998) consistently has demonstrated such relationships in
other contexts, although the relationships tend to be higher for responsiveness
than for assertiveness. The question here was whether these same relationships
apply within the supervisor/subordinate context.

Hypotheses 4 and 5 are exploratory hypotheses which probe the relationship
between subordinates' own SCO and their perceptions of the image of their
supervisors. While in other contexts which are more transitory, no meaningful
relationships have been found, the concern here was whether they might exist in
this particular type of on-going relationship. We believed that it was probable that
if subordinates observed reciprocity/accommodation in the communication behav-
ior of their supervisors, this might generate a generalized positive reaction to the
supervisors which would manifest itself in other perceptions of those supervisors.
Such relationships might also manifest themselves as a function of subordinates' positive images of their supervisors resulting in more reciprocity and accommodation on their part. Which of these explanations would be the correct interpretation of positive findings, of course, would not be able to be determined from the data available in the present investigation.

**Methods and Procedures**

**Participants**

A total of 213 full-time employees participated fully in this study. Twenty-seven
individuals provided incomplete data and were not included in the study. Of these
107 identified themselves as male, and 106 indicated they were female. A total of
121 participants indicated they worked for a male supervisor and 92 indicated
they worked for a female supervisor. Preliminary analyses indicated there was no
significant effect for the interaction of gender of participant and gender of supervi-
sor on any of the variables of concern in the study.

A total of 240 participants were recruited by adult volunteers (part-time stu-
dents in a graduate program in corporate/organizational communication) in a
wide variety of organizations, including corporate for-profit, non-profit service,
state government, private small business, and federal government. No one type
accounted for as much as 20 percent of the total sample and no more than 5 percent
came from any single organization. The participants' length-of-service to their
current employer ranged from five months to 31 years, with a mean length of
service of 4 years, 7 months. Since none of the participants were "new hires," it
was reasonable to assume that the theoretical processes advanced above would
have had sufficient time to be reflected in the communication and perceptions of all of the individuals studied.

**Measurement**

**SCS and SCO.** The Assertiveness-Responsiveness Measure (Richmond & McCroskey, 1990) was employed as the measure for the socio-communicative style (SCS) of the supervisors and the socio-communicative orientation (SCO) of the participants. The instructions for the instrument are different for the two purposes. In the present study, participants were asked to reference "the way your supervisor communicates with you at work" to estimate the supervisor's SCS, and "the way you communicate with your supervisor at work" to estimate the subordinate's SCO.

In previous research (Richmond & Martin, 1998) both the assertiveness and the responsiveness scores have been found to be highly reliable and uncorrelated with each other. In the present study, the Alpha estimates of the reliability of the assertiveness scale were .89 for the supervisors and .88 for the subordinates. The Alpha estimates for the responsiveness scale were .95 for the supervisors and .92 for the subordinates. The two dimensions were not significantly correlated for the supervisors ($r = .05, p > .05$) or for the subordinates ($r = .08, p > .05$).

**Source Credibility.** Three dimensions of source credibility (competence, trustworthiness, and goodwill) were measured by instruments developed by McCroskey (1966) and McCroskey and Teven (1999). The Alpha reliabilities for the three dimensions of credibility were: competence .91; trustworthiness, .94; and goodwill .96.

**Interpersonal Attraction.** Two dimensions of interpersonal attraction (social and task) were measured by use of instruments developed by McCroskey and McCain (1974). Four items were used for each of the two attraction dimensions. The Alpha reliabilities obtained were .88 for social attraction and .80 for task attraction.

**Attitude Toward Supervisor and Supervisor's Communication.** The Generalized Attitude Scale developed by McCroskey (McCroskey & Richmond, 1989) was used as a measure of both attitude toward the supervisor and attitude toward the supervisor's communication. This instrument is composed of six bipolar, seven-step scales. These scales have been found useful for measuring a wide variety of attitude targets. The Alpha reliability for this instrument in the current study was .95 for attitude toward the supervisor and .97 for attitude toward the supervisor's communication.

**Data Analyses**

Descriptive data for all of the measures used in this study appear in Table 1. The primary tests of the hypotheses advanced in this study were based on simple correlations. Exploration of patterns not hypothesized was conducted by use of canonical correlation analyses.
Results

Table 1 provides the means, standard deviations, and ranges for each of the measures in the study. Table 2 reports the simple correlations between the SCO/SCS variables and the outcome variables related to hypotheses 2–5.

Based upon reciprocity and accommodation theories, our first hypothesis predicted that supervisors' socio-communicative style (as reported by their subordinates) would be correlated with the socio-communicative orientations of their subordinates. The obtained correlation for assertiveness was a meager $r = .17$ ($p < .01$). While supportive of our hypothesis, this relationship accounts for only 3 percent of shared variance between the two measures. In contrast, the obtained correlation for responsiveness was .45. Given the probable genetic bases of this personality orientation, the 20 percent shared variance this correlation signifies is very strong support for our first hypothesis.

