A R T I C L E S

Emotional Intelligence:
Sine Qua Non of Leadership or Folderol?

by Frank Walter, Michael S. Cole, and Ronald H. Humphrey

Executive Overview

Emotional intelligence (EI) is a divisive topic for many individuals interested in the subject of leadership. Whereas practitioner-oriented publications have claimed that EI is the sine qua non of leadership, academics continue to discuss EI's relevance for understanding leadership emergence, behavior, and effectiveness. Here we critically review recent empirical evidence to constructively frame what has become a contentious debate about the relevance of EI. We also identify unresolved issues and highlight future research directions that may promote our understanding of EI's role for leadership. We close with a practical discussion of possible applications of EI in leadership education, training, and development.

It has been argued that an "affective revolution" (Barsade & Gibson, 2007) has taken hold in the leadership literature, with emotional intelligence (EI) of leaders increasingly seen as a critical issue in the domain (e.g., Ashkanasy & Daus, 2002; Brown & Moshavi, 2005; George, 2000). Some practitioners have gone so far as to suggest that EI explains up to 90% of the difference between senior-level leaders classified as "star" performers and their average-performing counterparts (Goleman, 2000). In fact, such claims have encouraged practitioner-oriented writings to contend that "emotional intelligence is the sine qua non of leadership" (Goleman, 1998, p. 93). And yet, academic perspectives on the role of EI for leadership remain more qualified and controversial (Antonakis, Ashkanasy, & Dasborough, 2009). Locke, for example, argued that EI is "invalid both because it is not a form of intelligence and because it is defined so broadly" (2005, p. 425), and Antonakis observed that empirical evidence for the relevance of leaders' EI "is nonex-

istent or very weak at best or contradictory at worst" (2003, p. 359). Others, in contrast, have developed conceptual frameworks linking the concept of EI with leadership outcomes (e.g., George, 2000) and have continued to empirically examine these relationships (e.g., Côté, Lopez, Salovey, & Miners, 2010; Rubin, Munz, & Bommer, 2005).

This controversy about the role of EI for leadership is the central focus of this article. We believe EI-leadership researchers must pay greater attention to unresolved issues and address crucial avenues for future investigation. To assist with this effort, we summarize the differing approaches toward EI prevalent in the literature and critically review recent empirical findings on the role of EI for leadership emergence, behavior, and effectiveness. We conclude with a discussion of important research directions and practical implications for leadership education, training, and development.

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Three Streams of EI Research: A Heterogeneous Field

The EI concept is characterized by widely differing definitions and measurement approaches. To simplify, Ashkanasy and Daus (2005) organized this literature into three distinct categories, or what they termed "streams" (see Table 1). The first stream follows Mayer and Salovey's (1997) definition of EI as a set of interrelated emotional abilities (i.e., accurately perceiving emotions, using emotions to facilitate thinking, understanding emotions, and managing emotions to attain goals). This stream employs ability-based EI tests that capture individuals' performance in solving emotional problems (e.g., Mayer, Salovey, & Caruso, 2004; Nowicki & Duke, 2001). Stream 2 also draws on Mayer and Salovey's (1997) definition, but rather than employing ability-based tests it uses self-assessments or other-reports of emotionally intelligent behavior (e.g., Jordan, Ashkanasy, Härtel, & Hooper, 2002; Wong & Law, 2002). In contrast, Stream 3 includes approaches that define EI in a broader sense. These "mixed" EI models subsume an array of different dispositions and competencies (e.g., self-awareness, empathy, mood, decision making, and teamwork; Ashkanasy & Daus,

2002; Bar-On, 2000; Goleman, 2000) and typically use self-assessments or other-report measures (e.g., Bar-On, 2000; Wolff, 2005).

Each EI stream has distinct advantages and disadvantages (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2010). Ability-based stream 1 measures, for example, are less susceptible to faking and socially desirable responding (Day & Carroll, 2008), and they come closest to what is implied by the term *emotional intelligence*: a set of abilities for effectively dealing with emotions (Joseph & Newman, 2010; Mayer, Roberts, & Barsade, 2008; Mayer, Salovey, & Caruso, 2008). Accordingly, researchers have labeled stream 1 measures as capturing "ability EI" (Jordan, Dasborough, Daus, & Ashkanasy, 2010). Nonetheless, ability-based EI measures have been criticized because they assess individuals' performance in solving abstract test questions rather than actual behavior (Petrides & Furnham, 2003). Stream 2 EI measures based on self- or other-reports, in contrast, allow individuals to rate their own or others' behavior in complex social situations. Also, stream 2 measures are more feasible to use in many settings because they are easily distributed and readily adjustable (Law, Wong, Huang, & Li,

