

# Saying It Like It Isn't: Mixed Messages From Men and Women in the Workplace<sup>1</sup>

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Participants in a simulated work environment were exposed to 1 of 4 feedback conditions that varied in verbal and nonverbal positivity (positive content/positive tone, positive content/negative tone, negative content/positive tone, or negative content/negative tone). Either a male or a female supervisor provided this feedback. Results indicate that both productivity and general work satisfaction varied by feedback condition and gender. For example, female subordinates reported higher rates of satisfaction to positive content/negative tone messages and male subordinates reported higher rates of satisfaction to negative content/positive tone messages. Additionally, the productivity of male subordinates with male supervisors appeared to be distinctly influenced by positive tone relative to all other dyadic compositions. These results demonstrate the importance of examining both verbal and nonverbal components of feedback messages, along with the gender of the supervisor and subordinate.

If we are fortunate, our interactions with our superiors in the workplace are not ambiguous or vague. They are straightforward, informative, and goal directed. Often, however, this may be far from the case. Our superiors might send signals that are difficult to understand and give feedback that is contradictory. Contradictory feedback might occur on a number of levels, but one interesting way in which supervisory feedback may be inconsistent is when the content of the feedback contradicts the manner with which the feedback is given. Consider, for example, the advertising executive who is told quite positively by her smiling boss to "try to be a little more creative." While the content of the message is clearly negative (implying that her work is not creative), the manner in which it is said is positive (with a smile and positive tone of voice). What consequences does this type of feedback have on employees? The present paper will address this

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question by exploring how contradictory feedback influences both the behavior and the attitude of subordinates who receive such feedback in the workplace.

### Nonverbal Cues in the Workplace

Nonverbal cues (e.g., tone of voice or facial expressions) provide information about internal states, status, and personality, and influence the quality of interpersonal interactions (Berry, 1991; DePaulo & Friedman, 1998; Knapp & Hall, 1997). The importance of these cues to workplace interactions has not been underestimated by the organizational trade literature (DePaulo, 1992) or by managerial and nonmanagerial employees (Graham, Unruh, & Jennings, 1991). In the workplace, nonverbal cues express status (Baskin & Aronoff, 1980), influence interviewee behavior (e.g., Word, Zanna, & Cooper, 1974), and distinguish hierarchical communication across cultures (Ambady, Koo, Lee, & Rosenthal, 1996) and gender (Steckler & Rosenthal, 1985). Nonverbal cues also affect subordinate motivation (Kay & Christophel, 1995) and evaluators' perceptions of both subordinates and supervisors (DeMeuse, 1987). For example, individuals' positive nonverbal behaviors (e.g., nods, smiles, gaze time) have been found to be positively related to others' positive evaluations (Shrout & Fiske, 1981), and individuals' negative behaviors such as "growling" and "scowling" have been negatively related to others' positive evaluations (Zahn, 1980).

Although the effects of nonverbal behaviors (e.g., facial expression, eye gaze) have been examined, not much research has examined the influence of tone of voice on subordinates' perceptions of and responses to supervisory communication. This is surprising, because tone of voice has been found to be quite informative about phenomena and characteristics that are important to organizational functioning, such as politeness (Ambady et al., 1996), dominance (Hall & Friedman, 1999), and gender relations (Steckler & Rosenthal, 1985). Moreover, relative to other more controllable channels, such as the face or verbal content, the tone of voice is a leaky channel. In other words, the tone of voice is relatively difficult to manipulate intentionally (Rosenthal & DePaulo, 1979a). Thus, tone of voice might be more reflective of true attitudes than other easily manipulated channels. The first goal of this paper, then, is to fill this gap in the literature by exploring what influential function tone of voice has on workplace attitude and productivity.

### Mixed Messages

A second goal of this paper is to examine how both verbal content and voice tone simultaneously affect message recipients. Interestingly, research on nonverbal communication in the workplace has typically examined nonverbal cues independently from their accompanying verbal cues. This is not because researchers

have not speculated about the importance of the combined effects of verbal and nonverbal cues. It has been suggested, for example, that for effective communication, nonverbal cues should enhance, or at least not contradict their verbal counterparts (DePaulo, 1992). Further, verbal and nonverbal cues have been called inseparable by some researchers (Knapp & Hall, 1997). Failing to simultaneously examine verbal and nonverbal cues, then, might leave a large gap in our understanding of the relationship between supervisory communication and subordinates' behavior and attitude.

The importance of consistency of verbal and nonverbal cues has been documented in a number of realms, such as education and health care. Specifically, *mixed messages*, messages in which two or more channels of communication are in conflict, have been found to have a considerable impact on their receivers. For example, research on expectancy effects has found that *biased teachers*, teachers who display greater susceptibility to negative stereotypical information about social class or ethnicity, demonstrated greater discrepancies between their verbal and nonverbal messages than did nonbiased teachers (Babad, Bernieri, & Rosenthal, 1989). Biased teachers thus show leakage, or "the transmission of more positive affect in controllable channels while negative affect is given away involuntarily in less controllable channels" (Babad et al., 1989, p. 91). Children who bear the brunt of these leaky negative nonverbal messages perform more poorly in school than do those who do not receive biased messages (Rosenthal & Jacobson, 1968).

