

RESEARCH REPORT

Emotionally Unskilled, Unaware, and Uninterested in Learning More: Reactions to Feedback About Deficits in Emotional Intelligence

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Despite the importance of self-awareness for managerial success, many organizational members hold overly optimistic views of their expertise and performance—a phenomenon particularly prevalent among those least skilled in a given domain. We examined whether this same pattern extends to appraisals of emotional intelligence (EI), a critical managerial competency. We also examined why this overoptimism tends to survive explicit feedback about performance. Across 3 studies involving professional students, we found that the least skilled had limited insight into deficits in their performance. Moreover, when given concrete feedback, low performers disparaged either the accuracy or the relevance of that feedback, depending on how expediently they could do so. Consequently, they expressed more reluctance than top performers to pursue various paths to self-improvement, including purchasing a book on EI or paying for professional coaching. Paradoxically, it was top performers who indicated a stronger desire to improve their EI following feedback.

Keywords: self-awareness, emotional intelligence, feedback, motivated reasoning, self-improvement

To regulate their behavior, manage other people, and achieve success in organizations, managers typically need a meaningful degree of self-awareness about their skills, expertise, and performance. Indeed, career advancement and avoiding derailment often hinge on the quality of managers' everyday self-assessments about what they should be doing, where they should allocate their efforts across tasks, and how well they are meeting personal and organizational goals (Ashford & Tsui, 1991; Dunning, 2011; Goleman, 1998; Shipper & Dillard, 2000; Yammarino & Atwater, 1993, 1997).

How good are managers at making valid self-assessments? Considerable evidence suggests that self-awareness is often lacking (for reviews, see Ashford, 1989; Dunning, 2005; Dunning,

Heath, & Suls, 2004; Shrauger & Schoeneman, 1979). In one meta-analysis, the average correlation between self-ratings of managerial skill and objective assessments of competence was .04; for interpersonal skills more generally, it was .17 (Mabe & West, 1982). Managers typically express views that correlate only modestly with those of their supervisors and peers, rating their own ability significantly more positively than other people do (Harris & Schaubroeck, 1988; Heidemeier & Moser, 2009).

We examine whether potentially mistaken managerial self-assessments might be rooted in a phenomenon known as the Dunning-Kruger effect (Dunning, 2011, in press; Dunning, Johnson, Ehrlinger, & Kruger, 2003; Ehrlinger, Johnson, Banner, Dunning, & Kruger, 2008; Kruger & Dunning, 1999; Williams, Dunning, & Kruger, 2013). According to the logic of this effect, the expertise necessary to judge a person's performance in many domains is exactly the same expertise needed to produce competent performance in the first place. For example, knowledge about the nuances of logic is necessary both to produce a logically sound argument and to judge whether another person's (or one's own) logic is sound (Kruger & Dunning, 1999). In domains like this, people who are poor performers often suffer a double curse. First, limitations in their expertise cause them to make many mistakes. Second, those exact same limitations prevent them from accurately recognizing just how mistaken their own choices are and how superior the choices of others might be.

Past research has shown that poor performers fail to recognize deficiencies in their performance even when competency is manipulated (as opposed to measured), when they are allowed to revise their initial assessments after viewing other people's per-

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formance (Kruger & Dunning, 1999), and when they are paid or made accountable for accurate self-assessments (Ehrlinger et al., 2008). Such overestimation is observed not only in the lab but in real world settings, such as with chess players overestimating their performance in chess tournaments (Park & Santos-Pinto, 2010), students providing overinflated estimates of their scores on class exams (Dunning et al., 2003), and medical technicians rating their knowledge in real-world lab procedures (Haun, Zerinque, Leach, & Foley, 2000).

To be sure, some critics have argued that because the correlation between the perception and the reality of one's performance is imperfect, and because people tend to overrate their performances in general, it is a statistical given that poor performers would overrate their competence and achievement (Krueger & Mueller, 2002). However, correcting for regression effects due to measurement error (Ehrlinger et al., 2008; Kruger & Dunning, 2002) or from floor and ceiling effects (Schlösser, Dunning, Johnson, & Kruger, in press) diminishes the size of the Dunning-Kruger effect only trivially. In sum, poor performers are often not in a position to recognize the depths of their deficits, no matter how honestly, impartially, or eagerly they strive for accurate self-assessments. Managers do not appear to be immune: Inaccurate self-assessments are particularly pervasive among poorly performing managers (Church, 1997).