Table 1
Three Streams of EI Research

Stream of EI Research	EI Definition	Measurement Approach	Example Measures
Stream 1	A set of interrelated abilities for effectively dealing with one's own and others' emotions (i.e., perceiving, using, understanding, and managing emotions; Mayer & Salovey, 1997).	Ability-based EI tests that capture individuals' performance in solving emotional problems.	MSCEIT (Mayer et al., 2004) DANVA (Nowicki & Duke, 2001)
Stream 2	A set of interrelated abilities for effectively dealing with one's own and others' emotions (i.e., perceiving, using, understanding, and managing emotions; Mayer & Salovey, 1997).	Self-assessments or other-reports of emotional abilities and emotionally intelligent behavior.	WLEIS (Wong & Law, 2002) WEIP (Jordan et al., 2002)
Stream 3	An array of dispositions, competencies, and perceptions related to the effective management of emotions (e.g., self-awareness, empathy, positive mood, decision making, etc.; Bar-On, 2000; Goleman, 2000).	Self-assessments or other-reports of EI-related dispositions, competencies, behaviors, and perceptions.	EQ-i (Bar-On, 2000) ECI (Wolff, 2005)

Note: Based on Ashkanasy and Daus (2005). DANVA = Diagnostic Analysis of Nonverbal Accuracy; ECI = Emotional Competence Inventory; EQ-i = Emotional Quotient Inventory; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test; WEIP = Workgroup Emotional Intelligence Profile; WLEIS = Wong-Law Emotional Intelligence Scale.

2008). On the other hand, such self- or other-report measures may capture respondents' beliefs and perceptions more than their emotional abilities (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Mayer, Salovey, & Caruso, 2000), reflecting a type of "emotional self-efficacy" (cf. Kirk, Schutte, & Hine, 2008). Finally, stream 3 approaches "essentially position [EI] as including almost everything except cognitive ability" (Ferris, Perrewé, & Douglas, 2002, p. 56). Consequently, some have labeled self- or other-reported stream 3 measures as broadly capturing "emotional and social competencies" (Jordan et al., 2010) or "trait EI" (Petrides & Furnham, 2003). Although such measures often outperform alternative EI measures' predictive validity, this is likely attributable to the wider construct space covered (O'Boyle et al., 2010). Hence, the ambiguity associated with stream 3 measures may hinder the development of new theoretical insights (Fiori, 2009).

Where Do We Stand: Current Knowledge on Emotional Intelligence and Leadership

Theoretical Background

Leadership has been described as an "emotion-laden process" (George, 2000, p. 1046), with the skillful management of followers' feelings representing a critical leadership function (Humphrey, 2002, 2008). Accordingly, leaders' emotions and associated behavior have been found to profoundly influence followers' emotional reactions (Bono & Ilies, 2006; Sy, Côté, & Saavedra, 2005). Followers' job performance, in turn, benefits from positive, optimistic feelings but suffers from feelings of frustration and negativity (McColl-Kennedy & Anderson, 2002; Pirola-Merlo, Härtel, Mann, & Hirst, 2002).

Given this fundamental role of emotions, EI may be crucial in the leadership process. Specifically, a leader who can accurately identify and understand others' emotions should better grasp subordinates' problems and needs and, in consequence, formulate more successful (emotional) responses (Caruso, Mayer, & Salovey, 2002). Similarly, a leader who can effectively display and manage emotions can more strongly and posi-

tively influence followers' feelings and address their concerns with greater proficiency (Humphrey, 2008). An emotionally intelligent leader may be capable of expressing authentic sympathy and support toward frustrated followers, but also "irritation at slackers, or enthusiasm for good performance" (Humphrey, Pollack, & Hawver, 2008, p. 160). In line with these notions, scholars have noted that EI can help leaders generate and maintain follower confidence, cooperation, and trust (George, 2000); guide teams through situations of ambiguity, confusion, and conflict (Humphrey, 2006; Pescosolido, 2002); and provide inspiration and a sense of meaning, identity, and commitment to followers (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003).

For these arguments to be valid, it is critical that the effects of EI not be empirically redundant with other individual characteristics. It is well known, for instance, that an individual's cognitive ability and personality are crucial for leadership (Judge, Bono, Ilies, & Gerhart, 2002; Judge, Colbert, & Ilies, 2004). Theoretically, EI is expected to influence leadership outcomes through alternative channels—namely by enabling leaders to more effectively manage both their own and their followers' feelings (George, 2000; Humphrey et al., 2008; Law et al., 2008). Therefore, EI's predictive utility beyond cognitive ability and personality is considered to be its litmus test (Antonakis et al., 2009). In the following sections, we move beyond theoretical considerations and review the empirical literature on EI and leadership. In doing so, we focus on three distinct leadership criteria: leadership emergence, behavior, and effectiveness.