Additional work has revealed other potentially negative effects of mixed messages. For example, mixed messages are associated with unfavorable interpersonal evaluations, poor marital relationships, and poor learning among the mentally ill (Bugental, Kaswan, & Love, 1970; Noller, 1982; Rierdan & Brooks, 1977). Further, individuals interacting with others who have negative self-views tend to leak negative affect through less controllable nonverbal channels, while remaining positive in controllable verbal channels. Because these messages might mask potentially helpful corrective feedback, they then might serve to maintain individuals' negative self-views (Swann, Stein-Seroussi, & McNulty, 1992). Consequently, message consistency has been regarded as essential and inconsistency as detrimental to effective communication.

But, the results of other studies are inconsistent with these findings. Some studies have suggested that mixed messages actually might have beneficial effects on their receivers. Positive content paired with negative tone, for instance, is often associated with surprisingly favorable outcomes. Woolfolk (1978) found that children's learning improved when teachers used messages that were positive in their content but negative in their tone. Similarly, Hall, Roter, and Rand (1981) showed that doctors who used messages that were positive in content but negative in tone had more satisfied patients. At first glance, these results seem counterintuitive. However, they suggest that some mixed messages might be motivating for

improving behavior. Consequently, the debilitating and motivating aspects of mixed messages in the workplace should be examined.

### Gender and Communication in the Workplace

Both consistent and inconsistent messages might be favored differently depending on characteristics of the message sender. Characteristics such as mental health, age, culture, and gender all have been associated with the differential interpretation of mixed messages (Bugental et al., 1970; Friedman, 1979; Roy & Sawyers, 1990; Solomon & Ali, 1975; Volkmar, Hoder, & Siegel, 1980). For example, children perceive mixed messages from women more negatively than mixed messages from men (Bugental et al., 1970). Further, messages that are comprised of positive nonverbal cues and negative verbal cues are viewed negatively when communicated by women and positively when communicated by men (Noller, 1982). Given the rapidly changing gender demographics of the workplace (Reskin & Padavic, 1994), these individual-difference findings take on great importance. As women continue to enter the workforce at a rapid rate, it is important to understand how coworkers and, more specifically, subordinates perceive their communication styles. Consequently, it seems prudent to investigate how mixed messages from male and female supervisors are reacted to and interpreted by their male and female subordinates. Our third goal, consequently, is to explore how gender influences individuals' responses to mixed and consistent messages.

### *Gender and Supervision*

Many interactions, including those in the workplace, have been seen as causing individuals to automatically gender-categorize and consequently cue gender stereotypes (Ridgeway, 1997). Gender stereotypes suggest that women should be feminine, communal, and modest and that men should be aggressive, agentic, and independent (Eagly, Makhijani, & Klonsky, 1992; Rudman, 1998; Rudman & Glick, 1999). These expectations are not always confirmed, however, and when women in particular do not hold these characteristics, they often suffer severe interpersonal and occupational consequences. For example, women deviating from female stereotypes are often rated as more interpersonally deficient, less socially attractive, and less likely to be hired (Rudman, 1998; Rudman & Glick, 1999). They are also seen as less persuasive (Burgoon, Dillard, & Doran, 1983) and are more likely to be denied promotions (Eagly et al., 1992; Rudman & Glick, 1999).

Moreover, men and women supervisors are often not evaluated or responded to similarly for similar behaviors (Bartol & Butterfield, 1976; Hutchinson, Valentino, Kirkner, 1998; Jago & Vroom, 1982), and men do not suffer the same consequences as do women for deviating from the expectations of others. Although gender-appropriate behaviors for men are known and generally expected (Eagly et al., 1992), men enjoy a great deal more flexibility in the behaviors that

they are allowed to show at work. For example, women suffer greater repercussions for engaging in weak arguments and weak conversational styles (e.g., the use of hedges, tag questions, and disclaimers; Bradley, 1981). In contrast, men who advance arguments without support are evaluated as more intelligent than are females who advance arguments without support (Bradley, 1981).

But, why do such differences occur? Perhaps it is because the behavioral and linguistic rules that individuals use in hierarchical interactions are less clear for women. Specifically, most interpersonal interactions can be characterized along two dimensions of interpersonal relationships: status and solidarity (Brown, 1965). Women supervisors might be quite difficult to characterize on these dimensions because they simultaneously hold two social roles that are status incongruent. Specifically, women's historically prescribed position relative to men is low status (Brown, 1965). Their socially prescribed position of being a supervisor, however, is high status. The tension between these conflicting roles might be confusing to female supervisors as well as their subordinates (male and female). There is some evidence of this tension. For example, relative to male-led groups, the development of norms and procedures in female-led work groups can be quite stunted, and leadership clarification and power can be confused (Reed, 1983). Because women supervisors' roles are somewhat ambiguous to subordinates, it is possible then that women supervisors might benefit to a greater extent than men by unambiguously maintaining supervisor-subordinate status roles. Thus, creating an environment that affirms their socially prescribed status as supervisor might aid in alleviating subordinates' confusion about power and roles, and consequently make women more effective leaders.