Herein, we focus on two important, and as of yet unaddressed, questions. The first is whether the Dunning-Kruger effect extends to social skills such as emotional intelligence. Although there are some reasons to think emotional intelligence differs from skills previously examined for the Dunning-Kruger effect, we make the case that the effect will nonetheless emerge along this critical skill for managers and leaders. The second question we examine is how people—in particular “unskilled and unaware” managers—react to feedback about their poor performance. Prior work on the Dunning-Kruger effect suggests that the effect persists in the face of feedback (Ferraro, 2010; Hacker, Bol, Horgan, & Rakow, 2000; Helzer & Dunning, 2012; Simons, 2013). Here, we develop a new “expedient escape” account to explain why that might be so and to specify conditions under which people instead seek development and personal growth. To presage our conclusion, we suggest that top performers, not low performers, are the ones most willing to invest in self-improvement after feedback. Low performers, instead, react to feedback by disparaging its credibility, leading them to be less enthusiastic about further self-development. Thus, the present article yields the first evidence of the Dunning-Kruger effect in emotional intelligence and sheds new light on how and why those most in need of self-improvement and development are often the least likely to pursue it.

Emotional Intelligence and the Dunning-Kruger Effect

Emotional intelligence (EI) is a social skill involving the ability to perceive, understand, manage, and use emotions in interpersonal relations, including those in the workplace (e.g., Caruso & Salovey, 2004; Fineman, 2004; Goleman, 1998; Mayer, Salovey, & Caruso, 2004). Research has linked EI to quality of decision-making (Hess & Bacigalupo, 2011), resilience in the face of stress (Armstrong, Galligan, & Critchley, 2011), and quality of social relationships (Lopes et al., 2004). EI has also been linked to important managerially relevant outcomes, including enhanced

in-role work performance (Brackett, Rivers, & Salovey, 2011; Côté & Miners, 2006; Law, Wong, & Song, 2004), leadership emergence (Côté, Lopes, Salovey, & Miners, 2010), and perceived effectiveness (Janovics & Christiansen, 2002; Kerr, Garvin, Heaton, & Boyle, 2006; Rosete & Ciarrochi, 2005).

At present, whether the Dunning-Kruger effect emerges in the domain of emotional intelligence is an open question. Although replicated across many domains (for a recent review, see Dunning, 2011), research on the effect has thus far focused almost exclusively on intellectual abilities, such as logical reasoning or grammar skill, or technical expertise, such as knowledge of firearm safety or medical lab procedures—domains where the criteria for right answers are well-defined and uncontroversial. It is possible that EI, a social ability, shows a different pattern of self-awareness. Given the ongoing task of managing people and dealing with emotions, both their own and those of others, managers likely have numerous and continual opportunities to observe and confront their failures in this domain. As a result, such experiences might very well guide them to a clear understanding of their abilities (cf. Sitzmann, Ely, Brown, & Bauer, 2010). Nonetheless, we expect that the Dunning-Kruger effect will emerge for emotional intelligence, for many of the same reasons it emerges elsewhere—namely, that those who lack emotional intelligence may be limited in their ability to gauge what effective emotionally intelligent responses look like.

Hypothesis 1 (H1): Self-evaluations of emotional intelligence will show a Dunning-Kruger pattern, with low performers grossly overestimating their skill and performance and high performers, at most, slightly underestimating theirs.

Feedback and Expedient Escape

If those lowest in emotional intelligence substantially overestimate their ability, how might they react when given concrete feedback about their actual lackluster performance? Will such feedback serve as a corrective, bolstering their self-awareness and stimulating efforts to self-improve? Or will low performers find a way to escape this presumably unwelcome news, resulting in little or no development? Clearly, it would seem important that low performing managers accept negative feedback in order to learn from experience, especially early in their careers in order to avoid eventual derailment (Shipper & Dillard, 2000). This seems particularly true of feedback about EI (Fineman, 2004). Additionally, prior work in the feedback-seeking literature suggests that when individuals fear they are falling short of personal goals, they become more positively oriented toward relevant developmental feedback, in some cases even proactively seeking it out (Ashford, 1986). Consequently, it is plausible that most people, especially developing managers (i.e., those early on in their careers and still actively honing their skills), might recognize emotional intelligence as critical to their development and thus show an eagerness to build such skills and address any deficit (Maurer, Weiss, & Barbeite, 2003).