Emotional Intelligence and Leadership Emergence

Leadership emergence represents the degree to which a person is perceived as a leader and exerts influence on other members of a group, even though he or she is not in a formal position of authority (Taggar, Hackett, & Saha, 1999). Relatively few studies have examined the link between EI and leadership emergence, and most of this research has relied on student samples (see Table 2). Our perusal of the relevant literature

yielded only one published study (Côté et al., 2010) that utilized an ability-based EI measure (viz., stream 1). The bulk of research in this area has applied stream 2 (e.g., Kellett, Humphrey, & Sleeth, 2006) or stream 3 measures of EI based on self- or other-reports (e.g., Higgs & Aitken, 2003; Kellett, Humphrey, & Sleeth, 2002; Offerman, Bailey, Vasilopoulos, Seal, & Sass, 2004; Wolff, Pescosolido, & Druskat, 2002). Côté and colleagues' work is likewise the only study to date that examined the role of EI for leadership emergence while taking into account individuals' cognitive ability *and* personality. In consequence, the majority of this research leaves open the possibility of alternative explanations (due to unmeasured variables; cf. Antonakis, 2003). These limitations notwithstanding, existing evidence has provided a rather consistent picture. In fact, all published articles support the notion that emotionally intelligent individuals are more likely to emerge as leaders. Also, a handful of studies have moved beyond direct effects and have examined explanatory mechanisms (viz., mediators). This initial work suggests that the role of EI for leadership emergence is transmitted through

empathy (Kellett et al., 2006) and behavioral strategies such as perspective taking, task coordination, and supportive/developmental behavior (Wolff et al., 2002).

Emotional Intelligence and Leadership Behavior

The association between EI and specific leadership behaviors has also received scholarly attention (see Table 3). This work has predominately focused on transformational leadership behavior (cf. Harms & Credé, 2010), which involves acting as a charismatic role model, communicating a captivating vision, and providing intellectual stimulation and individualized support to followers (Bass, 1985). EI research using stream 1's ability-based instruments has produced mixed results. Whereas some articles have shown EI and transformational leadership behavior to be positively related (Leban & Zulauf, 2004), others have reported non-significant results (Weinberger, 2009), and yet others have shown the relevance of EI to hinge on moderating factors such as leaders' extroversion (Rubin et al., 2005) and emotional intensity (Jin, Seo, & Shapiro, 2008). A majority of stream 2 (Groves, 2005; Middleton, 2005;

Table 2
Summary of Studies Linking EI and Leadership Emergence

Article	EI Measurement		Sample Description		Leadership Emergence Measurement		EI to Emergence Linkage
	Instrument	*Source*	*Sample Size*	*Sample Type*	*Outcome Description*	*Source*	
Stream 1							
Côté et al. (2010)	MSCEIT	Self	Study 1: 138 Study 2: 165	Undergraduate students	Conger-Kanungo leadership scale	Peer	Supported
Stream 2							
Kellett et al. (2006)	WEIP; Interactive Empathy	Peer	231	Undergraduate and graduate students	Task and relations leadership	Peer	Supported
Stream 3							
Higgs & Aitken (2003)	EI Questionnaire — Managerial	Self	40	Public service managers	Leadership potential	Assessment center	Supported
Kellett et al. (2002)	ECI (Empathy)	Peer	168	Undergraduate and graduate students	General leadership impression scale	Peer	Supported
Offerman et al. (2004)	ECI	Self	425	Undergraduate students	Leadership ranking	Peer	Supported
Wolff et al. (2002)	Empathy	Critical incident interviews	382	MBA students	Leader votes	Peer	Supported

Note: ECI = Emotional Competence Inventory; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test; WEIP = Workgroup Emotional Intelligence Profile.