Importantly, formal environments, such as those created when emphasizing hierarchy, in contrast to more communal work environments might impede behaviors important to effective organizational functioning, such as help seeking (Lee, 1997) and communication (Edmonson, 1999). Although formality might serve women well, it might not do so for men. Because of the consistency between male supervisors' historical and socially prescribed status, added formality might create an environment that is too rigid and consequently might prevent such positive work behaviors. Thus, although their historically prescribed status might preclude women from benefiting to as great a degree as men by creating more communal type environments, male supervisors might benefit substantially from efforts to minimize status differences and create solidarity. Because of historically prescribed status differences, the environmental tone that is most effective for men and women might differ.

### *Gender and Subordination*

Much less work has been amassed concerning gender differences between male and female subordinates. Outside of the workplace, males tend to engage in

competitive behavior (Gruber, 1992), respond better to competitive behavior (Lewis & Cooney, 1987), focus on the competitive nature of information (Roberts, 1991), and sometimes prefer competition to collaboration (Prakash, 1992) more than do females. But, women also differ from men in what they want from work and in how they perceive social interactions at work. While men self-report that they consider earnings and responsibility most important to them, women self-report that aspects such as challenge, growth, and good supervision, among other things, are most important to them (Konrad, Corrigan, Lieb, & Richie, 2000).

These differences in goals are accompanied by differences in perception. Linguistically, men tend to focus on solidarity, while women focus on status (Cowan & Kasen, 1984). Specifically, in ambiguous letters, men tended to view the use of a first name as indicative of solidarity, while women tended to view the use of a first name as indicative of low status. Thus, cues that to men indicate that they are socially close to their supervisor might be viewed by women as condescension. We could speculate based on this work that female subordinates might be more satisfied with more formal supervisory styles in the workplace and male subordinates might be more satisfied with more informal supervisory styles.

Gender differences in the perception of linguistic cues are supported by research suggesting that men and women are differentially sensitive to the nonlinguistic styles of their supervisors (Carli, LaFleur, & Loeber, 1995) and that women are better decoders of nonverbal cues generally (Hall, 1978, 1979). This effect, however, is attenuated as the nonverbal channels of communication become more unintentionally revealing. That is, as information becomes more difficult for an individual to conceal, women lose their nonverbal decoding advantage over men (Rosenthal & DePaulo, 1979b). This effect has been explained in terms of the accommodation hypothesis (Rosenthal & DePaulo, 1979b). This hypothesis specifically suggests that because of social norms, women attend less to nonverbal cues, as they become more revealing of affect not intended to be expressed. Although most adults' understanding of verbal/nonverbal messages is guided primarily by nonverbal cues (DePaulo, Rosenthal, Eisenstat, Rogers, & Finkelstein, 1978; Friedman, 1978; Haase & Tepper, 1972), because of accommodation, women's understanding of messages, at times, might be guided more by verbal content than by nonverbal cues. Thus, female subordinates focus more on content, while male subordinates focus on tone of voice in any given message.

### The Present Study

#### *Supervisor Predictions*

Beliefs about gender appropriateness of behavior and about expectations of status and solidarity are likely to influence what combinations of tone of voice and verbal content will be most effective for men and women supervisors. Given that women are expected to be communal (Rudman, 1998), individuals might

expect them to use positive content. At the same time, to positively influence subordinates, women might need to affirm their socially prescribed status as supervisor by using negative tone. This suggests that messages that are positive in content and negative in tone might result in the greatest positive effect on women's subordinates.

In contrast, given that men are not expected to be communal, but agentic and aggressive (Eagly et al., 1992), individuals might expect them to use negative content. At the same time, men have no need to affirm the socially prescribed status with tone of voice, as it is already supported by their historically prescribed status. Consequently, they might reap benefits from using positive tone to increase solidarity and reduce status differences. This suggests that negative content messages said with a positive tone might result in the greatest positive effect on men's subordinates.

In sum, the hypotheses are as follows:

*Hypothesis 1: Supervisor Gender and Verbal Content.* On average, women will elicit greater productivity from subordinates by using positive content messages, and men will elicit greater productivity from subordinates by using negative content messages.

*Hypothesis 2: Supervisor Gender and Tone of Voice.* On average, women will elicit greater productivity from subordinates by using negative tone of voice messages, and men will elicit greater productivity from subordinates by using positive tone of voice messages.

*Hypothesis 3: Supervisor Gender and Mixed Messages.* Overall, women will elicit greater productivity from subordinates by using positive content/negative tone of voice messages, and men will elicit greater productivity from subordinates by using negative content/positive tone of voice messages.