The correlations reported in Table 2 provide substantial support for our hypotheses 2–5 which suggest associations between SCO and SCS and a variety of important perceptions subordinates have of supervisors. These associations, however, were much stronger for responsiveness (both that of the supervisor and that of the subordinate) than for assertiveness. Although none of the associations were negative, the observed positive relationships with assertiveness (either supervisor or subordinate) were weak to non-nonsignificant. The notable exceptions were the moderately strong associations between supervisor assertiveness and both perceived competence ($r = .47$) and task attraction ($r = .36$). Subordinate assertiveness produced no similar associations.

The observed correlations with responsiveness were all positive. Those with subordinate responsiveness can best be described as moderate ($r = .35-.45$), indicating shared variance of from 12 to 20 percent. On the other hand, those with supervisor responsiveness can best be described as strong ($r = .52-.88$), indicating shared variance of from 27 to 77 percent.

An examination of the pattern of correlations in Table 2 appears to indicate that responsiveness is most associated with social attraction, trustworthiness, and goodwill—but it also is substantially associated with competence and task attraction. However, supervisor assertiveness appears to be more substantially related with competence and task attraction than the other perception variables. To probe these relationships we conducted a canonical correlation analysis with the four

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
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<tbody>
<tr>
<td>Supervisor Assertiveness</td>
<td>37.4</td>
<td>7.9</td>
<td>10–50</td>
</tr>
<tr>
<td>Supervisor Responsiveness</td>
<td>35.1</td>
<td>9.2</td>
<td>10–50</td>
</tr>
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<td>Subordinate Assertiveness</td>
<td>36.0</td>
<td>6.7</td>
<td>10–50</td>
</tr>
<tr>
<td>Subordinate Responsiveness</td>
<td>39.3</td>
<td>6.3</td>
<td>10–50</td>
</tr>
<tr>
<td>Social Attraction</td>
<td>14.2</td>
<td>4.2</td>
<td>4–20</td>
</tr>
<tr>
<td>Task Attraction</td>
<td>15.9</td>
<td>3.7</td>
<td>4–20</td>
</tr>
<tr>
<td>Competence</td>
<td>33.8</td>
<td>6.7</td>
<td>6–42</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>33.7</td>
<td>8.4</td>
<td>6–42</td>
</tr>
<tr>
<td>Goodwill</td>
<td>29.1</td>
<td>8.7</td>
<td>6–42</td>
</tr>
<tr>
<td>Attitude/Supervisor</td>
<td>32.5</td>
<td>8.4</td>
<td>6–42</td>
</tr>
<tr>
<td>Communicate w/Supervisor</td>
<td>31.9</td>
<td>8.1</td>
<td>6–42</td>
</tr>
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</table>
TABLE 2
Correlations Between SCS/SCO Measures and Supervisor Perception Variables

<table>
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<tbody>
<tr>
<td>Competence</td>
<td>.47</td>
<td>.52</td>
<td>.08*</td>
<td>.35</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>.17</td>
<td>.78</td>
<td>.15*</td>
<td>.38</td>
</tr>
<tr>
<td>Goodwill</td>
<td>.06*</td>
<td>.88</td>
<td>.10*</td>
<td>.45</td>
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<tr>
<td>Social Attraction</td>
<td>.07*</td>
<td>.76</td>
<td>.16</td>
<td>.40</td>
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<tr>
<td>Task Attraction</td>
<td>.35</td>
<td>.54</td>
<td>.07*</td>
<td>.35</td>
</tr>
<tr>
<td>Attitude/Supervisor</td>
<td>.26</td>
<td>.79</td>
<td>.16</td>
<td>.39</td>
</tr>
<tr>
<td>Communication/Supervisor</td>
<td>.23</td>
<td>.73</td>
<td>.20</td>
<td>.42</td>
</tr>
</tbody>
</table>

*p > .05.

SCO/SCS variables as predictors of the five variables reflecting credibility and interpersonal attraction. This analysis produced two statistically significant canonical variates. The first of these had an adjusted canonical correlation of .89 [F(d.f. 20) 29.72, p < .0001]. The only predictors with meaningful loadings on the variate were supervisor responsiveness (.998) and subordinate responsiveness (.498). The criterion variables with high loadings were social attraction (.849), trustworthiness (.873), and goodwill (.983). Loadings were substantial but somewhat lower for task attraction (.619) and competence (.578). The second canonical variate had an adjusted canonical correlation of .58 [F(d.f. 12) = 8.84, p < .0001]. The only predictor with a meaningful loading on the variate was supervisor assertiveness (.977). The two criterion variables with meaningful loadings were competence (.756) and task attraction (.555).

The results of the canonical analysis were consistent with our speculative observations of the correlation matrix. Supervisor assertiveness (but not subordinate assertiveness) appears to make a substantial contribution to subordinates’ task related perceptions. In contrast, both supervisor and subordinate responsiveness make substantial contributions to subordinates’ task related perceptions as well as their more socially related perceptions (social attraction, trustworthiness, and goodwill).

In order to probe the simple correlation results more deeply, we conducted a canonical correlation analysis with the SCO/SCS variables as predictors of the two attitude variables (toward supervisor and toward communication with the supervisor). This analysis produced one significant canonical variate with an adjusted canonical correlation of .83 [F(d.f. 8) = 43.69, p < .0001]. Supervisor responsiveness had the dominant loading on the variate (.962), while the other predictors had more moderate loadings (subordinate responsiveness, .493; supervisor assertiveness, .316; subordinate assertiveness, .205). Both of the criterion variables were loaded highly on the variate (attitude toward supervisor, .985; attitude toward communicating with supervisor, .913).

