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Empathy and complex task performance: two routes to leadership

Janet B. Kellett*, Ronald H. Humphrey¹, Randall G. Sleeth²

*Department of Management, Virginia Commonwealth University, 1015 Floyd Avenue, P.O. Box 844000,
Richmond, VA 23284-4000, USA*

Abstract

When we perceive someone as a leader, it is often because we are impressed with his/her mental abilities and his/her ability to perform complex tasks. Yet, there is a small but growing body of conceptual work suggesting that our perception of someone as a leader is affected by his/her emotional abilities as well. This article develops a model proposing two distinct behavioral routes that influence perception of an individual as a leader in a small group. One route influences people to perceive leadership from displays of emotional abilities, such as empathy. The other route influences people to perceive leadership from displays of mental abilities, such as complex task performance. Our test of the hypothesized model using structural equation modeling showed a good fit and support for the proposed relationships.

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1. Introduction

When we perceive someone as a leader, it is often because we are impressed with his/her mental abilities (Atwater, Dionne, Avolio, Camobreco, & Lau, 1999; Atwater & Yammarino, 1993; Lord, De Vader, & Alliger, 1986) and his/her ability to perform complex tasks (Humphrey, 1985; Humphrey & Berthiaume, 1993; Humphrey, Sleeth, Kellett, & Showalter, 2000). Yet, it is possible that our perception of someone as a leader is affected by his/her

* Corresponding author. Tel.: +1-804-320-1757; fax: +1-804-828-1602.

E-mail addresses: jbkell25@aol.com (J.B. Kellett), rhumph1@vcu.edu (R.H. Humphrey), rsleeth@vcu.edu (R.G. Sleeth).

¹ Tel.: +1-804-828-3173.

² Tel.: +1-804-828-1540.

emotional abilities as well. Indeed, recent writings (George, 2000, 1998a) suggest that emotional intelligence is a key determinant of effective leadership.

1.1. Emotional intelligence

The concept of emotional intelligence was first introduced by Salovey and Mayer (1990), who were influenced by earlier theories of social intelligence (Thorndike, 1920) and multiple intelligences (Gardner, 1983). Goleman's (1995) book on emotional intelligence became a best seller, igniting public and academic interest. Salovey and Mayer have continued to refine and develop their model, focusing entirely on emotion constructs involving the ability to perceive, glean information from, and manage one's own and others' emotions (Mayer & Salovey, 1997; Salovey & Mayer, 1990).

Emotional intelligence is described as distinct from general intelligence and personality traits (Mayer, Caruso, & Salovey, 2000a, 2000b; McCrae, 2000). Recent research suggests that elements of Salovey and Mayer's model of emotional intelligence may relate moderately (but not redundantly) to verbal intelligence (Mayer et al., 2000a), openness to experience, agreeableness, and emotional stability (Schutte et al., 1998).

1.2. Empathy

Salovey and Mayer (1990, p. 194) propose that "empathy may be a central characteristic of emotionally intelligent behavior." They define empathy as "the ability to comprehend another's feelings and to re-experience them oneself." Plutchik (1987, p. 43) writes that "empathy is not a separate emotion by itself, but a kind of induction process by which emotions, both positive and negative, are shared, and which increase the chance of similar behavior in the participants." In this way empathy serves to bond people together. Rogers (1951, pp. 52–54) emphasizes the importance of empathy in establishing an "ideal relationship" between a psychotherapist and a client. Rogers (1975, p. 3) notes research evidence that "points strongly to the conclusion that a high degree of empathy in a relationship is possibly the most potent and certainly one of the most potent factors in bringing about change and learning."

Indeed, empathy has a longstanding history as an important characteristic for counseling and psychotherapy. Katz (1963, p. 3) states, "when we experience empathy, we feel as if we were experiencing someone else's feelings as our own. We see, we feel, we respond, and we understand as if we were, in fact, the other person." Katz (1963, p. 4), explains that it is not necessary for the empathizer to experience physical sensations. However, empathy is more than an intellectual exercise. It involves personal involvement and imagination. An individual who is fortunate enough to encounter an empathic listener feels reassured, recognized and accepted (Katz, 1963, p. 8). An empathetic response is "triggered by cues in the conversation or by impressions we receive of the state of mind or feeling of the other person. We assimilate this information without being aware of doing so. We pick up the signals through a kind of inner radar and certain changes in our own emotional states make themselves felt. We mimic the other person and in the

excitement of our spontaneous response our attention is almost completely absorbed” (Katz, 1963, p. 5).

Katz maintains that people differ in empathic skill. He describes the effective empathizer as someone who succeeds in helping clients to change and who is able to balance involvement with appropriate detachment, “walking a narrow ridge between excessive empathy and myopic objectivity” (Katz, 1963, p. 161). Whereas, traditional views regard the experience of emotions—such as sympathy—in the workplace as contributors to burnout, more recent views have focused on the functional aspects of emotional experiences and argue that such experiences can help employees identify with their job (Ashforth & Humphrey, 1993, 1995).

Although empathy has played a central role for decades in many spheres of psychology, its measurement remains a challenge to researchers. Batson (1987) notes that self-reported measures of empathy are deficient because respondents are either unaware of or are unwilling to relate their empathic experiences. Possible alternative approaches include ability measures such as the Multifactor Emotional Intelligence Scale (Mayer et al., 2000b) or ratings by external observers (Mayer & Geher, 1996).