### *Subordinate Predictions*

The research mentioned previously suggests that women might gravitate toward clearly defined status roles and, as suggested by the interpersonal accommodation hypothesis, might be likely to focus slightly more on verbal content. In contrast, men might gravitate toward interpersonal solidarity and a competitive atmosphere. As with supervisors, then, it seems that different mixed messages might be most satisfying for male and female subordinates. Based on these findings, we suggest that female subordinates will be more satisfied when tone of voice is negative (setting up status differentials and minimizing solidarity) and verbal content is positive (affirming that they are doing a good job). Men, on the

other hand, will be more satisfied when tone of voice is positive (minimizing status and maximizing solidarity) and content is negative (posing a challenge or competition).

In sum, the hypotheses are as follows:

*Hypothesis 4: Subordinate Gender and Verbal Content.* On average, women will be more satisfied when they receive positive content messages, and men will be more satisfied when they receive negative content messages.

*Hypothesis 5: Subordinate Gender and Tone of Voice.* On average, women will be more satisfied when they receive negative tone of voice messages, and men will be more satisfied when they receive positive tone of voice messages.

*Hypothesis 6: Subordinate Gender and Mixed Messages.* Overall, women will be more satisfied when they receive positive content/negative tone of voice messages, and men will be more satisfied when they receive negative content/positive tone of voice messages.

The present study explores how the consistency of messages from male and female supervisors affects male and female subordinates by exposing individuals assigned to subordinate roles to messages of varying verbal/nonverbal consistency. Specifically, subordinates received messages that were either (a) positive in content and positive in tone, (b) positive in content but negative in tone, (c) negative in content and negative in tone, or (d) negative in content but positive in tone. Based on predictions supported by theories of gender appropriateness, status versus solidarity, and the work of Woolfolk (1978) and Hall et al. (1981), it was expected that, relative to consistent messages, certain combinations of mixed messages would have beneficial effects on the productivity and satisfaction of those who receive them.

## Method

### *Participants*

Participants were 156 undergraduates (78 male, 78 female). The participants were paid an average of \$7 for their participation or received course credit.

### *Materials*

Stimuli consisted of five scripted audiotaped feedback messages recorded by one female actor and two male actors. Each actor recorded all feedback message

conditions. These tapes consisted of feedback statements from supervisors that were either consistently positive or consistently negative in their content (Appendix). These positive statements and negative statements were recorded by individuals thoroughly trained in nonverbal expression, in both a positive tone of voice and a negative tone of voice. Individuals participated in about 5 hr of listening to example, practicing, and then recording. Thus, male and female voices gave feedback that was: (a) positive in content and positive in tone, (b) positive in content and negative in tone, (c) negative in content and positive in tone, or (d) negative in content and negative in tone.

Following the experimental task, two questionnaires were administered: two sections of the Job Diagnostic Survey (JDS; Hackman & Oldham, 1980)—Experienced Responsibility and Internal Work Motivation; and two sections of the Job Diagnostic Inventory (JDI; Smith, Kendall, & Hulin, 1969)—Supervisor Satisfaction and Work Satisfaction. Both scales were designed to assess individuals' attitudes toward aspects of work. The two sections of the JDS consist of 7-point scales asking how much people agree with statements about their jobs (e.g., "My opinion of myself goes up when I do this job well"). The two sections of the JDI ask people to report whether or not they feel that adjectives and statements are descriptive of their jobs (e.g., "fascinating") and their supervisors (e.g., "hard to please"). These scales have satisfactory reliability and validity.

### *Procedure*

Participants were randomly assigned to one of eight experimental conditions. Specifically, participants were assigned to receive one of the four experimental feedback conditions (positive content/positive tone, positive content/negative tone, negative content/positive tone, or negative content/negative tone) from either a male mock supervisor or a female mock supervisor.

At the start of the study, participants were told that they were about to participate in a dyadic study on supervisor–subordinate interaction. They were told that their partner for the day had not yet shown up for the experiment, but because they had arrived first, they would be assigned the role of subordinate for the task. They were also told that the other participant would be their acting supervisor for the day and that he or she would supervise them from an adjoining room with a one-way mirror via speakerphone. Participants were led to believe that the supervisor would be given a set of instructions for the task and would read it to them. They were also told that the supervisor would give them feedback during the task.

The experimenter then left the room, and shortly came back to declare that the second participant had arrived and that the study would begin. At this time, the experimenter left the room and played a randomly selected tape of task instructions. Specifically, the instructions explained that the participants had 10 min to sort 250 bibliographical index cards into 12 piles according to gender, age

group (25 to 34, 35 to 44), and salary rate (low, medium, high). This task was adapted from White, Mitchell, and Bell (1977). At the end of the instructions, the tape cued the participant to start sorting the cards. During the 10 min that the participants sorted the index cards, they received feedback statements at precisely scripted intervals. Finally, at the end of 10 min, the tape cued the participants to stop sorting the cards.