However, it is also true that a large body of work suggests that people, including developing managers, react to negative feedback with limited receptivity, potentially dismissing the results or finding ways of preserving their self-views (Brett & Atwater, 2001; Halperin, Snyder, Shenkel, & Houston, 1976; Korsgaard, 1996;

Sitzmann & Johnson, 2012). Such findings may explain why feedback interventions so often fail to have any appreciable effect on recipients' subsequent motivation or behavior (Kluger & DeNisi, 1996). Indeed, studies in the Dunning-Kruger paradigm in real world settings suggest that poor performers fail to assimilate any feedback they may receive, rendering predictions about future behavior that are no more accurate than those made before feedback (Ferraro, 2010; Hacker et al., 2000; Helzer & Dunning, 2012).

Building on this latter work, we propose an *expedient escape* account for how low performers react to feedback. This account yields a number of specific predictions. First, when people with positive preexisting self-views are confronted with negative feedback, ego protection concerns may trigger a motivation to "escape" the feedback. Escaping ego-threatening negative feedback could take a number of forms. Here, we focus on two. One would be to question the accuracy of the feedback ("These scores can't be true" or "This isn't a good test of my abilities"). Another would be to question the relevance of the domain itself ("The scores may be true, but this doesn't matter" or "This attribute is stupid"). We expect that low performers may readily take one or both of these routes. However, we also expect they will take the most *expedient* route, the one more open to motivated interpretation (Ditto & Lopez, 1992). If one route is blocked for some reason (e.g., because of a prior public commitment to a dimension's relevance), poor performers may pursue another escape route (e.g., disparaging test accuracy). Thus, the expedient escape account predicts the following effects:

Hypothesis 2 (H2): In the wake of feedback, poor performers who previously thought they were skilled in EI will be most likely to derogate the accuracy of their assessment and the relevance of emotional intelligence.

Hypothesis 3 (H3): When one escape route (e.g., accuracy) is restrained from motivated or congenial interpretation for low performers, they will pursue the other more open one (e.g., relevance) in their reactions to feedback.

We also argue that the expedient escape account can be extended beyond initial reactions to feedback to attitudes and actions related to personal development. Those who disparage feedback on emotional intelligence are likely to be uninterested in developing their skills in this domain, as reflected in their intentions to pursue development activities aimed at acquiring and practicing skills. This will lead to a paradox. Unskilled-and-unaware low performers are likely to engage in such disparagement and thus be less interested in self-improvement. As a consequence, those who may stand to benefit most from developing their emotional intelligence paradoxically may be least likely to invest in such activity. Those already skilled, on the other hand, will be *more* willing to do so. Thus, we offer two final predictions.

Hypothesis 4 (H4): Those who score lower in EI will show less interest in developing their emotional intelligence.

Hypothesis (H5): The disparagement of accuracy or relevance, whichever is available or most expedient (i.e., open to interpretation), will mediate the link between performance and development attitudes.

We recognize, of course, that we are not the first to suggest that people commonly dismiss negative feedback by questioning its accuracy or relevance, or that such reactions might make people less likely to self-improve (cf. Brett & Atwater, 2001; Maurer et al., 2003). However, to date, theoretical and empirical work on reactions to feedback (e.g., Fedor, 1991; Kinicki, Prussia, Wu, & McKee-Ryan, 2004; Taylor, Fisher, & Ilgen, 1984) has focused almost exclusively on information-processing-based explanations for feedback acceptance, such as evaluations of the feedback source or message. Little research to our knowledge has systematically examined a motivational account for people's dismissal of negative feedback, or directly linked dismissal (be it motivated or not) to self-improvement motivation.