Table 3
Summary of Studies Linking EI and Leadership Behavior

Article	EI Measurement		Sample Description		Leadership Behavior Measurement		EI–Behavior Link
	Instrument	*Source*	*Sample Size*	*Sample Type*	*Outcome Description*	*Source*	
Stream 1							
Jin et al. (2008)	MSCEIT	Self	178	Managers (part-time MBA students)	TL	Subordinate	Supported
Leban & Zulauf (2004)	MSCEIT	Self	24	Project managers	TL, CR*, MBE, LF	Subordinate; stakeholder	Partially supported
Rubin et al. (2005)	DANVA	Self	177	Managers	TL, CR*	Subordinate	Partially supported
Weinberger (2009)	MSCEIT	Self	138	Managers	TL*, CR*, MBE*, LF*	Subordinate	Not supported
Stream 2							
Gardner & Stough (2002)	SUEIT	Self	110	High-level managers	TL, CR, MBE, LF	Self	Supported
Lindebaum & Cartwright (2010)	WLEIS	Subordinate, manager	45-58	Project managers	TL*	Subordinate, line manager	Not supported
Groves (2005)	SSI	Self	108	Senior organizational leaders	CL	Subordinate	Supported
Middleton (2005)	SSEIT	Self	64	Undergraduate students	CL	Peers, parents, teachers, etc.	Supported
Moss et al. (2006)	SUEIT	Self	Study 1: 263 Study 2: 166	Government organization managers	TL*, Corrective-avoidant leadership	Subordinate	Partially supported
Palmer et al. (2001)	TMMS	Self	43	Higher, middle, and lower level managers	TL, CR, MBE*	Self	Partially supported
Walter & Bruch (2007)	WLEIS	Self	34	Higher, middle, and lower level managers	CL	Subordinate	Supported
Stream 3							
Barbuto & Burbach (2006)	EI measure	Self	80	Elected community leaders	TL	Subordinate	Supported
Barling et al. (2000)	EQ-i	Self	49	Higher, middle, and lower level managers	TL, CR	Subordinate	Supported
Brown et al. (2006)	EQ-i	Self	161	Managers and supervisors	TL*, CR*	Subordinate	Not supported
Mandell & Pherwani (2003)	EQ-i	Self	32	Managers	TL	Self	Supported
Sosik & Megerian (1999)	Emotional competencies	Self	63	Managers	TL	Self; subordinate	Supported

Note: CL = Charismatic leadership; CR = Contingent reward; DANVA = Diagnostic Analysis of Nonverbal Accuracy; EQ-i = Emotional Quotient Inventory; LF = Laissez-faire; MBE = Management by exception; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test; SSEIT = Schutte Self-Report Emotional Intelligence Test; SSI = Social Skills Inventory; SUEIT = Swinburne University Emotional Intelligence Test; TL = Transformational leadership; TMMS = Trait Meta Mood Scale; WLEIS = Wong-Law Emotional Intelligence Scale. * EI was not found to significantly relate with this variable.

Walter & Bruch, 2007) and stream 3 (e.g., Barbuto & Burbach, 2006; Barling, Slater, & Kelloway, 2000; Sosik & Megerian, 1999) studies, however, have observed a positive linkage between self-reported EI and leaders' transformational behavior (but see Brown, Bryant, & Reilly, 2006, and Moss, Ritossa, & Ngu, 2006). Interestingly, Lindebaum and Cartwright (in press) found a significant relationship between EI (stream 2) and transformational leadership only if both constructs were measured using the same source (e.g., leader ratings), but not when using different measurement sources (e.g., leader and follower ratings). Hence, one should be cautious when interpreting single-source studies drawing on self-reports of EI that have purported to find EI and transformational leadership to be positively related (e.g. Gardner & Stough, 2002; Mandell & Pherwani, 2003; Palmer, Walls, Burgess, & Stough, 2001).

Transformational leadership behavior has received the lion's share of attention in the EI literature; other forms of leader behavior have received limited consideration. Stream 1 research, for example, has shown contingent reward behavior (i.e., providing rewards that reflect subordinates' performance) to be unrelated to ability-based tests of EI (Leban & Zulauf, 2004; Rubin et al., 2005; Weinberger, 2009). Stream 2 and 3 studies using self-report EI measures, however, have demonstrated positive relationships between EI and contingent reward behavior (Barling et al., 2000; Gardner & Stough, 2002; Palmer et al., 2001; but see Brown et al., 2006). Further, a few studies have reported negative relationships between stream 1 (Leban & Zulauf, 2004) and stream 2 (Gardner & Stough, 2002) measures of EI and passive leadership styles, including management-by-exception (i.e., providing corrective criticism and negative feedback) and laissez-faire (i.e., abdicating responsibility), whereas more recent research has reported non-significant linkages (Moss et al., 2006; Weinberger 2009).

Published research provides broad support for EI's role as an antecedent of transformational leadership behavior (see also Harms & Credé, 2010), although this association is most likely more complex than previously believed—that is,

EI's role is anticipated to hinge on important boundary conditions and generative mechanisms that remain understudied to date. Moreover, empirical findings regarding EI's relevance for other forms of leadership behavior remain mixed and inconclusive. Further, it has become clear in conducting our review that self-report EI measures (i.e., streams 2 and 3)—criticized by many as not tapping the "pure" EI concept (e.g., Daus & Ashkanasy, 2005; Mayer et al., 2000)—dominate published research on leadership behavior. We are aware of only four articles that have used ability-based stream 1 measures; of these studies, one is based on a very small sample (Leban & Zulauf, 2004) and one is published as a conference proceeding (Jin et al., 2008). Finally, despite well-argued reasons as to why it is important to account for known covariates (Antonakis, 2003), no study in this area has simultaneously controlled for cognitive ability and personality, leaving open the possibility of spurious relations.