After completing the task, participants filled out the appropriate sections of the JDS (Hackman & Oldham, 1980) and the JDI (Smith et al., 1969). Productivity was measured by counting the total number of biographical index cards that were correctly sorted. Participants were then asked if they believed the cover story and were debriefed.

## Results

### *Manipulation Check*

There were 30 individuals (15 male, 15 female) who participated in a manipulation check. Written transcripts of the content of the statements recorded on the audiotapes were rated by 10 naïve participants (5 male, 5 female) on a 5-point Likert scale on seven dimensions: positive, antagonistic, warm, negative, friendly, aggressive, and supportive. The negative ratings were reverse scored and averaged with the positive ratings to create an overall positivity composite score. A  $t$  test revealed that the content feedback that was intended to be positive was rated as significantly more positive than the content feedback that was intended to be negative,  $t(9) = 8.89, p < .001$ .

To establish the validity of the tone of voice, the audiotapes were content filtered (removal of high-band frequency to obscure content but retain tone of voice) and rated on the same traits as the verbal content. Male and female tapes were rated by 10 naïve judges (5 male, 5 female) each. Thus, the male voice was rated by 10 judges, and the female voice was rated by 10 judges. As with content, the negative ratings were reverse scored and averaged with the positive ratings to create an overall positivity composite score. A  $t$  test revealed that the tone feedback that was intended to be positive was rated as significantly more positive than the tone feedback that was intended to be negative,  $t(19) = 3.31, p < .01$ . This difference did not vary between the male supervisors,  $t(9) = 0.82, p = .22$ ; or between the female supervisor and the male supervisors,  $t(18) = 0.92, p = .19$ .

### *Composite Variables*

The correlations between the four sections of the questionnaires (Experienced Responsibility, Internal Work Motivation, Work Satisfaction, and Supervisor Satisfaction) suggested that the measures be combined into a composite variable representing general satisfaction with the experimental task (Table 1). For these

Table 1

*Correlation Matrix for Dependent Variables*

	Productivity	Supervisor satisfaction	Work satisfaction	Experience responsibility	Internal work motivation
Supervisor satisfaction	.24	—			
Work satisfaction	.25	.35	—		
Experienced responsibility	.16	.32	.46	—	
Internal work motivation	.25	.29	.51	.57	—

measures, the correlations ranged from .29 to .57, with an average intercorrelation of .42. In order to equalize variance before combining the four sections of the questionnaire, the individual sections were first *z* scored. The sections were then averaged together, creating the general satisfaction variable. Productivity was not included in this composite variable because it represented an objective performance rating rather than a subjective self-reflection of attitude. However, productivity did correlate with general satisfaction ( $r = .30$ ).

*Analyses*

Because of missing data, stemming from either failure to complete the questionnaires or failure to believe the cover story, the data were analyzed with 144 (74 female, 70 male) individuals for productivity and 149 (75 female, 74 male) individuals for general satisfaction. A  $2 \times 2 \times 4$  ANOVA was conducted for each dependent variable with gender of supervisor, gender of subordinate, and feedback message (positive or negative content crossed with positive or negative tone) as between-subjects variables. Contrasts testing specific hypotheses were computed based on these analyses.

*General Satisfaction*

Results show that individual satisfaction varied by feedback condition and subordinate gender. Thus, a significant interaction of feedback message with subordinate gender was found,  $F(3, 133) = 3.27, p = .02$ . No other main effects or interactions involving feedback message were observed. The following are planned contrasts on this interaction, unless otherwise indicated.

*Subordinate gender and tone of voice.* A contrast was conducted to determine if female subordinates given negative tone messages and male subordinates given positive tone messages were relatively more satisfied than were female subordinates given positive tone messages and male subordinates given negative tone

messages. Contrast weights were as follows: female, positive content/positive tone (-1); female, negative content/positive tone (-1); female, positive content/negative tone (+1); female, negative content/negative tone (+1); male, positive content/positive tone (+1); male, negative content/positive tone (+1); male, positive content/negative tone (-1); and male, negative content/negative tone (-1). Results show that this hypothesis was supported,  $t(133) = 1.68, p < .05 (r = .14)$ . Thus, on average, female subordinates reported more satisfaction to negatively toned messages, and male subordinates reported more satisfaction to positively toned messages.

*Subordinate gender and verbal content.* A contrast was conducted to determine if female subordinates given positive content messages and male subordinates given negative content messages were relatively more satisfied than were female subordinates given negative content messages and male subordinates given positive content messages. Contrast weights were as follows: female, positive content/positive tone (+1); female, negative content/positive tone (-1); female, positive content/negative tone (+1); female, negative content/negative tone (-1); male, positive content/positive tone (-1); male, negative content/positive tone (+1); male, positive content/negative tone (-1); and male, negative content/negative tone (+1). Results show that this hypothesis was supported,  $t(133) = 2.55, p < .006 (r = .22)$ . Thus, on average, female subordinates reported more satisfaction to positive content messages, and male subordinates reported more satisfaction to negative content messages.