Discussion
Our results were consistent with our hypotheses. The data indicated the presence of the theoretically expected correlations which would flow as a result of reciprocity and accommodation in the normal interaction of supervisors and subordinates. These results provide both a bright and a dark side. On the one side,
people who are responsive can anticipate generating more positive relationships as being the likely outcome of their behaviors. On the dark side, people who lack the ability or desire to be responsive must look forward to less positive working relationships. Many supervisors appear to have the flexibility to reciprocate, accommodate, and "give what they get" from their subordinates.

Previous research (particularly in non-intimate dyadic and instructional contexts) has failed to find correlations between participants' self-reported SCO and target others' SCS. In such contexts no correlations would be expected, unless they were produced by a response bias as a function of the similarity of the instruments completed at the same time. Brief interactions with non-intimates, such as students with teachers of large lecture classes, would not be expected to produce the outcomes predicted by reciprocity and accommodation theories. However, dyads who interact daily in an environment where it is in the interest of each to establish good communicative relationships with the other, it seemed to us, provide an optimal opportunity to test the applicability of these theories in the organizational context.

Our results reflect positively on both theories. However, they also point to limitations that should be considered. We probably should not expect the tendency to reciprocate or accommodate in all aspects of communicative behavior. Clearly, high responsivenes represents a category of behaviors which in most contexts would be considered positive. We should expect these theories to work best under these circumstances. On the other hand, assertiveness represents a category of behaviors which can be seen as either positive or negative—it depends. If I am a supervisor who wants her subordinate to do something and the subordinate is highly assertive in finding out how best to accomplish my desired mission, things are good. If, however, the subordinate is highly assertive about his desire to avoid that task, things are not so good. Thus, my likelihood of accommodation is lower, and my reciprocity, if any, might be negative. We believe the marginal but statistically significant results we observed for assertiveness is reflective of this concern.

If we look to things more extreme than normal assertiveness, we may find accommodation and reciprocity theories a bit more limited. We would expect, for example, if one person in a dyad is very verbally aggressive, the other person may move to accommodate divergently and/or reciprocate in ways in which would lead to increasingly negative interpersonal perceptions (in contrast to the increasingly positive ones observed in the present study). Whether these theories will be as predictive under such circumstances remains for future research to determine. At present, we can only be confident in suggesting to both supervisors and subordinates that if they engage in responsive communication behaviors toward the other it is likely they will experience reciprocity and accommodation from the other.

For those who are deeply involved in the study of interpersonal communication, this conclusion certainly does not represent a shockingly new insight. However, previous research has not found such effects in non-intimate dyads, particularly not in an applied context outside of intimate relationships. To establish that this effect is empirically verifiable with a study that drew data from a wide range of workers in a very wide variety of types of organizations does indeed have important implications. It is precisely this kind of evidence of potential outcomes which training administrators need to justify beginning and/or continu-
ing communication training in their employee training programs. Clearly, effective communication in the organizational context of supervisor and subordinate can make a major difference in the relationship between the two individuals, and most likely, in the desirability of the other outcomes of their interaction.

The results of the simple and canonical correlational analyses of the associations between SCO/SCS with credibility and attraction perceptions provided an interesting picture, one which makes sense but which has not been reported previously by either credibility or attraction researchers. While the simple correlations indicated that, as would be expected, perceptions of supervisor credibility and attraction generally were more associated with supervisor SCS than with subordinate SCO, it was also obvious that responsiveness seemed to be more associated with these perceptions than did assertiveness, particularly subordinate assertiveness. The one apparent anomaly was the relationship between perceived competence of the source with perceptions of assertiveness. While the correlation was nominally but not significantly lower for assertiveness (r = .47) than responsiveness (r = .52), it was not as dramatically lower as most of the other credibility and attraction dimensions.

The results of the canonical analysis of these four predictors (assertiveness and responsiveness of both superior and subordinate) and the five criterion variables (three dimensions of credibility and two dimensions of attraction) exposed the existence of two distinct perceptual domains which we have chosen to call the "affective" and the "evaluative" domains. Each of these was represented by its own canonical variate. The first and probably most important perceptual domain was the affective domain. This domain included perceptions of both supervisor and subordinate responsiveness predicting (or being predicted by) perceptions of social attraction, trustworthiness, and caring. These perceptions may all represent an affective domain of "liking" and "disliking" the other.

The second domain was the evaluative domain. This domain included perceptions of the supervisor's assertiveness (but not the subordinate's) along with perceptions of both credibility and task attraction. These perceptions may all represent evaluative (or attitudinal) continuum of "positive" at one extreme and "negative" at the other. Since responsiveness scores were also predictive of the competence and task attractiveness perceptions, it is clear that affect is involved here. Hence, this domain is not as "pure" as is the first.