Emotional Intelligence and Leader Effectiveness

Published empirical research has also focused on determining whether EI promotes leader effectiveness, defined as "a leader's performance in influencing and guiding the activities of his or her unit toward achievement of its goals" (Judge et al., 2002, p. 767). This research has shown promising results (see Table 4). Following stream 1, various studies have demonstrated ability-based EI tests to be positively related to managerial performance (Byron, 2007; Kerr, Garvin, Heaton, & Boyle, 2006; Rosete & Ciarrochi, 2005; but see Weinberger, 2009). Studies utilizing survey instruments based on stream 2 (e.g., Sy, Tram, & O'Hara, 2006; Wong & Law, 2002; Wong, Wong, & Peng, 2010) and stream 3 approaches (e.g., Brown et al., 2006; Hopkins & Bilimoria, 2008; Koman & Wolff, 2008; Offerman et al., 2004; Young & Dulewicz, 2007) have likewise shown EI to be positively associated with leader effectiveness. And finally, there is preliminary evidence for possible mediating mechanisms as well as boundary conditions. Byron (2007), for example, found managers' perceived persuasiveness and supportiveness to mediate the role of EI for managerial effectiveness, and she found this relationship to hinge on manag-

ers' gender (see also Hopkins & Bilimoria, 2008; Koman & Wolff, 2008; Sy et al., 2006).

Again, a majority of this published research has employed survey measures associated with stream 2 or 3 approaches to EI; only four articles have used ability-based (i.e., stream 1) tests, and two of

these studies are based on relatively small samples. Also, studies on EI and leader effectiveness have been limited in terms of the control variables used—for example, none of the published articles has simultaneously controlled for both cognitive ability and personality. Demonstrating the rele-

Table 4
Summary of Studies Linking EI and Leader Effectiveness

| Article | EI Measurement | | Sample Description | | Leader Effectiveness Measure | | EI–Effectiveness Link |
	Instrument	Source	Sample Size	Sample Type	Outcome Description	Source	
Stream 1							
Byron (2007)	DANVA	Self	112	Managers	Performance; satisfaction with manager	Subordinate; supervisor	Supported
Kerr et al. (2006)	MSCEIT	Self	38	Supervisors	Leadership effectiveness	Subordinate	Supported
Rosete & Ciarrochi (2005)	MSCEIT	Self	41	Executives	Performance	Supervisor	Supported
Weinberger (2009)	MSCEIT	Self	138	Managers	Extra effort*, satisfaction*, effectiveness*	Subordinate	Not supported
Stream 2							
Carmeli (2003)	SSEIT	Self	98	Senior public managers	Job performance	Self	Supported
Semadar et al. (2006)	SUEIT	Self	136	Managers	Job performance*	Supervisor	Not supported
Sy et al. (2006)	WLEIS	Self	187	Restaurant managers	Job performance, subordinate satisfaction	Supervisor, subordinate	Supported
Wong & Law (2002)	WLEIS	Self	146	Middle-level administrators	Subordinate performance*, OCB, job satisfaction*	Self, subordinate	Partially supported
Wong et al. (2010)	WLEIS	Self	3866	Senior and frontline teachers	Job satisfaction	Subordinate	Supported
Stream 3							
Boyatzis (2006)	Unpublished EI measure	360-degree	43	High-level managers	Financial performance	Financial data	Partially supported
Brown et al. (2006)	EQ-i	Self	161	Managers and supervisors	Various leader effectiveness measures	Subordinate	Supported
Hopkins & Bilimoria (2008)	ECI	360-degree	105	Upper level executives	Performance	Supervisor	Supported
Koman & Wolff (2008)	ECI	360-degree	81	Military officers	Performance	Supervisor	Supported
Langhorn (2004)	EQ-i	Self	161	Restaurant general managers	Profit, team/customer satisfaction, turnover	Various sources	Partially supported
Offerman et al. (2004)	ECI	Self	428	Undergraduate students	Leadership effectiveness	Peer	Supported
Young & Dulewicz (2007)	LDQ	Self	261	Naval officers	Performance	Appraisal system	Supported

Note: DANVA = Diagnostic Analysis of Nonverbal Accuracy; ECI = Emotional Competence Inventory; EQ-i = Emotional Quotient Inventory; LDQ = Leadership Dimensions Questionnaire; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test; OCB = Organizational Citizenship Behavior; SSEIT = Schutte Self-Report Emotional Intelligence Test. * EI was not found to significantly relate with this variable.

vance of using appropriate controls, Semandar, Robins, and Ferris (2006) found managers' self-reported EI (stream 2) and performance to be unrelated after considering key covariates related to individuals' social effectiveness (e.g., self-monitoring and leadership self-efficacy).