*Subordinate gender and mixed messages.* A contrast using weights of -2, -1, +1, and +2 suggested that for women subordinates, general satisfaction increased linearly from negative content/positive tone to negative content/negative tone to positive content/positive tone to positive content/negative tone,  $t(133) = 3.46, p = .0004 (r = .29)$ . For male subordinates, a contrast using weights of -2, -1, +1, and +2 indicated that general satisfaction increased linearly from positive content/negative tone to negative content/negative tone to positive content/positive tone to negative content/positive tone,  $t(133) = 1.33, p = .09 (r = .11)$ .

Note that the highest and lowest reported satisfaction to feedback conditions are reversed for men and women. In other words, the highest reported satisfaction for women (positive content/negative tone) was the lowest reported satisfaction for men, and vice versa (negative content/positive tone). Although the interaction of supervisor gender, subordinate gender, and message type did not reach significance,  $F(3, 133) = 0.68, p < .57$ , a full breakdown of the means is provided in Table 2.

### *Productivity*

Results show that individual productivity varied by feedback condition and supervisor gender. Thus, the interaction of supervisor gender with feedback condition approached conventional levels of significance,  $F(3, 128) = 2.43,$

Table 2

*General Satisfaction: Dyad Composition by Message Type*

	Female supervisor				Male supervisor			
	Female subordinate		Male subordinate		Female subordinate		Male subordinate	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
PCPT	0.29	0.74	-0.07	0.98	0.15	0.79	0.23	0.44
PCNT	0.56	0.81	-0.10	0.52	0.07	0.46	-0.14	0.71
NCNT	-0.07	0.91	0.03	1.10	-0.27	0.36	-0.21	0.47
NCPT	-0.21	0.70	-0.07	0.76	-0.65	0.94	0.43	0.54

*Note.* PCPT = positive content/positive tone of voice, PCNT = positive content/negative tone of voice, NCNT = negative content/negative tone of voice, NCPT = negative content/positive tone of voice.

$p = .07$ . No other main effects or interactions involving feedback condition reached significance. The following are planned contrasts on this interaction, unless otherwise indicated.

*Supervisor gender and tone of voice.* A contrast was conducted to determine if female supervisors using negative tone messages and male supervisors using positive tone messages elicited higher levels of productivity relative to female supervisors using positive tone and male supervisors using negative tone. Contrast weights were as follows: female, positive content/positive tone (-1); female, negative content/positive tone (-1); female, positive content/negative tone (+1); female, negative content/negative tone (+1); male, positive content/positive tone (+1); male, negative content/positive tone (+1); male, positive content/negative tone (-1); and male, negative content/negative tone (-1). Results show that this hypothesis was supported,  $t(128) = 2.13$ ,  $p < .02$  ( $r = .19$ ). Thus, on average, female supervisors elicited the greatest amount of productivity from their subordinates by using a negative tone of voice, and male supervisors elicited the greatest amount of productivity from their subordinates by using a positive tone of voice.

*Supervisor gender and verbal content.* A contrast was conducted to determine if female supervisors using positive content messages and male supervisors using negative content messages elicited higher levels of productivity relative to female supervisors using negative content and male supervisors using positive content. Contrast weights were as follows: female, positive content/positive tone (+1); female, negative content/positive tone (-1); female, positive content/negative tone (+1); female, negative content/negative tone (-1); male, positive

Table 3

*Productivity: Dyad Composition by Message Type*

	Female supervisor				Male supervisor			
	Female subordinate		Male subordinate		Female subordinate		Male subordinate	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
PCPT	195.09	35.39	178.67	47.18	160.78	43.49	205.44	51.44
PCNT	197.30	30.91	196.00	42.61	157.78	50.84	157.78	60.15
NCNT	201.90	51.76	191.56	65.46	201.63	21.88	173.38	51.56
NCPT	179.00	43.57	182.50	58.21	174.43	41.87	229.75	27.85

*Note.* PCPT = positive content/positive tone of voice, PCNT = positive content/negative tone of voice, NCNT = negative content/negative tone of voice, NCPT = negative content/positive tone of voice.

content/positive tone (-1); male, negative content/positive tone (+1); male, positive content/negative tone (-1); and male, negative content/negative tone (+1). Results show that this hypothesis was supported,  $t(128) = 1.82, p < .04 (r = .16)$ . Thus, on average, female supervisors elicited the greatest amount of productivity from their subordinates by using messages with positive content, and male supervisors elicited the greatest amount of productivity from their subordinates by using messages with negative content.

*Supervisor gender and mixed messages.* The means show that positive content and negative tone were not the highest productivity message for female supervisors, as was predicted. However, a post hoc contrast shows that the two feedback conditions that elicited the highest productivity rates—negative content/negative tone and positive content/negative tone—did not differ from each other,  $t(128) = 0.02, p = .49 (r = .002)$ . Thus, for women, tone seemed to influence their subordinates to a greater extent than did content. However, as suggested in the hypotheses, negative content/positive tone elicited the greatest productivity of any feedback conditions used by male supervisors,  $t(128) = 2.02, p = .02 (r = .18)$ . Although the interaction of supervisor gender, subordinate gender, and message type did not reach significance,  $F(3, 128) = 1.49, p < .22$ , a full breakdown of the means is provided in Table 3.