Yukl (1998, p. 99) lists displaying empathy as an important leader behavior for managing relations. Indeed, empathic abilities may underlie relations-oriented leader behavior, such as showing consideration (Stogdill, 1965), which is a friendly, supportive, and concerned approach to employees. Current theorizing regarding emotions and transformational leadership (Bass & Avolio, 1990) suggests that the ability to understand others’ emotions enables a leader to empathize and results in effectiveness (Ashkanasy & Tse, 2000, p. 233). According to Goleman (1998a, p. 100), “empathy is particularly important today as a component of leadership for at least three reasons: the increasing use of teams, the rapid pace of globalization, and the growing need to retain talent.” It means “thoughtfully considering employees’ feelings—along with other factors—in the process of making intelligent decisions.”

Researchers have investigated empathy’s distinction from other constructs. As an ability that combines thinking and feeling, empathy is distinguished from personality traits (McCrae & Costa, 1997) and relations-oriented leadership behavior (Yukl, 1998). For example, someone who is high on agreeableness (good-natured and cooperative; Barrick & Mount, 1991) and shows consideration (Stogdill, 1965) does not necessarily comprehend and experience others’ emotions. However, a moderate relationship may exist between empathy and certain aspects of personality. Davies, Stankov, and Roberts (1998) found that empathy was moderately related to openness ($r=.23$, $P<.05$) and agreeableness ($r=.26$, $P<.01$). McCrae (2000) theorizes that empathy is closest to the “tender-mindedness” dimension of agreeableness. Boyatzis, Goleman, and Rhee (2000) posit that agreeableness is an antecedent to empathy.

1.3. Research problem and purpose

Outside the realm of psychology, research in parenting and teaching shows that emotional abilities, such as empathy, contribute to positive interpersonal relationships and successful

outcomes (Goldstein & Michaels, 1985). Yet, empirical research in leadership has largely disregarded the role of emotions. George (2000, p. 1028) notes that, except for work on charisma (e.g., Conger & Kanungo, 1998), organizational scholars have neglected the effects of leaders’ emotions on effectiveness in favor of a strong cognitive orientation. Considering the emphasis on leader–follower relationships in current conceptualizations of leadership (Gerstner & Day, 1997; Graen & Uhl-Bien, 1998; House & Aditya, 1997; Klein & House, 1995), it is reasonable to investigate whether or not emotional abilities, such as empathy, benefit leadership in the workplace.

The purpose of this study is to empirically test the theoretical relationships among empathy, performance of complex tasks, and impressions of leadership in small workgroups. Fig. 1 depicts the hypothesized model, which we describe in detail below.

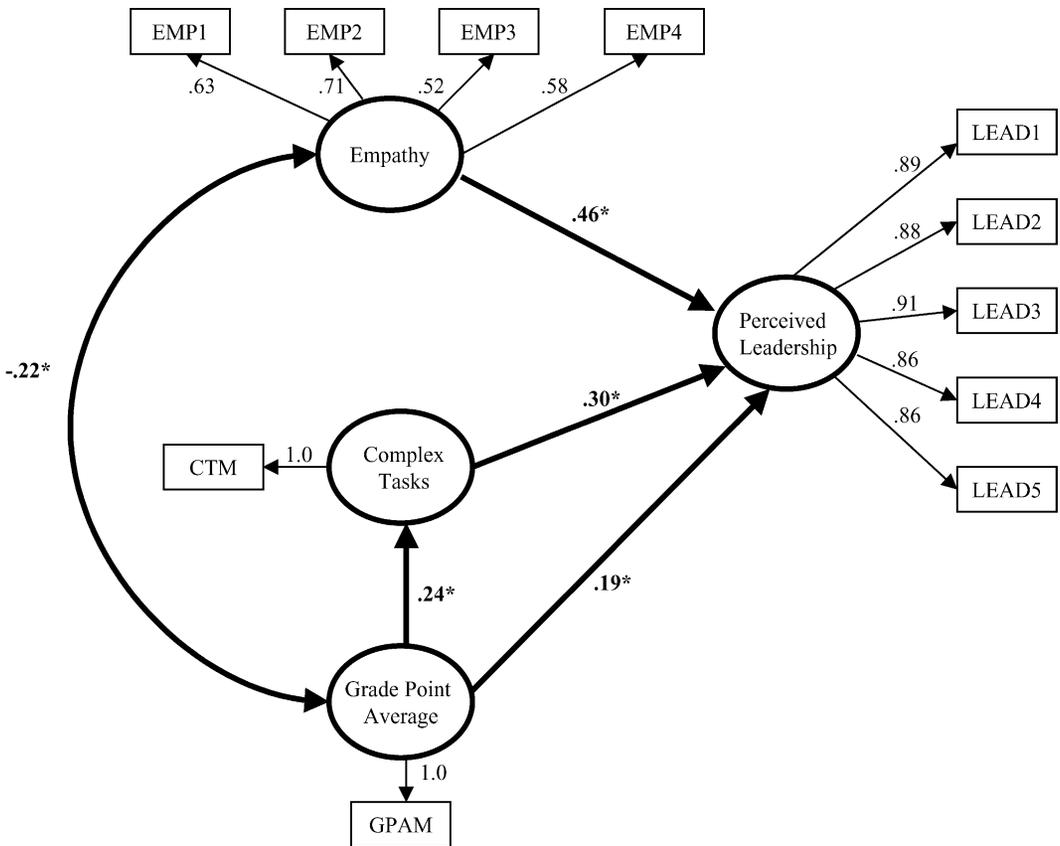


Fig. 1. Measurement and structural model with standardized path coefficients. $N=168$. EMP1–EMP4 and LEAD1–LEAD4 represent indicators for the latent variables, empathy and perceived leadership. CTM and GPAM represent indicators for the manifest variables, complex tasks and GPA, * $P < .05$.