Overview

Across three studies featuring multiple samples of people completing a well-established measure of EI, we sought the first evidence that the Dunning-Kruger effect extends to the domain of EI. We expected that those scoring lowest in emotional intelligence would be the least self-aware (H1). In Studies 2 and 3, participants received feedback about their scores, allowing us to examine our expedient escape account. We expected that poor performers would derogate the accuracy of the measure and relevance of emotional intelligence (H2). If either of these routes was blocked, they would derogate the other (H3). This would allow them to preserve their positive self-views. Finally, we examined attitudes and actual choices involving development, expecting that participants scoring lowest would paradoxically be least interested in developing their emotional intelligence skills (H4). This effect would be at least partly mediated by their "escape" through derogating accuracy or relevance (H5). Thus, these studies hold the potential to shed new light on the dynamics of emotional intelligence, the scope of the Dunning-Kruger effect, the motivated ways in which people escape unwanted feedback, and exactly who is motivated toward self-development.

Method for Studies 1, 2, and 3

Participants

Study 1 participants were 157 masters students (62% female) enrolled in two separate masters-level classes at two large Northeastern universities. They ranged in age from 21–40 years old ($M = 29$), averaging approximately 5 years of post-undergraduate work experience. Showing no significant differences, we collapsed our analyses in Study 1 across both groups. Study 2 participants were 66 Masters of Business Administration (MBA) students (45% female) enrolled in a management course on organizational behavior at a large Midwestern university, ranging in age from 25–45 years old ($M = 30$), with an average of 7 years of post-undergraduate work experience. Study 3 participants were 157 MBA students enrolled in a management course in organizational behavior at a large Northeastern university. Sixteen were excluded from analyses, due to clear protocol violations ranging from not completing key components of the study to misreading the objective feedback. This left a sample of 141 MBA students (35% female). These participants ranged in age from 23–63 ($M = 29$), with an average of 6 years of post-undergraduate work experience.

Common Materials and Procedure

In all studies, participants first completed the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003), introduced as one of the most well-validated and widely used EI tests used by numerous Fortune 500 companies and large organizations for training and development purposes. Participants received an extensive description of EI, as conceptualized by Mayer, Salovey, and Caruso (2008), and indicated their percentile ranking among U.S. adults in EI on a scale ranging from 0 to 100, as well as where they believed their specific score on the MSCEIT they had just completed would place them. Next, participants answered similar percentile questions for each of the MSCEIT's four specific subcomponents: perceiving emotions in the self and others, using emotions to facilitate thought, understanding emotions, and managing their own and others' emotions.

Feedback and Interest in Development

Study 2 added two unique elements. First, after taking the MSCEIT and completing our self-evaluation measures, participants actually learned how they fared on the test. We then administered a post-feedback questionnaire asking participants to assess the MSCEIT's accuracy from 1 = *Not at all* to 7 = *Extremely*, adapted from Brett and Atwater (2001). In doing so, we also provided participants with an actual self-improvement opportunity—a chance to purchase, at a discount, a book titled *The Emotionally Intelligent Manager* (Caruso & Salovey, 2004) by two eminent scholars known for their work on EI. If participants indicated they wanted to buy the book, the experimenter followed up a week later to collect payment in exchange for it.

In Study 3, we included the same general elements as Study 2, but expanded the design in two ways. First, before completing the MSCEIT, participants were randomly assigned to rate either the expected accuracy of the upcoming test (*Accuracy Restraint Condition*) or the relevance of EI to their future work and social success (*Relevance Restraint Condition*). In the Accuracy Restraint condition, participants indicated (1 = *Not at all*, 7 = *Very much so*) the extent to which they *anticipated that the MSCEIT, as a test, would accurately capture their true overall emotional intelligence*, as well as the extent to which they anticipated *trusting, believing, and seeing as accurate* feedback they would receive from the test's publisher ($\alpha = .90$). In the Relevance Restraint condition, participants instead rated the extent to which they believed that having high EI would contribute to their *future job performance, career success, social success, and success in life*

more generally, with items based on Noe & Wilk's (1993) tripartite classification of perceived benefits associated with developmental tools and activities ($\alpha = .86$). In both conditions, participants' average responses across all rated items were positive relative to the scale neutral midpoint, $M_s = 5.16$ and 6.35 for accuracy and relevance, respectively $t_s(64) = 28.20$ and 10.74 , $p_s < .001$, evidencing clear commitment to the variable rated.