*Additional Analyses*

The interaction of supervisor gender with subordinate gender reached significance for general satisfaction,  $F(1, 133) = 3.27, p < .02 (r = .27)$ . The pattern of

means suggests that same-gender groups were more satisfied than were mixed-gender groups. The interaction of supervisor gender and subordinate gender approached significance for productivity,  $F(1, 128) = 2.34, p < .13$  ( $r = .20$ ). Interestingly, the pattern was identical, with same-gender groups being more productive than mixed-gender groups.

In addition to this analysis, several post hoc contrast analyses were conducted to determine whether dyadic gender composition reliably influenced both satisfaction and productivity. While strong effects were observed for productivity, the same effects did not survive conservative alpha adjustment for satisfaction. Specifically, a contrast suggesting that male–male dyads were most productive during positive tone conditions ( $\lambda_s = +3$ ) and all other dyads were most productive during negative tone conditions ( $\lambda_s = +1$ ) was significant,  $t(128) = 3.52, p < .0003$  ( $r = .30$ ). This remained significant even after Bonferroni adjustment ( $p = .005$ ). Note that this effect size was the largest for all effects investigated for productivity. Thus, this comparison might offer the best explanation for the productivity data. In contrast, although this same contrast reached significance for satisfaction,  $t(133) = 2.27, p < .01$  ( $r = .19$ ), it did not retain significance after Bonferroni adjustment ( $p = .15$ ).

### Discussion

These results demonstrate the importance of examining both the verbal and the nonverbal content of supervisory feedback from men and women in a work setting. Positive and negative feedback had quite different results for men supervisors and women supervisors. For example, while women on average elicited greater productivity with positive content, they also elicited greater productivity with negative tone. In contrast, while men on average elicited greater productivity with negative content, they also elicited greater productivity with positive tone. The seemingly counterintuitive results show that mixed messages from male and female supervisors can have surprisingly beneficial effects on productivity.

But, these results varied depending on both the gender of supervisor and the gender of the subordinate. While male supervisors seemed to benefit overall by using positive tone, this was observed to its greatest extent in male–male dyads. In fact, the use of negative tone had surprisingly beneficial effects on productivity for all other groups. Perhaps this was because male–male dyads using positive tone might be characterized by particularly high levels of solidarity, without undermining the authority of the supervisor. Not only was immediacy increased in these dyads with the positive tone of voice (Mehrabian, 1972), but also gender similarity might have naturally induced feelings of solidarity (Brown, 1965). Because of men's historical high status, this solidarity might not have threatened their high-power position. Female–female dyads did not appear to reap the same benefits from solidarity as a result of gender similarity alone. Thus, the male–

male pair might be unique in its ability to benefit from enhanced solidarity gleaned from using a positive tone of voice.

This set of results is interesting for a number of reasons. First, the results show that unconditional positivity in a work setting does not necessarily result in the highest rates of productivity. In fact, negativity in different channels of communication occasionally seemed to boost productivity for female and male supervisors, at least in the short term. Educational research has found similar results. For example, student effort has been found to be enhanced by teachers' negative behavior (Redd, Morris, & Martin, 1975). This improvement has been attributed to the perceived seriousness of the feedback and contrasted with unconditional positivity, which might be perceived as feigned. Similarly, valid negative feedback has been found to raise individuals' goals (Podsakoff & Fahr, 1989) and effort (Campion & Lord, 1982). The feedback in the current study was probably perceived as thoughtful and consequently valid. Thus, the negative tone might have served to motivate the receivers of these messages. It is important to note that these interactions lasted for only for 10 min. Sustained negativity is not likely to retain its motivational quality.

Second, these results show that the beneficial effects of specific verbal and nonverbal messages differed for men and women. We suggest that this is true because individuals hold different expectations of men and women, and because men and women hold different historically prescribed levels of status. That is, people expect that women, relative to men, will be other-oriented (Eagly et al., 1992). Thus, individuals might have expected compliments to a greater extent from women and criticisms to a greater extent from men. Confirmation of these expectations via verbal content might have resulted in people working harder for women using positive content and men using negative content. At the same time, a communal/safe work environment has been found to have beneficial effects on employees (Edmonson, 1999; Lee, 1997). Men's ability to take advantage of this by utilizing a positive tone of voice was reflected in higher productivity levels for this condition. Women's inability to take advantage of this, because of risk at undermining supervisory authority, was reflected in higher productivity levels for negative tone of voice conditions, which enforced status differences.