1.4. Leadership perception

Research by Lord et al. (Cronshaw & Lord, 1987; Lord, Foti, & De Vader, 1984; Phillips & Lord, 1981) indicates that people have particular behaviors in mind that they associate with leadership and are able to categorize others as leaders or nonleaders by observing their behavior. These categories are useful to the perceiver for predicting future behavior and explain how leaders emerge and exercise influence in groups. Lord's theory suggests that in order to be effective as a leader one must first be perceived as a leader. Thus, the criterion variable in the hypothesized model is perceived leadership.

Lord et al. (1984) use the term "prototype" to refer to the loosely associated attributes that constitute one's image of a leader and influence perceptions and expectations. Their studies show that general intelligence is highly prototypical (strongly associated with perceptions of leadership). Although empathy did not appear specifically in Lord et al.'s (p. 353) assessment of leadership prototypicality, aspects of empathy such as "understanding" and "caring" were among the most important and diagnostic traits. Understanding and caring were associated with high proportions (.45 and .27) of leadership categories (leader family resemblance) and achieved leader diagnosticity scores (difference between leader and nonleader family resemblance) of .36 and .18, respectively. Our hypothesized model (Fig. 1) incorporates Lord et al.'s findings by specifying intelligence (grade point average, GPA) and empathy as antecedents of perceived leadership.

1.5. Empathy and leadership

Empathy is linked conceptually to effective leadership behavior in organizational settings (Cooper & Sawaf, 1997; Goleman, 1998b; Yukl, 1998). In their review of leadership effectiveness, House and Podsakoff (1994) observed that outstanding leaders differ from less effective leaders in their higher consideration of and sensitivity to the needs of their followers. In their discussions about leadership, Cooper and Sawaf (1997, p. 51) emphasize that leadership is a relationship and "emotional relationships are the lifeblood of any business." They maintain that we like and care about leaders because of the way they make us feel. They cite studies that showed that the ability to extend empathy was the most prominent difference between successful and unsuccessful leaders. Cooper and Sawaf (1997, p. 48) stress the importance of "leading with empathy":

Empathy and compassion connect us with others through the shared language of feelings and experience, one heart to the next, beneath the words, behind the posturing and gestures. Through feelings of empathy and compassion we help ourselves learn and grow, and we also enable others to begin to feel safe enough to talk about what is really going on in their lives—to tell their stories—without fear of being judged, criticized, or abandoned. It is then that we begin to empathize *with them*, and extend compassion and support *to them*, rather than remaining distant or unaffected, or sympathizing *about them*. And, more often than not, such empathy and compassion are, sooner or later, returned to us in kind.

Cooper and Sawaf (1997, p. 50) point out, “Nationwide surveys indicate that people are made to feel more worthy and valued as a result of interactions with leaders they admire and respect.” Dansereau, Yammarino, Markham, and Alutto (1995), in their recent theory of individualized leadership, argue that support for feelings of self-worth causes one to be viewed as a leader. These authors suggest that leaders may provide support for a person’s sense of self-worth in exchange for satisfactory performance. Thus, there is growing evidence that we will respond to others as leaders if they make us feel understood and valued as individuals through displays of empathy.

Tiedens (2000) describes how emotions convey important information about, and reinforce perception of, social status within a group. Specifically, her research indicates that anger is associated with higher status, whereas sadness and guilt are associated with lower status. Hence, emotions that are shared through empathy may have an equalizing effect on perceptions of status differences and reduce relationship barriers.

High quality relationships stemming from empathy are likely to enhance perceptions of a leader’s integrity, or credibility, and engender cooperation and trust (George, 2000; Lewis, 2000). The knowledge and understanding that leaders glean from their sense of empathy with followers may enable leaders to influence follower’s emotions and attitudes in support of corporate goals and objectives including feelings of excitement, enthusiasm, and optimism (George, 2000; Lewis, 2000).

Hypothesis 1: Empathy is positively related to perceived leadership.

1.6. General intelligence and leadership

Organizational studies show a strong and consistent association between general intelligence and leadership. According to Mumford, Zaccaro, Harding, Jacobs, and Fleishman’s (2000, p. 21) review of Stogdill’s (1948, 1974) research, 48 studies found that leaders are smarter than followers.

A meta-analysis by Lord et al. (1986), including studies representing a diverse range of populations, found a strong correlation between intelligence and leadership emergence in small groups. Atwater and Yammarino (1993) found that leader intelligence was related to subordinate ratings of leadership. Taggar, Hackett, and Saha (1999) found that cognitive ability was a stronger predictor of leadership emergence than personality attributes. A longitudinal study by Atwater et al. (1999) found that individuals with greater cognitive ability were more likely to emerge as leaders.