Second, we revised the "post-feedback" questionnaire from Study 2, adding several new measures and items. We began by asking participants to rate their overall EI again in percentile terms, now that they had actually received feedback on it. We then assessed the extent to which participants viewed the MSCEIT as an accurate measure of their abilities and saw EI in general as relevant to their future success. Because of time constraints, we employed slightly abbreviated versions of these measures. Specifically, participants rated the degree to which they saw their test results and feedback as *accurate, believable, and trustworthy* ($\alpha = .96$). They assessed post-feedback relevance by indicating the extent to which they viewed EI as relevant to their future *career success* and *social success* in life ($\alpha = .88$).

Finally, using a few adapted items from previous work on learning and development intentions (Hurtz & Williams, 2009; Maurer et al., 2003), we assessed intentions to improve EI by asking participants to report *the extent to which they personally intended to improve their EI on one or more of the four EI subscales, and the extent to which they planned to seek out additional feedback, suggestions, or input on improving their EI abilities from peers or close others* (1 = *Not at all*, 7 = *Extremely*; $\alpha = .84$). Participants also expressed their willingness to pay (in U.S. dollars; Foreit & Foreit, 2003; O'Brien & Viramontes, 1994) for each of three developmental activities: the same book on EI offered to participants in Study 2, individual coaching from an expert EI-trainer, and a half-day of group training on EI and leadership with a similarly expert EI-trainer. For the last two items, we indicated that the professional coach in question was an employee of *TalentSmart.com*, a firm describing itself as the world's leading provider of emotional intelligence-related products and services, with 75% of Fortune 500 companies as clients. The prices participants cited were heavily skewed. Thus, we subjected these prices to a log transform on their price plus \$1. We then combined the three items to create a single willingness-to-pay (WTP) for development scale ($\alpha = .85$).

Results

Means, standard deviations, and correlations among variables for each of our three studies are included in Tables 1, 2, and 3.

Table 1
Means, Standard Deviations, and Correlations From Study 1

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Actual EI	39.71	23.56	—				
2. Estimated EI	77.05	12.88	.20**	—			
3. Estimated MSCEIT	75.26	12.65	.23***	.76***	—		
4. Est. EI–Act. EI	38.56	22.46	–.83***	.34***	.18**	—	
5. Est. MSCEIT–Act. EI	37.14	21.63	–.83***	.22***	.26***	.94***	—

Note. $N = 157$. EI = emotional intelligence; Est. = estimated; Act. = actual; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test.

** $p < .05$. *** $p < .01$.

Table 2
Means, Standard Deviations, and Correlations From Study 2

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Actual overall EI	44.67	26.69	—						
2. Estimated EI	78.00	13.36	.19	—					
3. Estimated MSCEIT	72.58	13.87	.04	.80***	—				
4. Test accuracy	3.86	1.13	.37***	-.05	-.01	—			
5. Interest in book	1.36	0.48	.34***	.10	.09	.36***	—		
6. Est. EI–Act. EI	36.41	23.23	-.87***	.23*	.30**	-.42***	-.26**	—	
7. Est. MSCEIT–Act. EI	33.83	22.51	-.80***	.19	.29**	-.32**	-.27**	.94***	—

Note. *N* = 166. EI = emotional intelligence; Est. = estimated; Act. = actual; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test.
** *p* < .05. *** *p* < .01.

Gender failed to qualify any of the results of any of our three studies.

Before examining our hypotheses, we considered a more basic question: How accurate were people in their self-assessments of emotional intelligence? Participants in all three studies overestimated their EI relative to objective performance. On average across studies, participants placed themselves in the 77th percentile among U.S. adults, exceeding their actual average performance (41st) by roughly 36 percentile points, all paired *t*s > 9.83, *p* < .0001. They also overestimated their specific test score, predicting, on average, that their test score fell in the 74th percentile, all paired *t*s > 7.64, *p* < .0001. Such overestimation occurred even though participants' self-ratings possessed a marginal correlation with actual performance aggregated across studies, average *r* = .09, *z* = 1.65, *p* < .10 and average *r* = .09, *z* = 1.86, *p* < .07, for perceptions of EI and specific MSCEIT performance, respectively. This degree of correlation, albeit low, is consistent with that found in past research (Brackett & Salovey, 2006).