It has been demonstrated in many studies subsequent to the original report of the assertiveness-responsiveness scale that the measures are both theoretically and statistically independent of each other. The manifestation of the separation in this study in terms of each being primarily associated with a different perceptual domain suggests an explanation for why our predictions for correlations between supervisor and subordinate assertiveness and responsiveness did not fare equally well. It appears that accommodation and reciprocity theories are better predictors of behaviors impacting the affective domain than they are for those impacting the evaluative domain. Of course, this interpretation is fully consistent with our interpretation of the less positive results for assertiveness noted in our earlier discussion.

Finally, we need to consider the limitations of the current research. We have attempted to avoid suggesting direct causation in this discussion. Since this research was purely correlational, no causation can be clearly established from the present data. While this is a limitation of this research, it is the limitation
associated with all purely correlational research. In some instances, that is a very severe limitation. In the present case, the theories being applied do not necessitate establishment of the direction of causation. Whether the supervisor, or the subordinate, initiates positive (or negative) communication, we may expect reciprocity and/or accommodation on the part of the other. Over time, the same positive or negative outcomes are likely regardless of who initiated the subsequently reciprocated or accommodated communication behavior.

A second limitation of this study is that data were collected only from subordinates. Ideally, data would be obtained from both supervisors and subordinates. We might find differences in the results from such data compared to the present data. Supervisors and subordinates may not perceive things in the same way. However, one of the keys to understanding communication is to understand its relationship with perception. While what one person perceives in an interaction may be different than what the other perceives, both will respond in the way they perceive things, not on the basis of some objective reality. There is no reason to anticipate that the theories of reciprocity or accommodation will work differently for supervisors than they do for subordinates when they are involved in continuing relationships.

References


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The Impact of Supervisor and Subordinate Immediacy on Relational and Organizational Outcomes

Virginia P. Richmond and James C. McCroskey

Hypotheses were advanced based on the immediacy principle, accommodation theory, reciprocity theory, and previous research in another applied context which argue that increased nonverbal immediacy behaviors of supervisors have the potential to enhance subordinates’ perceptions of that supervisor, increase subordinate satisfaction with the supervisor and communication with the supervisor, and increase motivation and job satisfaction on the part of the subordinate. All of the hypotheses were supported by the results. The “principle of immediate communication” received strong support. It is concluded that increased immediacy on the part of either the supervisor or the subordinate is likely to generate reciprocity and accommodation leading to a more positive work environment and more desirable outcomes.

Key words: Immediacy, Supervisor-Subordinate Communication, Organizational Outcomes

Research has established that supervisors may employ a variety of communication strategies that impact their subordinates’ perceptions of them, the subordinates’ satisfaction with supervision, and the subordinates’ job satisfaction (Daly, McCroskey, & Falcione, 1976; Falcione, McCroskey, & Daly, 1977; Richmond & McCroskey, 1979; Richmond, McCroskey, & Davis, 1982, 1986; Richmond, Wagner, & McCroskey, 1983). One group of these, known as “affinity-seeking strategies,” have been found to be helpful to supervisors (Richmond, et al., 1986).

One affinity-seeking strategy, use of nonverbal immediacy, has been widely researched within the instructional context. The results of this research show that increases in a teacher’s nonverbal immediacy can result in greatly increased student learning and more positive student evaluations of the teacher (McCroskey & Richmond, 1992). The corollaries between the instructional context and the supervisor-subordinate context are far from perfect. However, positive student evaluations of teachers are not wholly unlike positive reports of subordinates on their supervisors. Nor are positive student reports on their affect for the course content wholly unlike positive subordinate reports on their affect for the jobs they perform. The similarities are at least sufficient to justify hypothesizing that outcomes resulting from increased immediacy in the organizational context would parallel those observed in the instructional context. The present research was designed to test such hypotheses.

Rationale and Hypotheses

The concept of nonverbal immediacy was introduced by social psychologist Albert Mehrabian (1971) to describe behavior patterns of people who like someone or something. He noted that consistently people move toward the person or thing they like. Mehrabian (1971) advanced an explanatory principle, called the “immediacy principle,” to account for the consistent observation of these behaviors:

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"People are drawn toward persons and things they like, evaluate highly, and prefer: and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (p. 1). Immediacy is indicated by such behaviors as looking at someone, leaning toward someone (in a non-threatening manner), sitting near someone, speaking in an animated way toward someone, and smiling at someone. While each of these behaviors can be observed in isolation, in normal interaction they are responded to collectively. Hence, people receive impressions of immediate behavior holistically, although it is possible for them to be aware of each component in the larger pattern.

The nonverbal immediacy construct was not initially proposed as a communication construct, but rather as a social psychological explanation of human nonverbal behavior. Then, as now, psychological and communication scholars approached nonverbal behavior in very different ways. While the disciplines overlap occasionally, generally under the psychological approach nonverbal behavior serves as a means for understanding the motivations and internal states of the individuals engaging in those behaviors. Communication scholars, in contrast, view nonverbal behaviors as potential messages which humans can use to communicate with and influence each other. However, because Mehrabian's work had obvious implications for interpersonal communication behaviors, it drew attention from communication researchers. Within the communication discipline the construct was reformulated to describe behaviors which could be used to communicate liking to others. The term "nonverbal immediacy" was adopted to describe many teaching behaviors which previously had been found (in isolation) to be associated with effective teaching (Andersen, 1978). The stream of research on nonverbal immediacy within the instructional context over the past two decades produced such convincing results that Richmond and McCroskey (2000) have proposed what they call the "principle of immediate communication" which they argue will apply in any interpersonal communication context. The principle they proposed is:

The more communicators employ immediate behaviors, the more others will like, evaluate highly, and prefer such communicators, and the less communicators employ immediate behaviors the more others will dislike, evaluate negatively, and reject such communicators. (Richmond & McCroskey, 2000, Chapter 1).