1.7. GPA, complex tasks, and leadership

Humphrey et al. (Humphrey, 1985; Humphrey & Berthiaume, 1993; Humphrey, Sleeth, Kellett, et al., 2000) have shown that job characteristics influence observers’ perceptions of leadership. Humphrey and Berthiaume (1993) argue that job characteristics determine many of the behaviors performed in work settings and these behaviors cause others to infer leadership capabilities. They explain that performing complex tasks creates expectations that

one has the skills necessary to perform subsequent complex tasks and to solve difficult problems under discussion. Indeed, observers may commit the fundamental attribution error (Ross, 1977) by failing to consider that the behavior derives from demands and structure of the job and might not represent the overall capabilities of the individual. For example, an observer may attribute intelligence (and therefore leadership) to someone who performs an intricate data analysis, while concluding that someone else who performs a simple data entry function lacks leadership ability.

Humphrey (1985) demonstrated that individuals who were randomly assigned to perform complex managerial roles received higher ratings on leadership and executive skills than others who were assigned to perform the low-skilled clerical tasks. In his study, even those who were assigned to perform the low-skilled tasks rated their fellow clerical workers lower than they rated the managers. This occurred even though the participants realized that they were randomly assigned to perform the work.

Subsequent research by Humphrey et al. examined the role that individual differences played in willingness to perform complex tasks (Humphrey, Sleeth, & Kellest, 2000; Humphrey, Sleeth, Kellest, et al., 2000). Participants in these studies had the opportunity to work on their choice of either complex or simple tasks. GPA was found to be a good predictor of complex task choice. All studies found a close association between performance of complex tasks and favorable leadership attributions from teammates.

We used GPA as one indicator of participants' willingness to work on complex tasks. A high GPA represents repeated long-term and short-term successes in courses and in the tasks assigned in those courses. We believe that intelligence associates with school achievement and mental ability (Carroll, 1993, p. 519), and that higher grades in courses normally go to students who perform well on the demanding or complex tasks the higher grades represent. A high GPA indicates a high potential to contribute to group success on similar tasks.

We believe that in an assessment center setting where participants try to make positive impressions on others, high-GPA students, with a history of success on relatively complex tasks, will continue to choose to work on relatively complex tasks. By contributing to their groups, they would increase their likelihood of selection or endorsement as leaders (Hollander, 1979; Jacobs, 1970). High-GPA participants who select and work on complex tasks would have ability and opportunity to display superior reasoning, better use of language, and other indicators of intelligence observers expect in leaders. They would show observers a contribution to group success more direct and more visible than a past academic record. Accordingly, we believe that selection and performance of complex tasks during a group meeting should predict leadership perceptions more strongly than GPA alone.

Hypothesis 2: GPA is positively related to perceived leadership.

Hypothesis 3: Performance of complex tasks is positively related to perceived leadership.

Hypothesis 4: Complex tasks will partially mediate the relationship between GPA and perceived leadership.

1.8. Empathy and GPA

There is a need for more empirical work to determine the degree of association between emotional abilities and mental abilities (Davies et al., 1998, p. 1013). Emotional abilities, such as empathy, involve feelings. In contrast, mental abilities involve verbal fluency, logic, analytical problem-solving, memory, and abstract thinking (Carroll, 1993; Sternberg & Grigorenko, 2000). Theorists suggest that emotional abilities and mental abilities are related, but distinct (Goleman, 1998a; Mayer et al., 2000a; Mayer & Salovey, 1997). However, research exploring the relationship between overall measures of emotional intelligence and general intelligence supports claims that the two capabilities are independent (Bar-On, 2000, p. 385; Ciarrochi, Chan, & Caputi, 2000). Indeed, Fox and Spector (2000) found that emotional abilities, such as empathy, are not related to general intelligence. The present study responds to the call for more empirical research by investigating the relationship between empathy and GPA.

Hypothesis 5: There is a small positive correlation between empathy and GPA.

2. Method

This study used a variation of the simulated corporate office designed by Humphrey et al. (Humphrey, 1985; Humphrey & Berthiaume, 1993). The earlier studies randomly assigned participants to perform either complex or simple tasks. In the present study, participants chose to work on either complex or simple tasks in the context of an assessment center exercise.

After reviewing and collecting informed consent forms, we randomly assigned each participant to a three-person table. To minimize the possibility of prior acquaintances among team members, we asked participants to request reassignment if they found themselves seated with someone they knew.

Each table contained office supplies and a large file box containing about 70 files and over 100 documents. These files provided instructions and related reference material for the tasks. We gave each participant an individual work folder labeled Person A, Person B, or Person C, and a corresponding role tag (A, B, or C) to display for identification purposes.

2.1. Participants

A total of 168 Organizational Behavior students participated in the study, 70 were male and 98 female. The sample consisted of both undergraduate (82%) and graduate (18%) students who averaged 25 years of age.

2.2. Procedure

During Round 1, participants worked individually on their choice of tasks (one task at a time) for an interval of 40 min. They used a task sign-up form (Appendix A) to select relatively

managerial, complex tasks (e.g., marketing new products) or relatively nonmanagerial, simple tasks (e.g., copying addresses to mailing labels) from a list of 24 activities.