The Dunning-Kruger Effect in Self-Assessments

Turning to H1, we found, as predicted, that participants lowest in emotional intelligence vastly overestimated their ability and performance on the MSCEIT. Figure 1 displays the relationship between actual performance and overestimation of skill as measured by self-ratings of EI (left panel) and perceived performance on the MSCEIT (right panel). Overestimation skyrocketed as performance worsened, as evidenced in regression analyses, looking for both linear and quadratic trends, predicting overestimation from actual performance, all linear *b*s < -.69 and -.86, *p*s < .0001, for EI self-rating and MSCEIT score estimate, respectively. For instance, the analysis showed that participants performing at the 10th percentile overestimated their EI by roughly 63 to 69 percentile points, depending on the study, and their MSCEIT performance by 62 to 63 points. Top performers, on the other hand, were relatively much more accurate. They underestimated their skill and performance, but Figure 1 reveals, for example, that participants at the 90th percentile did so by only 5 to 20 points for both perceptions of EI and MSCEIT performance. No quadratic trends arose, save for overestimation of EI after receiving feedback in Study 3, $\beta = .15$, *p* < .05. This trend emerged (see Figure 1) because high performers typically corrected almost all of their self-underestimation after feedback, whereas low performers corrected only a fraction of their overestimation.¹

As hinted at earlier, a critic might label these results as mere statistical artifact, namely, regression to the mean plus a hefty overall overestimation of self (Krueger & Mueller, 2002). Further analyses, however, spoke against such an account. Instead of looking at over/underestimation, we next examined the absolute deviation between performance estimates and actual performance—that is, how much each participant's estimates differed, regardless of direction, from actual performance. Figure 2 depicts those absolute deviations as a function of actual performance. Via regression analyses, we investigated any linear and quadratic relationships between the two. In each analysis, we found significant linear, all β s < -.85, *p*s < .0001, and quadratic trends, all β s > .11, *p*s < .02, such that increases in accuracy emerged as actual performance improved, but that this improvement slowed at high levels of performance.

At first glance, such a slowing improvement of accuracy at the top might be taken as evidence of regression to the mean: If top performers are consistently underestimating their performances, then they would show more consistent gaps between perceived and actual performance, causing a quadratic trend in our analysis. However, a close examination of Figure 2 argues against such an interpretation. At the 99th percentile, the top of the scale, the overall slope of the relationship between actual performance and accuracy (as assessed by the deviation measure) is still improving—and significantly so when data were combined across studies, average β s at the 99th percentile = -.16, *Z* = -5.58, *p* < .0001, and -.05, *Z* = -2.52, *p* < .02, for EI and MSCEIT performance, respectively. Such continuing increases in accuracy at the very top of the scale argue against a regression account, which would predict worsening accuracy at this point because performers would increasingly underestimate themselves at the very top.

Expedient Escape in Reactions to Feedback

Next, we examined how people reacted to feedback about their EI. Before testing whether and how people derogated the feedback's accuracy or relevance (H2 and H3), we considered how

¹ We also tested whether the Dunning-Kruger effect is limited to people's overall perceptions of EI or extends to more specific self-estimates, such as the four subcomponents of EI assessed by the MSCEIT. Repeating the analyses described in the text on those four subcomponents revealed the same patterns of over- and underestimation, with bottom performers grossly overestimating their ability and performance and top performers slightly underestimating theirs.

Table 3
Means, Standard Deviations, and Correlations From Study 3

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Restraining condition			—										
2. Actual EI	40.14	22.90	-.06	—									
3. Pre-feedback estimated EI	76.47	12.88	-.01	-.08	—								
4. Pre-feedback estimated MSCEIT	74.06	13.55	.16	-.00	.80***	—							
5. Post-feedback estimated EI	63.15	21.67	.06	.26***	.25***	.31***	—						
6. Post-feedback accuracy rating	5.88	1.05	-.19**	.48***	-.10	-.09	-.05	—					
7. Post-feedback relevance rating	3.99	1.42	.16*	.32***	-.14	-.05	.02	.09	—				
8. General improvement intentions	4.80	1.44	-.07	.31***	-.14	-.16*	-.18*	.32***	.33***	—			
9. WTP for development (3 items)	0.00	0.89	-.05	.39***	-.10	-.10	-.02	.45***	.29***	.40***	—		
10. Est. EI—Act. EI	39.12	22.88	.07	-.84***	.38***	.22***	-.08	-.43***	-.34***	-.35***	-.40***	—	
11. Est. MSCEIT—Act. EI	37.31	21.66	.16*	-.79***	.33***	.38***	-.01	-.40***	-.29***	-.36***	-.40***	.93***	—