Implications Drawn From Research to Date

There is a broad body of empirical research that contributes to a better understanding of the linkages between EI and important leadership criteria. The overall picture emerging from the available literature seems balanced. On one hand, published evidence contradicts extreme claims that EI has no value for leadership theory and practice (e.g., Antonakis, 2003; Locke, 2005). Clearly, academic researchers are frequently reporting significant relationships between EI and leadership emergence, behavior, and effectiveness. From this base, it seems reasonable to conclude that EI has the potential to contribute to the leadership field, and we concur with Ashkanasy and Dasborough's evaluation that "the accumulating bulk of research . . . is supportive of emotional intelligence in general, and its role in leadership in particular" (Antonakis et al., 2009, p. 258).

On the other hand, non-significant findings reported by some scholars, along with initial evidence for possible moderating and mediating factors, suggest that the EI construct is not equally relevant for leadership across all work conditions. In addition, a number of unresolved issues give rise to important reservations about the empirical research conducted to date. If EI is to become an established concept and widely used by leadership researchers, future work must address these misgivings. Thus, in the next section, we outline what we believe are key challenges and opportunities for further research on EI and leadership.

Where Should We Go From Here? Criticisms and Future Directions

We maintain that advances in three broad directions will help the EI-leadership literature address existing criticisms and create important new knowledge. These directions concern (a) greater methodological rigor, (b) exami-

nation of more complete theoretical models, and (c) exploration of innovative research areas.

Greater Methodological Rigor

Incorporating Relevant Control Variables. A key concern levied against research on EI and leadership is its frequent neglect of relevant control variables (e.g., Antonakis et al., 2009). Although a recent meta-analysis has found EI to relate to job performance over and above cognitive ability and personality (O'Boyle et al., 2010), leadership studies still need to more widely incorporate these important controls. In fact, *only one published article across all three leadership criteria* has simultaneously controlled for both cognitive ability and personality (Côté et al., 2010). We contend, as have others (Antonakis, 2003), that empirical findings can be misleading when known covariates are ignored. Hence, it is vital for future EI-leadership research to incorporate both cognitive ability and personality measures as study covariates. It is equally important for future studies to build on previous research by controlling for other variables that are consistently shown to influence the leadership outcome of interest. For example, a study wishing to examine the relationship between EI and leader emergence may account for constructs known to enhance individuals' effectiveness in social situations—including self-monitoring, leadership self-efficacy, and political/social skill (Côté et al., 2010; Semadar et al., 2006; see Ferris et al., 2002, for an overview). Until relevant covariates are more widely incorporated, the EI-leadership field will remain plagued by critics' suspicions and, by extension, will be unable to more firmly conclude that EI is indeed relevant and practically useful for leadership.

A Greater Emphasis on Ability-Based EI Tests. Self- and other-report (i.e., stream 2 and 3), not ability-based (i.e., stream 1), approaches toward EI dominate the published leadership literature. This is of special concern because many EI supporters contend that only stream 1 measures validly capture the core meaning of EI as a set of emotion-related abilities (e.g., Daus & Ashkanasy, 2005; Jordan et al., 2010; Mayer et al., 2000). It is therefore important for future research to replicate and extend previ-

ous findings vis-à-vis increased application of stream 1 instruments.

We acknowledge that using ability-based EI tests may present considerable challenges. First, such instruments may find less acceptance by a study's participants (e.g., managers) than self-reports because stream 1 inventories assess actual test performance. Hence, it is crucial to credibly guarantee anonymity and/or confidentiality to study participants. Second, certain ability-based instruments are time-consuming (e.g., the MSCEIT consists of 141 items; Mayer et al., 2004), rendering them difficult to employ in field samples where participants are "on the clock." Nevertheless, we anticipate that the benefits of using stream 1 inventories far outweigh associated costs. Further, tests of specific EI abilities are often considerably shorter than ability-based tests capturing all possible EI dimensions. Rubin et al.'s (2005) study, for example, is based on 24 items capturing individuals' emotion recognition capability. Where theoretically appropriate, such shorter measures enable the use of stream 1 approaches even in otherwise difficult situations.

More Complete Theoretical Models

Focusing on Underrepresented Leadership Criteria. The bulk of research on EI and leadership has focused on transformational leadership behavior and leader effectiveness; other criteria (leadership emergence and other types of behavior) have received considerably less attention. Also, even though theorists have suggested that both leaders' and followers' EI shapes leadership outcomes (Riggio & Pirozzolo, 2002), empirical research has rarely examined such ideas (for an exception, see Sy et al., 2006). Therefore, studies examining alternative, novel leadership phenomena will push EI research toward new areas and, thereby, make important contributions to this line of inquiry.