In order to offer managerial tasks, the assessment center included tasks designed as both complex and high on four dimensions in Hackman's and Oldham's (1980) Job Characteristics Model (JCM; the fifth dimension, feedback, was not relevant in this setting). These tasks were high on skill variety, task identity, task significance, and autonomy. JCM skill variety recognizes elements of complexity in variety ("many different things, using a number of skills and talents," "a number of complex or sophisticated skills," and "the job is quite simple and repetitive" reverse scored; Hackman & Oldham, 1980, pp. 279, 281). To emphasize the complexity component of the designed managerial tasks, we also recognized Wood's (1986) three dimensions in defining task complexity: (1) component complexity (the number of elements in a task), (2) coordinative complexity (the number and nature of relationships between the elements), and (3) dynamic complexity (the number and types of elements and the relationships between them over time).

Every complex task required participants to (1) retrieve correspondence, instructions, and data about the task from a file box, (2) determine the action required, (3) calculate appropriate solutions, and (4) write a response to the original correspondence. The simple tasks were designed to be repetitive and relatively mindless. Based on prior studies, task names on the task sign-up form enabled participants to distinguish easily between complex and simple tasks (Humphrey, 1997), and the 24 tasks were sufficient to occupy the three group members over the allotted time. Although the participants worked individually in Round 1, they were seated together and could easily judge whether the other group members were performing a simple or complex task.

In Round 2, participants worked as a team and made group decisions. During this round, they performed three group tasks over a period of 50 min (including a 10-min break). The first task had the participants write a team report on their accomplishments during Round 1. In the second task, the members had to choose which of three complex tasks the team would perform, and then complete the chosen task. The third task consisted of a brainstorming activity in which the team members could make suggestions about corporate products, generate advertising slogans, or suggest ways to improve morale. The Round 2 tasks were designed to be representative of typical group work activities in corporations. These activities also provided an opportunity for group members to assess each other's empathic abilities and leadership skills. Immediately following Round 2, we separated group members to establish privacy and distributed the questionnaires.

2.3. Measures

We used a seven-item peer-report empathy measure from the Emotional Competence Inventory (Boyatzis et al., 2000). This measure (Appendix B) uses a seven-point Likert-type scale anchored by "slightly characteristic" and "very characteristic." An individual's score resulted from an average of the ratings provided by the two other people in his/her group. Sample items are "shows sensitivity and understanding," "accurately reads

people's moods, feelings, or nonverbal cues," "asks questions to be sure he/she understands another person," and "accurately assesses the underlying or root causes of a person's problems." Boyatzis et al. (2000) report that this empathy measure is associated with social awareness competencies such as organizational awareness and service orientation, and distinct from social skills competencies such as leadership, communication, and developing others.

We used a five-item General Leadership Impression Scale, developed by Lord (1977) and Cronshaw and Lord (1987), to measure perceived leadership. This measure has a five-point Likert-type scale. An individual's score resulted from an average of the ratings provided by the two other people in his/her group. A sample item is "How much leadership do you think was exhibited by this individual?" We measured complex tasks by the quantity of complex tasks performed by an individual during Round 1, as noted by the participants on the task sign-up form.

We used a self-report measure of GPA. Prior research indicates a strong association between self-reported and actual GPA. For example, Frucot and Cook (1994) found a correlation of .91 ($P < .01$) using a sample of 132 business students. Studies suggest that the tendency for some students to overstate their GPA relates to factors such as social desirability, self-enhancement (Zimmerman, Caldwell, & Bernat, 2002), and narcissism (Robins & Beer, 2001).

2.4. Rater agreement

We examined intraclass correlations (ICC1s) from one-way analyses of variance for peer-rated (dyad) measures of perceived leadership and empathy to evaluate the adequacy of within dyad agreement and between dyad differences (Bliese, 2000; James, 1982; Kenny & LaVoie, 1985). We found an acceptable level of agreement for perceived leadership (ICC1=.33) but not for empathy (ICC1=.02). Our inspection of empathy scores from the individual raters for each dyad showed 17 cases (out of 168 cases) in which raters differed by two points or more on the seven-point scale. A reexamination of the remaining sample of 151 cases showed an acceptable level of agreement on the empathy measure (ICC1=.27). We elected to retain the full sample of 168 cases. As described in the Results section below, a comparative analysis ($n = 168$ vs. 151) showed that the 17 cases with meager agreement did not affect the outcome.

2.5. Scale analysis

We used confirmatory factor analysis to assess the measurement model containing the two latent variables, empathy and perceived leadership. Because of our sample size we reduced the number of parameters estimated in our overall measurement model by combining the seven empathy items into four aggregate item parcels, as recommended by Hall, Snell, and Foust (1999). This procedure resulted in a measurement model containing four item-parcel indicators for empathy and five item-level indicators for perceived leadership.