Note. $N = 141$. Variable 9 is standardized and log transformed. For condition coded, 1 = accuracy, and 2 = relevance. EI = emotional intelligence; Est. = estimated; Act. = actual; MSCEIT = Mayer-Salovey-Caruso Emotional Intelligence Test; WTP = willingness to pay.
* $p < .10$. ** $p < .05$. *** $p < .01$.

much they modified self-views as a function of feedback (Study 3). The influence of feedback on self-views was straightforward (Figure 1, left panel). The degree to which participants' self-ratings of EI dropped (i.e., post-feedback EI minus pre-feedback EI) correlated with what their feedback revealed about their actual performance. Bigger drops followed more negative feedback, $r(141) = .30, p < .0005$. Overall, self-ratings of EI dropped to an average of the 63rd percentile after receiving feedback, $t(140) = -7.10, p < .0001$, an average change of 13.3 percentile points. However, note that this figure is still far higher than participants' actual performance, $t(140) = 10.09, p < .0001$. Those at the 10th percentile lowered their self-assessments on average by 18 percentile points, thus continuing to hold self-impressions far higher than a strict reading of their performance on the MSCEIT merited.

H2 suggests that one potential reason for such modest drops is motivated "pushback" associated with expedient escape. Evidence for this expedient escape account emerged in both Studies 2 and 3. In Study 2, performance on the MSCEIT was correlated with perceptions of test accuracy, $r(62) = .37, p < .005$. Those faring

poorly saw the test as less accurate. Study 3 provided additional evidence consistent with our expedient escape account. Participants rated both accuracy, $r(141) = .47, p < .0001$, and relevance, $r(141) = .32, p < .0001$, lower to the extent that their actual performance was poor.

Additionally, this tendency to dismiss feedback was also affected by whether participants were restrained by a previous rating of relevance or accuracy, as predicted in H3. Participants in the accuracy restraint condition disparaged relevance more than accuracy, rating the relevance of EI as marginally lower ($M = 5.70$) than those in the relevance restraint condition ($M = 6.04$), $t(139) = -1.96, p = .052$. In contrast, participants in the relevance restraint condition disparaged accuracy more than relevance, rating the accuracy of the MSCEIT lower ($M = 3.74$) than those in the accuracy restraint condition ($M = 4.28$), $t(139) = -2.29, p < .025$. An alternative analysis brought these findings into sharper focus. We standardized both accuracy and relevance ratings, thus putting ratings of these attributes on a common scale. We then noted which attribute participants had been restrained on and

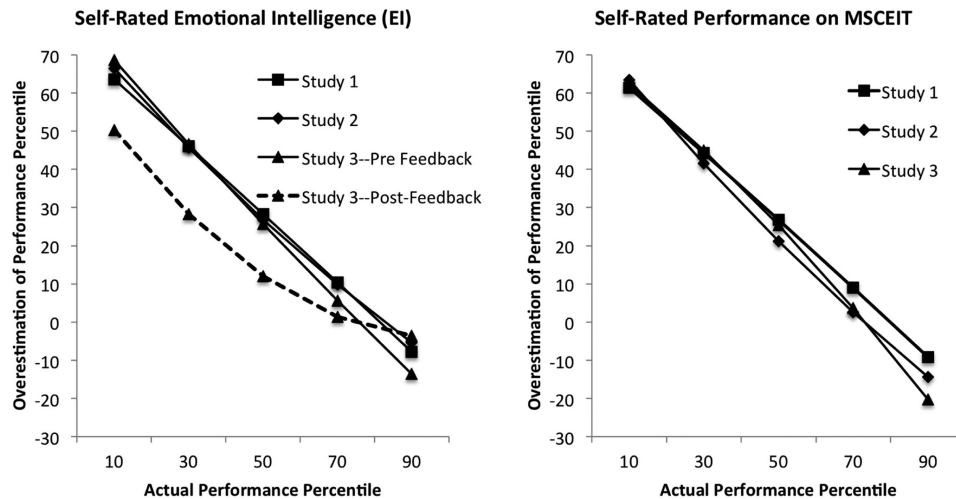


Figure 1. Overestimation of emotional intelligence (left panel) and performance on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; right panel) as a function of actual performance on the MSCEIT.