Within the organizational context, nonverbal immediacy, from a communication perspective, is a repertoire of nonverbal behaviors which supervisors may or may not use as messages to signal liking, positive evaluation, and positive affect (or their opposites) for their subordinates. Such behavior may or may not be within the conscious control of the supervisor. That is, the supervisors may be unaware that such messages are being sent, they may simply be responding to subordinates' actions. However, a particular supervisor may also be fully aware of her/his behavior and be consciously manipulating the nonverbal (as well as verbal) behavior in order to produce a desired image in the minds of the subordinates. Instruction in communication, for example, may enable previously naive supervisors to gain more control over their nonverbal behavior in order to generate more positive images and become more effective supervisors. If, indeed, the principle of immediate communication applies within this context, we should expect more immediate supervisors to be perceived more positively. Consequently, we advanced the following four hypotheses:

H1: Supervisors perceived as exhibiting higher immediacy will be perceived as more credible.
H2: Supervisors perceived as exhibiting higher immediacy will be perceived as more interpersonally attractive.
H₃: Supervisors perceived as exhibiting higher immediacy will be evaluated more positively.
H₄: Subordinates of supervisors perceived as exhibiting higher immediacy will evaluate the supervisors’ communication more positively.

Another principle may also be applicable here—the principle of reciprocity. It has long been known that in interpersonal interaction people tend to reciprocate positive (and negative) behaviors directed to them (Gouldner, 1960). That is, when someone smiles at us, we are likely to smile back; when they look at us, we tend to look back at them. Whether emotion precedes nonverbal expression, or the reverse, is an unresolved issue. But what is not at issue is that they tend to go together. Hence, we should expect that if a subordinate (or supervisor) engages in nonverbal immediacy behaviors with the supervisor (or subordinate), it is likely that the partner in the interaction will reciprocate. In short, if positive or negative affect is communicated via nonverbal immediacy behaviors, it will be reciprocated. This same pattern of behavior is predicted on the basis of speech accommodation theory (Giles, Mulac, Bradac, & Johnson, 1987), which suggests that people adjust their style of speech to their communication partners in order to gain approval and maintain positive social identity with the person to whom they are talking. In the present context, therefore it would be expected that supervisors and subordinates desiring to gain approval and maintain a positive image with the other person would accommodate by adjusting their immediacy behaviors to those of the other person. On the other hand, there is substantial evidence that an individual’s general communication style is genetically based (Horvath, 1998), hence it may not be subject to the reciprocity process to the extent that a supervisor and subordinate can modify their immediacy behaviors sufficiently to accommodate reciprocation with each other. The available data indicate, however, that some flexibility in communication style is still possible for most people (Beatty, McCroskey & Heisel, 1998). Consequently we advanced the following hypotheses:

H₅: Supervisor and subordinate immediacy will be positively correlated.

Research in organizational communication has confronted a major problem in terms of defining outcome variables which are both amenable to investigation and socially relevant to people in real organizations. Clearly, increasing productivity and/or profit are important, even critical concerns. Yet, many organizations do not operate on a profit motive and productivity in many organizations is extremely difficult to measure, or even in some cases to define. Furthermore, conducting research across both different organizations and different types of organization is critical to generalizing about the role and impact of communication in organizations.

Research conducted outside the communication discipline has determined that 1) employees who are highly motivated generally are more productive than those that are not, and 2) employees who are satisfied with their jobs are both more motivated to do high quality work and less likely to leave their jobs (Baum & Youngblood, 1975; Day & Hamblin, 1964; Student, 1968). The latter is increasingly important to organizations as work becomes more technologically dependent. For many organizations turnover is extremely expensive due to the increased costs of training new workers. Consequently, increasing motivation and job satisfaction have become critical concerns for almost all organizations in today’s economy. For these reasons, and the fact that these two concerns are amenable to cross-organizational research,
we chose subordinate motivation and job satisfaction as the outcome variables in the current research.