Table 1
Means, standard deviations, and correlations

Variable	<i>M</i>	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. GPA	3.06	0.59												
2. Complex tasks	1.42	1.25	.24 **											
3. Empathy	5.03	0.63	-.18 *	-.05										
4. EMP1	5.56	0.77	-.10	-.05	.85 **									
5. EMP2	4.08	0.81	-.13	.05	.74 **	.40 **								
6. EMP3	5.69	1.01	-.21 **	-.11	.65 **	.43 **	.37 **							
7. EMP4	4.69	0.93	-.15 *	-.09	.64 **	.42 **	.38 **	.29 **						
8. Perceived leadership	3.28	0.84	.15 *	.30 **	.30 **	.19 *	.45 **	-.03	.21 **					
9. LEAD1	3.46	0.88	.13	.29 **	.25 **	.18 *	.39 **	-.09	.17 *	.91 **				
10. LEAD2	3.32	0.98	.17 *	.35 **	.24 **	.13	.39 **	-.03	.18 *	.91 **	.79 **			
11. LEAD3	3.18	0.88	.10	.29 **	.30 **	.17 *	.45 **	.01	.22 **	.92 **	.81 **	.80 **		
12. LEAD4	3.38	0.91	.14	.26 **	.28 **	.20 **	.38 **	-.05	.19 *	.90 **	.81 **	.74 **	.77 **	
13. LEAD5	3.04	0.96	.16 *	.19 *	.31 **	.21 **	.41 **	.04	.21 **	.90 **	.74 **	.76 **	.81 **	.75 **

n = 168. EMP1–EMP4 represent indicators for empathy. LEAD1–LEAD4 represent indicators for perceived leadership.

* *P* < .05.

** *P* < .01.

The test of the measurement model revealed an acceptable chi-square value, χ^2 (26, $n = 168$) = 60.90, and acceptable fit indices (CFI=.96, RMSEA=.09). Factor loadings were all significant ($P < .05$), with standardized values ranging from .52 to .71 for empathy and from .86 to .91 for perceived leadership. Composite reliabilities (Fornell & Larcker, 1981) for the two latent variables equated to .71 for empathy and .95 for perceived leadership. The factor correlation was significant ($r = .40$, $P < .05$). A comparison of the measurement model with a model in which the factor correlation was constrained to 1.00 provided evidence that the two latent variables—empathy and perceived leadership—are distinct constructs. The constrained model indicated a poor fit (CFI=.88, RMSEA=.18) and the chi-square difference ($\Delta\chi^2 = 78.56$) exceeded the critical value (3.84) for one degree of freedom.

3. Results

Means, standard deviations, and bivariate correlations for all study variables appear in Table 1. We assessed hypothesized relationships among the two latent constructs, empathy and perceived leadership, and the two manifest variables, GPA and complex tasks, using structural equation modeling. Table 2 provides a summary of model fit statistics. Fig. 1 displays the estimated standardized path coefficients and correlation. Table 3 indicates the frequency of complex and simple task selection during Round 1.

The hypothesized model fit the data well, χ^2 (41, $n = 168$) = 76.94, CFI=.96, RMSEA=.07, and all path coefficients were significant ($P < .05$). Support for Hypothesis 1 was demonstrated by the standardized path coefficient from empathy ($\gamma = .46$) to perceived leadership. Hypothesis 2 was supported, as GPA ($\gamma = .19$) predicted directly to perceived leadership. GPA also predicted directly to complex tasks ($\gamma = .24$). Hypothesis 3 was supported by the path ($\beta = .30$) between complex tasks and perceived leadership.

A comparative model using a reduced sample of 151 cases with adequate peer-rater agreement produced results that were similar to the full sample. Fit indices were the same. Minor differences in standardized estimates included empathy factor loadings (ranging

Table 2
Summary of model fit statistics

Model	<i>df</i>	χ^2	CFI	RMSEA
Measurement	26	60.90	.96	.09
Measurement with factor correlation = 1	27	139.46	.88	.18
Hypothesized	41	76.94	.96	.07
GPA completely mediated ^a	42	82.95	.96	.08
GPA unmediated ^b	33	66.06	.96	.08

$n = 168$. CFI = comparative fit index, RMSEA = root mean square error of approximation.

^a GPA-perceived leadership = 0.

^b Without complex tasks.

Table 3
Frequency of complex and simple task selection

Number of tasks	Number of participants	
	Complex tasks	Simple tasks
0	49	33
1	47	41
2	37	44
3	25	26
4	8	20
5	2	2
6	0	2
Total	168	168

from .52 to .68) and an empathy-perceived leadership path coefficient of .43. The similar results (1) indicated that the 17 cases having meager rater agreement on the empathy measure did not introduce bias and (2) supported the use of the full sample of 168 cases in this study.

In testing for mediation effects (Baron & Kenny, 1986; Holmbeck, 1997), we compared the hypothesized model with a model in which we constrained the GPA-perceived leadership path to zero. The resulting χ^2 difference (1, 6.01) between the two models exceeded the critical value (3.84), indicating that the GPA-perceived leadership path improved the model and that GPA was not fully mediated by complex tasks. However, when the complex tasks variable was not in the model, the GPA-perceived leadership standardized path coefficient increased from .19 to .26 suggesting partial mediation of GPA by complex tasks. Using a test of the difference in GPA-perceived leadership due to complex tasks (Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998; Sobel, 1982), we found that the amount of mediation (.07) only approached significance ($Z=1.41$, $P<.08$). Thus, Hypothesis 4 was not supported.

Results from the structural model showed a significant ($P<.05$) negative correlation ($-.22$) between empathy and GPA. The direction of this correlation was surprising and Hypothesis 5 was not supported. As predicted by the hypothesized model, bivariate correlation analysis showed no relationship between empathy and complex tasks.