Alternatively, previous research has shown that men and women who violate the gender-stereotypic expectations of others are occasionally evaluated favorably (Bettencourt, Dill, Greathouse, & Charlton, 1997). Thus, women and men who violated stereotypic expectations in mock job applications were evaluated more positively than were women and men who did not. Extending this to our own findings, perhaps tone and content do not operate independently, but as a whole message and particular combinations of verbal content and nonverbal tone actually resulted in a violation of stereotypes for men and women.

Indeed, researchers have suggested that mixed messages result in specific meta-messages. Positive content/negative tone, for example, has been suggested

to represent a firm but fair message that conveys support and concern (Bugental, Henker, & Whalen, 1976; Hall et al., 1981; Woolfolk, 1978). The combination of negativity in vocal tone with positivity in content seems to result in a message that simultaneously expresses both objective satisfaction (positive verbal content) and subjective dissatisfaction (negative nonverbal tone). In a sense, the sender is being supportive but holding back, and not being as completely supportive as he or she could have been had positive content been paired with positive tone. In contrast, researchers have suggested that negative content/positive tone is a tentative/apologetic mixed message (Woolfolk, 1978). This message correspondingly expresses objective dissatisfaction (negative content) and subjective satisfaction (positive tone). In a sense, the sender is being critical but holding back, and not being as completely critical as he or she could be had the negative content been paired with negative tone.

Each of these meta-messages might violate stereotypic expectations. For example, subordinates might have expected the female supervisor to be a hesitant/warm or a "soft" supervisor. However, based on the firm-but-fair mixed message (positive content/negative tone), they might have found her to be quite competent and no nonsense, and this disconfirmation might have resulted in a favorable evaluation and increased motivation to work hard. Similarly, if subordinates expected the male supervisor to be an assertive and dominant supervisor, but based on the tentative/apologetic mixed message (negative content positive tone) found him to be relatively less dominant and warm, again this disconfirmation might have resulted in a positive evaluation and consequently enhanced productivity. More work is needed to determine whether these combinations reflect a whole message that is in violation of stereotypic expectations or independent units that additively confirm stereotypic expectations and support a status/solidarity explanation.

Interestingly, general satisfaction with work after receiving mixed messages varied by the gender of the subordinates. Depending on one's gender, positive and negative feedback had quite different effects on general work satisfaction. That is, female subordinates were both more satisfied when they received positive content feedback and when they received feedback that was negative in tone of voice. In contrast, male subordinates were both more satisfied when they received negative content feedback and when they received feedback that was positive in tone of voice. Thus, mixed messages seemed to be perceived quite favorably by subordinates.

We suggest that these results occurred because men and women seem to value different types of communication in the workplace and because men and women perceive similar information in different ways. Specifically, while men seem to favor competition, women seem to value less competitive atmospheres (e.g., Prakash, 1992). Thus, the challenge of a negative criticism via verbal content might be welcomed to a greater extent by men than by women. At the same time,

men and women have been found to perceive the same information as either conveying solidarity or pointing out status differentials (Cowan & Kasen, 1984). While men might have perceived positive tone as indicating solidarity, women might have perceived it as condescension. Thus, the observed satisfaction differences for positive and negative tone are not unreasonable if men are responding to positive tone with warmth and women are responding with skepticism.

Alternatively, some work has shown that women focus on more controllable channels of communication (Rosenthal & DePaulo, 1979a). If this is true, women might merely have been responding to the positive content and ignoring the negative tone. General findings that men respond favorably to positive tone and women respond favorably to positive content support this suggestion.

Certain limitations of the present work should be kept in mind. In future work, face-to-face interactions should be assessed to determine the effects of mixed messages conveyed through other channels of communication. Other non-verbal cues (e.g., facial expressions) are important in workplace interactions. The role of these cues in influencing productivity should be examined. Further, the task used in this study was somewhat monotonous and resembled clerical work. Because it is possible that different types of tasks might be more or less susceptible to supervisory feedback, examining other tasks (e.g., creative tasks) might also be useful. Finally, similar research should be conducted in natural settings. Individuals in the workplace typically have a shared history and often interact for long periods of time.

Understanding the way that men and women respond to one another in the workplace is key to enhancing organizational effectiveness. The effects of the messages that male and female supervisors relay have a substantial impact on the attitude and behavior of their subordinates. However, the most beneficial effects are not necessarily reaped from unconditional positivity. Productivity and satisfaction are often boosted by mixed messages. Mixed messages play an important role in influencing subordinates' perceptions of supervisors as well as subordinates' affect and behavior. Thus, men and women in the workplace must be aware of what they say, who they say it to, and how they say it.

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## Appendix

*Informational Statements*

Time into task	Positive statements	Negative statements
2 min	You seem like you're getting it.	I really find this kind of boring.
5 min	You're doing fine. Keep going.	Aren't you halfway through yet?
8 min	You should do well. You have another 2 minutes.	You only have 2 minutes left.
9.5 min	I'll bet you do better than most people.	Um . . . oh, never mind, continue.
10 min	Okay, 10 minutes, you have to stop.	Please stop what you are doing.