While generating more positive subordinate perceptions of supervisors and interactions with supervisors are desirable outcomes, at the bottom line is the question of whether all of this produces results that are positive for the organization as a whole. The first proposition of communication-centered nonverbal immediacy theory argues that exhibiting nonverbal immediacy behaviors generates positive affect in others. In the context of the current concern this means that supervisors who are nonverbally immediate with their subordinates will create positive affect toward themselves (as indicated in hypotheses 1–4 above). The second proposition of this theory is that positive affect generated within a relationship will generalize to the function of that relationship. This has been demonstrated to occur in the instructional context. Not only do students like immediate teachers more, but they also learn more from them and have more positive affect for what they learn. The corollary in the present context is that subordinates will like immediate supervisors more, and they will have more positive affect (motivation) toward their work and more satisfaction with that work. Hence, we advanced two final hypotheses:

\[ H_0: \text{Perceived supervisor immediacy will be positively correlated with subordinate motivation.} \]
\[ H_1: \text{Perceived supervisor immediacy will be positively correlated with subordinate job satisfaction.} \]

While the theory leading to the hypotheses above is mostly straight-forward, there is one ambiguity that we set out to explore in the current research. Clearly, the causal factor which presumably is operating in this theory is nonverbal immediacy. Also it is clear that immediacy is proposed as the factor leading to the formation or change of certain perceptions of the supervisor in the subordinates' minds. At this point it is unclear whether we should expect immediacy to be the direct cause of outcomes like motivation and job satisfaction or we should expect that the impact passes through (is mediated by) the perceptions of the supervisor that the subordinates have and thus is an indirect causal agent.

Since the design of the current study is correlational, direct assessment of causation is not possible. However, it was believed that it might be possible to rule out one of the possible causal paths, and thus give us insight into the probable causal process in operation. Hence we posed the following research question:

\[ \text{RQ: What is the most likely causal path between supervisor immediacy and subordinate motivation and job satisfaction?} \]

Methods and Procedures

Participants

There were 224 participants in this study (106 identified as male, 105 as female, the remaining participants did not report their gender). Of those indicating their gender, 129 worked for male supervisors and 62 worked for female supervisors. Sixty female participants reported working for male supervisors and 46 reported working for female supervisors. Eighty-nine male participants reported working for male supervisors but only 16 reported working for female supervisors. This pattern reflects the reality of the general society where the "glass ceiling" for potential female supervisors continues to exist in many organizations. Because of the observed gender disproportionality, preliminary analyses were conducted to determine whether
gender interacted with any of the hypothesized relationships in this study. No such interactions were observed. Consequently, since no gender-based hypotheses were advanced, no additional references to gender are included in this report.

Adult volunteers in a wide variety of organizations, including corporate for-profit, non-profit service, state government, private small business, and federal government (military, IRS, Bureau of Public Debt) recruited participants for this study. The adult volunteers (N = 60) were recruited from students enrolled in extended learning classes in three different areas. Each volunteer was given 4 questionnaires with instructions to give them to people at very different levels of the organization. The volunteers were associated with 46 different organizations. No one type of organization accounted for as much as 20 percent of the total sample. The participants’ length-of-service to their current employer ranged from one month to 32.5 years (M = 3 years, 8 months). The distribution was skewed, indicating that most of the participants had been with their current employer less than 3 years. All of the volunteers were employees in the organization in which they distributed questionnaires. They distributed a total of 240 questionnaires. Each questionnaire was accompanied by a postage-paid return envelope addressed to the researchers.

Measurement

Nonverbal immediacy. The Self-Report of Immediacy Behavior (SRIB; Richmond & McCroskey, 1995, p. 216) instrument was employed to measure participants’ perceptions of their own nonverbal immediacy. A modified version of the instrument was used for participants to report their perceptions of supervisors’ immediacy. The two versions of the instrument were separated by two pages in the four-page questionnaire to minimize measurement effects. In previous research, this procedure produced nonsignificant correlations between the scores on the two instruments when substantial correlations should not have been observed. Hence, any correlation between the scores found in the current research should be a function of the hypothesized relationship rather than an artifact of data collection. The Alpha reliability of the instrument in the current research was .81 as a self-report and .87 as a report of supervisors’ immediacy. The scores on the report of supervisor immediacy were used to test all of the hypotheses. The self-report instrument was employed to test hypothesis 5.

Source credibility. Three dimensions of source credibility (competence, goodwill, and trustworthiness) were measured by instruments developed by McCroskey (1966) and McCroskey and Teven (1999). The alpha reliabilities obtained for the three dimensions of credibility were: competence, .90; goodwill, .95; and trustworthiness, .95. The scores on these instruments were employed to test hypothesis 1.

Interpersonal attraction. Two dimensions of interpersonal attraction (social and task) were measured by measures developed by McCroskey and McCain (1974). Four items were used for each of the two attraction dimensions (alpha reliabilities were .87 for social attraction and .77 for task attraction). The scores on these instruments were employed to test hypothesis 2.

Affect toward supervisor. The Generalized Attitude Scale developed by McCroskey and Richmond, 1989) was employed to measure participants’ attitudes toward communication with their supervisors and their general attitude toward their supervisors. This instrument is composed of six bipolar, seven-step scales (good-bad,
wrong-right, harmful-beneficial, fair-unfair, wise-foolish, negative-positive). It has been found to have high reliability and validity across a wide variety of attitude targets across over 30 years of use (alpha reliabilities were .96 for both attitude toward supervisor and toward supervisor's communication). These instruments were employed to test hypotheses 3 and 4.

**Subordinate motivation.** Subordinate motivation was measured employing five bipolar, seven-step scales modeled on the instrument previously employed by Richmond (1990). The scales employed were motivated-unmotivated, excited-bored, uninterested-interested, involved-uninvolved, and dreading-it-looking forward to it (alpha reliability obtained in the present study was .92). This instrument was employed to test hypothesis 6.