4. Discussion and conclusions

The results presented here suggest that there are two distinct behavioral routes that influence perception of an individual as a leader in a small group. One route influences people to perceive leadership from displays of emotional abilities, such as empathy. The other route influences people to perceive leadership from displays of mental abilities, such as complex task performance. The standardized path coefficients indicate that these two routes are of roughly equal importance. The largest coefficient (.46) is for the path from empathy to

perceived leadership. This certainly suggests that empathy is a key variable, and is consistent with a small but growing body of conceptual work linking emotional abilities with effective leadership (Cooper & Sawaf, 1997; George, 2000; Goleman, 1998a, 1998b). Indeed, perceiving others' feelings and empathizing with them is likely to establish an affective bond or relationship that offers benefits for leadership (Cooper & Sawaf, 1997; George, 2000; Lewis, 2000).

The standardized coefficient (.19) from GPA to leadership is less than the coefficient for empathy. However, if we consider the contribution of complex tasks (.30), the combined influence would roughly equal that for empathy. Indeed, the zero-order correlation between complex tasks and perceived leadership is twice that of the correlation between GPA and perceived leadership (.30 vs. .15). This suggests that researchers studying the relationship between leadership perceptions and variables such as intelligence or GPA should not neglect the crucial role that complex task performance plays in determining leadership perceptions. In our study, complex task performance was more important than GPA, yet most studies neglect to include measures of complex task performance when investigating leadership perceptions. In part, this neglect may occur because researchers take the importance of task performance for granted, in the same way that early scientists ignored gravity.

The neglect of task factors may also be due to the methods commonly used. In most studies on leadership perceptions participants sit around a table performing a common task, usually one that involves making group judgments. There is little room for participants to perform a variety of different tasks. However, in a typical work setting, employees normally work on a variety of individual tasks that vary greatly in complexity, as well as spend some time working in groups. Their performance on the individual tasks could create expectations about their skills and abilities that carry over into the group settings.

Even when people work in committees or teams, the usual result of the deliberations is the dividing up of the various work tasks. Those committee members who volunteer to take on the more complex, difficult, and functionally important tasks are likely to be granted high leadership ratings. High general intelligence and academic skills are likely to give employees the confidence and ability to tackle the more complex tasks, and thus to have an edge when it comes to obtaining leadership positions. However, intelligent employees who do not use their skills to solve group problems would be throwing away their advantage. In general, our findings support the well-established association between mental abilities and leadership and further indicate the importance of displaying these abilities through the performance of complex tasks.

This study raised more questions than it answered about the degree of association between emotional abilities and mental abilities. The negative relationship between empathy and GPA in our sample was an unexpected result that points to a need for more empirical work. One possible explanation is that people choose the path that aligns with their emotional or cognitive abilities. Students with high GPAs may recognize that they have the ability to perform the complex tasks, and may be drawn to focus their attention on completing the tasks. Even if they also possess good emotional skills, they

may decide to concentrate on task performance and leave the role of socioemotional leader to others. Thus, their teammates, who are the ones rating them on empathy, may observe a biased sample of behavior to rate them on. If the high GPA students were given a task that more specifically called for an empathic response, it is quite possible that they would demonstrate high levels of empathy.

An alternative explanation may be that task leaders feel and express less empathy for coworkers. Fiedler uses the Least Preferred Coworker Scale to measure whether someone is a task or relationship oriented leader (Fiedler, Chemers, & Mahar, 1977). Task leaders rate their least preferred coworker more negatively on the scale, and express less sympathy for incompetent or low-performing coworkers. In our sample, consisting predominantly of business students, those with high GPAs may naturally fall into the task leadership style and thus feel less empathy for low performers. (The relationship may not hold for students in helping professions such as social work or nursing.).

4.1. Limitations

We must recognize potential limitations that may apply to this study with respect to nonexperimental designs using perceptual, cross-sectional data from a student sample. Because there is no way to confirm a structural equation model (there are always competing models with good fits), inferences about cause and effect must be viewed with caution. Our employment of a common source for measuring empathy and perceived leadership may have affected their relationship to some degree (Avolio, Yammarino, & Bass, 1991; Bass & Avolio, 1989). However, research investigations (Crampton & Wagner, 1994; Doty & Glick, 1998) suggest that common sources are less pernicious than originally believed and do not necessarily bias results. Crampton and Wagner (1994, p. 72) concluded “percept–percept inflation may be more the exception than the rule in microresearch on organizations.” Indeed, common sources offer advantages to research questions, such as ours, that examine perceptions of others (Schmitt, 1994).

We believe there are features of our study design that serve to minimize the influence of common source and method variance. In assessing empathy and leadership, participants in our study reported about others rather than about themselves. This peer-report approach, in contrast to self-report measures, raises fewer concerns about monomethod bias (Spector, 1994, p. 385). Furthermore, empathy and perceived leadership scores were derived from the mean of two peer ratings by relative strangers. Thus, individual response biases (e.g., social desirability, likeability, similarity, and negative affect; Schmitt, 1994) were averaged out and variance was compressed, allowing for a conservative interpretation of the results (McGrath, 2001). Students who were unfamiliar with each other formed the three-person, randomized, groups used in this study. Therefore, they had only a short time to form perceptions about the empathic and leadership abilities of their peers. It seems reasonable to predict that relationships observed in our model may be even stronger for members of existing workgroups.