Uncovering Generative Mechanisms and Boundary Conditions. Various articles have demonstrated that EI can influence leadership outcomes, but only a few studies have empirically examined *why* the respective relationships occur (e.g., Kellett et al., 2006; Sy et al., 2006). Echoing Côté et al. (2010), we believe researchers should focus on opening the "black box" of the EI-leadership linkage. In a similar vein, research has only started to address potential *boundary conditions* associated with the role of EI for leadership, examining leader (e.g., Rubin et al., 2005) and follower (e.g., Moss et al., 2006) characteristics as moderating variables. Beyond such characteristics, future research should extend these ideas by taking into account aspects of the larger work context (e.g., organizational culture) as potential moderators (cf. Jordan et al., 2010).

Initial evidence also points toward fascinating connections between the leadership criteria discussed here, wherein leaders' specific behaviors mediate the relationship between EI and leadership emergence/effectiveness (Byron, 2007; Wolff et al., 2002). Taking this idea a step further, we wish to underscore the fact that boundary conditions and mediating processes are not mutually exclusive (Edwards & Lambert, 2007). For example, the relationship between EI and leadership emergence/effectiveness may be indirect (e.g., through specific behaviors), and this indirect relation might hinge on yet another variable (e.g., individual or context characteristics). Studies examining such complex relationships would greatly advance our theoretical understanding by clarifying—in an integrative manner—*how* and *under what circumstances* EI influences leadership outcomes.

Examining the Relative Importance of Separate EI Dimensions. Conceptual discrepancies notwithstanding, each stream defines EI as a multidimensional construct. Mayer and Salovey (1997), for example, distinguished the dimensions of perceiving, using, understanding, and managing emotions. Nevertheless, research has yet to systematically examine the relative contribution of these different EI dimensions for leadership criteria. One could speculate, for example, that the dimensions of EI differ in relevance depending on the specific leadership criterion (leader emergence, behavior, or effectiveness) under consideration—and research that examines such differences will advance a finer grained understanding about the connections between EI and leadership.

We highlight two critical issues in addressing this important research question. First, from a

conceptual perspective, careful theoretical development is sorely needed. Stream 3 conceptualizations of EI, in particular, typically comprise a large number of dimensions. To avoid capitalizing on chance (a Type I error), scholars should—a priori—develop theory-based predictions about when, where, and why a specific dimension should (or should not) be relevant for leadership criteria. Second, from a methodological perspective, EI's dimensions are often highly correlated (Joseph & Newman, 2010), and these correlations may result in biased conclusions from multivariate analyses. Notably, recent advances in a data analytic approach termed dominance analysis (e.g., Johnson & LeBreton, 2004) directly address this problem by delivering meaningful estimates of predictor importance even when predictors are highly correlated.

Novel Research Areas

Examining Cultural Impacts on the Role of EI for Leadership. Scholars have cautioned that what is considered emotionally intelligent in one cultural context may not be in another (Brackett & Geher, 2006; Wong, Wong, & Law, 2007). For example, awareness of slight changes in others' moods may contribute to outstanding leadership in many, but not all, countries (Aditya & House, 2002). Hence, specific aspects of EI may differ across cultures in their relevance for leader emergence, behavior, and effectiveness.

With research on EI and leadership conducted mostly in Western countries, the generalizability of existing findings remains unclear (Harms & Credé, 2010; Law et al., 2008). Accordingly, a key research opportunity involves adopting a cross-cultural perspective when examining the role of EI for leadership. A first step is constructive replication of previous findings in other cultures. Beyond this, future research on EI and leadership should consider specific cultural dimensions (e.g., power distance, individualism, or masculinity; Hofstede, 2001) as potential moderators. We believe that such work will contribute to a more informed, theory-driven understanding of the cross-cultural significance of EI for leadership emergence, behavior, and effectiveness.

Incorporating Recent Insights from Neuroscience. Some innovative research has recently explored aspects of brain functioning as a foundation of EI (e.g., Bar-On, Tranel, Denburg, & Bechara, 2003; Bechara, Tranel, & Damasio, 2000; Killgore & Yurgelun-Todd, 2007). Although literature on the neurological origins of organizational behavior is in a very early stage (Becker & Cropanzano, 2010), this research holds important implications for the science and practice of leadership (cf. Rock & Schwartz, 2006; Waldman et al., 2009). Future work in this area may, for instance, uncover biological foundations of leaders' emergence, influence, and effectiveness. Also, evidence for a neurological basis of emotionally intelligent leadership would hold important consequences for leadership training and development. It may be possible to develop emotionally intelligent leadership behavior by training individuals to consciously exploit specific brain circuits more effectively. To achieve this, however, cognitive learning approaches are unlikely to be sufficient, requiring the "hard work of changing your behavior" (Goleman & Boyatzis, 2008, p. 78) through experiential learning and diligent practice in everyday life.