**Job satisfaction.** The Generalized Belief Scale developed by McCroskey (McCroskey & Richmond, 1989) was employed to measure participants' job satisfaction. This instrument is composed of five bipolar, seven-step scales (true-false, right-wrong, no-yes, disagree-agree, correct-incorrect). It has been found to have high reliability and validity across a wide variety of belief targets across over 30 years of use. The instrument targets a specific belief. In the current implementation the belief was "I have a very good job" (alpha reliability was .97). This instrument was employed to test hypothesis 7.

**Data Analyses**

The hypotheses were all tested with simple Pearson correlations. The research question was addressed through path analyses employing the CALIS procedure available in the SAS statistical package.

**Results**

Correlations obtained between perceived supervisor immediacy and the other variables in this investigation are reported in Table 1. As noted in the table, all of the observed correlations were statistically significant.
Hypothesis 1 suggested that supervisors who are perceived as more immediate will be seen as more credible. This hypothesis was confirmed for each of the three dimensions. The correlation between supervisor immediacy and supervisor competence was .51, indicating 26 percent of the variance in supervisor competence is predictable by perceived immediacy. The correlation with trustworthiness was higher \( r = .59, z = 12.78, p < .01 \) indicating 35 percent predictable variance on this dimension. The highest correlation, however, was with goodwill \( r = .63, z = 7.0, p < .01 \), indicating that immediacy could predict 40 percent of the variance on perceived goodwill.

Hypothesis 2 suggested that supervisors who are more immediate will be perceived as more interpersonally attractive by their subordinates. This hypothesis was confirmed on both dimensions of attraction measured in this study. The correlation between supervisor immediacy and social attractiveness was considerably higher \( r = .64 \) than that for task attraction \( r = .40, z = 37.11, p < .01 \). These results indicate that supervisor immediacy could predict 16 percent of the variance in task attraction, but it could predict 41 percent of the variance in social attraction.

Hypotheses 3 and 4 predicted that subordinates who perceived their supervisors as more immediate would express more positive attitudes toward both their supervisors and communication with their supervisors. Both of these hypotheses were confirmed. The correlation between immediacy and subordinate attitude toward the supervisor was a strong one \( r = .66 \) which indicated that immediacy could predict 44 percent of the variance in subordinate attitude. The similarly high \( r = .61 \) correlation between immediacy and attitude toward communication with the supervisor indicates 37 percent predictable variance.

Based on reciprocity and accommodation theories, hypothesis 5 predicted a positive relationship between supervisor and subordinate immediacy. This hypothesis also was confirmed. The obtained correlation \( r = .31 \) indicates knowledge of either supervisor or subordinate immediacy will permit prediction of about 10 percent of the variance in the other.

The final two hypotheses predicted that supervisor immediacy would be positively related to motivation and job satisfaction. The observed correlation \( r = .34 \) indicated that supervisor immediacy was positively related with subordinate motivation and could predict approximately 12 percent of the variance in motivation, confirming hypothesis 6. Similarly, Hypothesis 7 was confirmed. The correlation between immediacy and job satisfaction \( r = .24 \) was lower than the other correlations observed, but it indicated that immediacy could predict about 6 percent of job satisfaction.

Table 2 reports the correlations between mediator variables (credibility, and attraction) and job satisfaction and motivation. As noted in the table, all of the correlations are statistically significant and moderate. In order to determine the extent to which supervisor immediacy may have a direct, as opposed to a mediated, impact on job satisfaction and/or motivation, path analyses were conducted. The first model (testing separately for subordinate motivation and subordinate job satisfaction) employed a direct causal path sequence: subordinate immediacy to supervisor immediacy to attitude toward supervisor to the outcome variable (subordinate motivation or subordinate satisfaction). Attitude toward supervisor was used because it was believed to be the most global of the possible mediating variables.
TABLE 2
CORRELATIONS BETWEEN MEDIATOR AND OUTCOME VARIABLES

<table>
<thead>
<tr>
<th>Mediator Variables</th>
<th>Outcome Variables*</th>
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<tr>
<td></td>
<td>Motivation</td>
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<td>Credibility</td>
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<td>Competence</td>
<td>.36</td>
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<td>Goodwill</td>
<td>.32</td>
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<td>Trustworthiness</td>
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<tr>
<td>Interpersonal attraction</td>
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<tr>
<td>Social</td>
<td>.36</td>
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<tr>
<td>Task</td>
<td>.32</td>
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*All correlations are statistically significant, p < .001.

![Diagram](image)

FIGURE 1
PATH MODEL FOR SUBORDINATE WORK MOTIVATION (NUMBERS IN PARENS ARE STANDARDIZED PATH COEFFICIENTS)

The characteristics of an ideal fit for causal models suggested by Hatcher (1994) were employed as decision criteria in this investigation. The five characteristics of concern were: (1) No absolute values of entries in the normalized residual matrix should exceed 2.0; (2) The chi-square test of the model should be non-significant (p < .05); (3) The comparative fit index (CFI: Bentler, 1989) and non-normed fit index (NNFI: Bentler & Bonett, 1980) should both exceed .90; (4) The $R^2$ for every predicted variable should be relatively large, compared to what has been observed in the past; and (5) All path coefficients should be statistically significant (p < .05) and nontrivial in magnitude (absolute values above .05).