4.2. Future research

Our model sheds light on the importance of “leading with empathy” (Cooper & Sawaf, 1997), and may stimulate more work to replicate and extend these findings in other samples. Future research should include peer ratings of personality traits in order to show that empathy adds to the variance explained by personality.

We recognize some parallels to the literature on the high–high leadership paradigm (e.g., Larson, Hunt, & Osborn, 1976). Although subordinates might report preferences for and even hold implicit theories that perceive effective leaders as displaying a combination of high consideration and high structure (e.g., Powell & Butterfield, 1984), Schriesheim (1982) concluded that the superiority of the high–high leadership style is only a myth. We recommend examining the arguments and framing of the high–high leadership debate for guidance in expanding research on the empathy and task routes to leadership.

Many of the issues that Yukl (2001, pp. 58–61) summarizes from the extensive high–high leadership literature may apply here. Future research on empathy and task routes to leadership should examine: (1) possible additive and multiplicative models for emotion-related and complex-task-related perceptions of leadership, (2) emotion-associated and complex-task-associated activities that might predict perceptions of different elements of leadership, such as supporting and directing, (3) contingencies that might influence the levels of emotion-associated and complex-task-associated perceptions of effective leaders, (4) ways that observers’ implicit theories of leadership affect perceptions of emotion-associated and complex-task-associated activities, and (5) ways that leaders can create perceptions representing a qualitative (not simply an additive) combination of both emotion-associated and complex-task-associated behaviors. For these two routes to leadership, as Yukl (p. 60) notes for consideration and initiating structure, “interdependencies can be very complex, and it is not always possible to completely integrate both. . .concerns.”

Another fruitful area for future research concerns the relationships among job characteristics, empathy, and intelligence. The type of task that people perform may well determine the size of the relationship between empathy and leadership perceptions. Some jobs are primarily technical in nature, such as performing accounting tasks or creating computer codes, and thus make relatively low empathic demands. Other jobs, such as caring for preschoolers or interacting with customers, call for much higher levels of empathy. The same may be true of the relationship between intelligence and leadership perceptions. As Wood (1986) demonstrates, jobs vary greatly in their task complexity. The importance of intelligence to job performance and leadership is likely to increase, as jobs become more technically complex. Some jobs may be so technically and cognitively demanding that the relative importance of intelligence overwhelms that of empathy.

It should be noted that the tasks performed in the current study were not particularly high on empathic demands. For example, Round 1 called for participants to perform tasks such as financial analysis or alphabetizing employee names. Likewise, Round 2 had participants perform brainstorming tasks. Thus, both rounds had participants perform tasks that were primarily cognitive in nature. Hence, the current study can be seen as a baseline study, in which we examine the effects of empathy when participants perform relatively emotionally neutral

tasks. The fairly strong effects for empathy suggest that empathy is important whenever people interact, as the simple process of interacting with each other requires at least some empathy.

Although empathy was a strong predictor of leadership perceptions in the current study, empathy may be even more important for jobs that require high levels of emotional labor. The service sector is now the largest part of the economy, and many service jobs require “service with a smile.” Other jobs may require leaders to sooth anxious customers, handle disputes among subordinates, or care for sick patients. Thus, future researchers should test for the effects of empathy on leadership perceptions by varying empathic task requirements. For example, in one condition participants could perform primarily cognitive tasks. Under this condition, empathy should have its main effect on the interactions among group members. In another condition, participants could perform a task high in emotional labor demands. In this case, empathy may influence both the group members’ interactions and directly influence task performance.

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Appendix A. Task sign-up form

Please review the following list and decide which tasks you would like to work on first. In order to make sure that two people are not working on the same task, circle your Role Letter (A, B, C) next to each task before you start to work on it. Do *not* sign up for several tasks in advance.

Role letter	Task
A B C	Sales forecasting
A B C	Adding hours worked
A B C	Supervisor review report
A B C	Color coding forms
A B C	Quality control analysis
A B C	Sorting employees by classification
A B C	Cost reduction analysis
A B C	Copying addresses to mailing labels
A B C	Inventory control process report
A B C	Making name tags
A B C	Marketing new products report
A B C	Assembling pages of a report
A B C	Product reliability tests
A B C	Counting supplies of Parts “A” and “B”

(continued on next page)

Appendix A (continued)

Role letter	Task
A B C	Pricing policy analysis
A B C	Taping logo to letters
A B C	Installation procedure report
A B C	Coloring decorations for office party
A B C	Financial analysis
A B C	Alphabetizing employee names
A B C	Consumer survey analysis
A B C	Coding names into numerical equivalents
A B C	Interest rate analysis
A B C	Separating Parts 1 and 2 on forms

Appendix B. Emotional Competence Inventory empathy items (R.E. Boyatzis, personal communication, February 2001)

1. Identifies others' strengths and limitations.
2. Accurately reads people's moods, feelings, or nonverbal cues.
3. Gives others opportunity to speak their mind.
4. Accurately assesses the underlying or root causes of a person's problems.
5. Pays attention and listens well.
6. Shows sensitivity and understanding.
7. Asks questions to be sure he/she understands another person.

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