EI and Leadership Ethics. Consistent with an increased interest in corporate social responsibility (Devinney, 2009), researchers and practitioners are focusing considerable attention on ethics in leadership (e.g., Brown & Treviño, 2006). It is intriguing, in this context, to also consider the role of EI. Some authors have suggested that emotionally intelligent leaders are more likely to establish caring interpersonal relations, to act in tune with emotional expectations, and to behave in ethically responsible ways (Gardner, Fischer, & Hunt, 2009; Humphrey, 2008). Consistent with recent concerns about a "dark side" of EI (Austin, Farrelly, Black, & Moore, 2007; Jordan et al., 2010), however, it also seems reasonable to assume that one's emotional abilities could be used to manipulate others. To test these notions, future research should examine the connections between EI and measures of ethical (Brown & Treviño, 2006) or authentic (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) leadership behavior. If EI

is found to promote (un)ethical leadership behavior, this would suggest significant alterations to organizations' EI development activities (Lindebaum, 2009). Interestingly, Austin and her colleagues (2007) reported a negative relationship between EI and Machiavellianism (i.e., manipulative behavior in order to promote self-interest), somewhat alleviating concerns about a potential dark side of EI.

Implications for Leadership Education, Training, and Development

Leadership courses, training, and development programs drawing on EI concepts abound, and in many instances these courses/programs have preceded solid scientific evidence (Riggio & Pirozzolo, 2002). As the present review shows, empirical work on the EI-leadership link has begun to accumulate in recent years, and evidence does affirm EI's relevance for leadership phenomena. Nevertheless, we concur with Ashkanasy and Dasborough's evaluation that this research remains in its early stages (see Antonakis et al., 2009), and numerous questions remain unanswered. Although leadership courses and programs can benefit from incorporating discussions of the EI concept, we believe that teachers, trainers, and professionals must carefully consider the current state of research (and associated pitfalls) when doing so.

It seems crucial to recognize that the field of EI has not yet reached consensus regarding key definitional and measurement issues. Crucial assumptions associated with the EI concept vary even among its supporters—and it is important to be very clear about the stream of EI being used in a specific training or course. The appropriateness of an EI stream depends on the purpose of its use (O'Boyle et al., 2010), and we believe it is incumbent upon leadership program designers and teachers to justify their choice of EI approaches (and associated measures). With stream 1 instruments directly tapping into individuals' emotional abilities, employing such an assessment helps management trainers and professionals obtain a precise understanding of leaders' EI capabilities and identify potential for improvement. Stream 2 self-report measures, in contrast, are useful to raise

leaders' awareness of EI and stimulate self-reflection; when other-ratings are used, leaders may gain important feedback on key stakeholders' perceptions (Kellett et al., 2006). A similar logic applies for broader measures of EI reflecting stream 3, although definitional ambiguities associated with this final approach render it difficult to employ for targeted interventions (Joseph & Newman, 2010).

We also caution leadership professionals and trainers against uncritically accepting claims about EI's relevance that are not backed by scientific evidence. The literature discussed in this article intimates that EI is helpful for understanding why certain individuals emerge as leaders, engage in productive leadership behaviors, and are effective in leadership positions. At the same time, EI proponents are increasingly acknowledging that the EI concept is but one of various factors (including personality, cognitive ability, and functional skills) that influence leadership outcomes (Caruso et al., 2002). Also, the pattern of findings reported in the published literature suggests that EI does not unequivocally benefit leadership across all work situations. Hence, incorporating EI in leadership education, training, and development should proceed on strictly evidence-based grounds, and it should not come at the expense of other equally or even more important leadership antecedents.

Conclusion

We conclude that in spite of conflicting perspectives on the definition and measurement of EI, and in the midst of a continued debate on EI's construct validity, empirical research on EI and leadership has produced notable findings. Even though the scholarly literature does not support hyperbolic claims regarding EI's relevance for leadership processes, evidence does suggest that EI has potential to help scholars better understand leadership emergence, specific leadership behaviors, and leader effectiveness. That said, we also believe a lot remains to be accomplished. By continuing to examine the EI-leadership linkage, scholars can promote further confidence in the relevance of EI and contribute new insights toward important questions that have not been

sufficiently addressed to date. The knowledge gleaned from such efforts will certainly assist educators, trainers, and management professionals in more effectively utilizing EI concepts as part of their leadership development efforts. The opportunity lies in front of us.

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