Figure 1 reports the components and links of the best interpretable model obtained for subordinate work motivation. The most direct model (subordinate immediacy to supervisor immediacy to subordinate attitude toward supervisor to subordinate work motivation) was rejected because of a significant chi-square (12.33, p < .01). Entries in the normalized residual matrix indicated that addition of a link with supervisor immediacy directly predicting subordinate work motivation would not improve the model. However, an entry in that matrix indicated including a direct link between subordinate immediacy and subordinate work motivation would improve the model. Since there is a theoretical rationale for the existence of this link, both are affective orientations and may be produced at least in part by the same causal element(s), it was added and the resulting model appears in Figure 1.
The model in Figure 1 has all of the characteristics of a model with an ideal fit. After inclusion of the new link, the absolute values of entries in the normalized residual matrix were all below 2.0. The chi-square obtained for the model (3.58) was not significant ($p < .17$). The CFI was .97 and the NNFI was .99. All of the $R^2$ results (see Figure 1) were substantial. The $t$ statistics for the path coefficients all exceeded the 1.96 cut-off for significance at the .05 level (attitude toward supervisor predicting motivation, $t = 5.59$, subordinate immediacy predicting motivation, $t = 2.95$, supervisor immediacy predicting attitude toward supervisor, $t = 12.76$, and subordinate immediacy predicting supervisor immediacy, $t = 4.70$). Finally, all of the standardized path coefficients were not only non-trivial, all were substantial.

Figure 2 reports the components and links of the best interpretable model obtained for subordinate job satisfaction. This model is the direct model which was the first model tested. This model has all of the characteristics of a model with an ideal fit. The absolute values of entries in the normalized residual matrix were all below 2.0, which means adding or subtracting any link would not meaningfully improve the model, but could substantially degrade the model. The chi-square obtained for the model (3.47) was not significant ($p < .32$). The CFI was .997 and the NNFI was .994. All of the $R^2$ results (see Figure 2) were substantial. The $t$ statistics for the path coefficients all exceeded the 1.96 cut-off for significance at the .05 level (attitude toward supervisor predicting job satisfaction, $t = 5.16$, supervisor immediacy predicting attitude toward supervisor, $t = 12.76$, and subordinate immediacy predicting supervisor immediacy, $t = 4.70$). As in the previous model, all of the standardized path coefficients were far beyond trivial in size.

Discussion

All of the hypotheses advanced in this study were confirmed. Supervisor immediacy has substantial positive relationships with perceived credibility and interpersonal attraction. Supervisors who were perceived as high in nonverbal immediacy were also perceived as credible and attractive. Increased credibility and attractiveness, in turn, are substantially associated with subordinate motivation and job satisfaction.

These results support the general theory that exhibiting nonverbal immediacy enhances positive affect from others. Our finding that subordinates' perceptions of supervisor immediacy were significantly correlated with subordinates' self-perceived immediacy, in the light of the lack of such observed correlations within other contexts in previous research, suggests an opportunity for both supervisors and subordinates within the organizational context. Exhibiting nonverbal immediacy, whether one is supervisor or a subordinate, appears to facilitate reciprocity and accommodation forces which generate more positive affect within the supervisor-subordinate relationship.
Although there is strong evidence that subordinates’ and supervisors’ communication style is impacted by genetic factors, the results of this study indicate that there remains sufficient flexibility in the communicative style of many (if not most) people in organizations to be able to accommodate to the positive (or negative) immediacy behaviors of others around them. Both supervisors and subordinates have the potential for strategic use of these nonverbal behaviors to build better relationships within the working environment.

The results of this study suggest a very positive outlook for enhancement of relationships within organizations. Three conclusions may be drawn:

1) The principle of immediate communication has strong application in the organizational context. The results of this research indicate a direct impact of subordinate immediacy on the immediacy of their supervisors, which in turn impacts subordinates attitudes toward their supervisors.

2) A more nonverbally immediate supervisor is likely to be perceived by subordinates as higher in competence, goodwill, trustworthiness, and social and task attractiveness. When supervisors are perceived by their subordinates as more credible and attractive, employees may perform more positively for the supervisor and demonstrate more willingness to work with and for that supervisor.

3) A more nonverbally immediate supervisor will produce more positive subordinate affect toward her/himself, affect toward communication with her/himself, attitude toward job, and motivation.

The results of the path analyses suggest that organizations can justify spending more time and other resources on training supervisors (particularly new managers) to engage in the positive, immediate nonverbal communication behaviors. Organizations can be expected to benefit long-term from better management. There should be more motivation and increased job satisfaction on the part of subordinates. While lower absenteeism, decreased complaining, and reduced turnover probably are not perfectly correlated with increased motivation and job satisfaction, they certainly can not be expected to be negatively related. Future research needs to examine these increasingly important outcome variables directly. Adding these variables into our current causal model should provide us with an even clearer picture of the role of immediacy in organizations.

References


IMMEDIACY AND ORGANIZATIONAL OUTCOMES


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