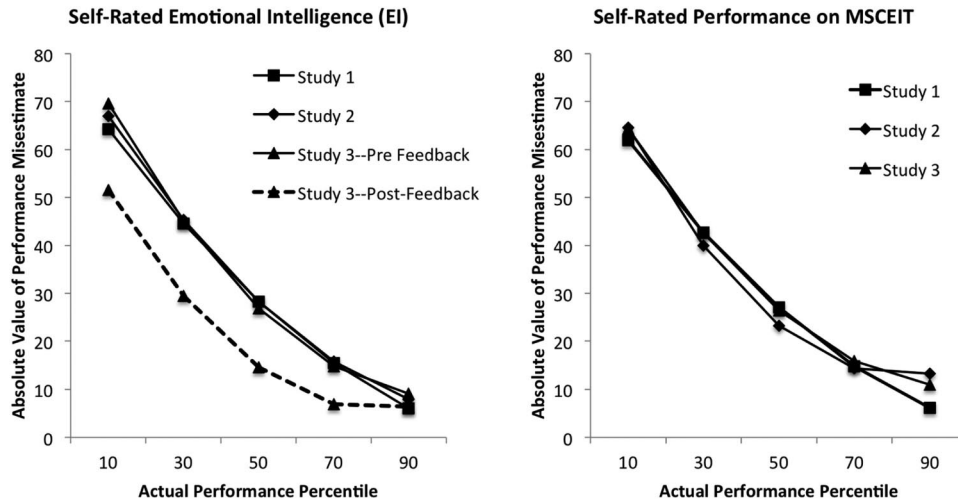


Figure 2. Absolute value of performance misestimates for emotional intelligence (left panel) and perceived Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) performance (right panel) as a function of actual MSCEIT performance.

which they had not. A comparison of these standardized scores revealed that participants rated the unrestrained variable significantly lower than the one they had been restrained on, $M_s = -.18$ vs. $.18$, $t(139) = -3.20$, $p < .005$.

Pursuing H3 further, we explored whether participants downgraded their rating on the unrestrained variable to the extent that they had a reason to expediently escape, that is, that they (a) received negative performance feedback but (b) held positive views of their own EI prior to receiving feedback. We subjected the standardized ratings of the restrained and unrestrained attributes to a multivariate analysis of variance (MANOVA; see Table 4) including actual performance, pre-feedback self-view of EI, and their interaction as predictors. This analysis revealed, first, effects for performance, $p < .0001$, and self-view, $p < .05$, but also, that these effects were qualified by a performance \times restraint interaction, $p < .02$, and further by a three-way interaction, $p < .005$.

To unpack these MANOVA results, we conducted separate multiple regression analyses on unrestrained and restrained attri-

butes (see Table 5). These analyses revealed that participants down-rated the unrestrained attribute more to the extent that their performance feedback was low, $\beta = .49$, $p < .0001$, but that this trend for the restrained variable was more muted, $\beta = .28$, $p < .001$. Figure 3 depicts the full three-way interaction among all independent variables (according to the procedures suggested by Aiken & West, 1991), and shows that participants denigrated the unrestrained variable after low performance only to the extent that their pre-feedback self-views about EI were high (i.e., 1 SD above the mean), simple slope $\beta = .70$, $p < .001$. They did not denigrate the unrestrained variable to the same degree when their self-view was low (i.e., 1 SD below the mean), simple slope $\beta = .27$, $p < .005$. Denigration of the restrained attribute was moderate and did not depend on the participants' previous self-view. This pattern of denigration is consistent with motivated reasoning and expedient escape.

Paradoxical Patterns in Self-Development

Two sets of analyses explored how the above feedback reactions affected participants' motivation for self-development. Consistent with H4, poor performers in Studies 2 and 3 showed less interest

Table 4
MANOVA Results Exploring the Relationship of Actual Performance and Pre-Feedback Self-View of Emotional Intelligence to Perceptions of Restrained Versus Unrestrained Attribute After Feedback

Independent variable effects	F(1, 137)	p
Between-subject effects		
Actual performance	54.74	<.0001
Pre-feedback self-view of EI	3.97	<.05
Performance \times Self-View	2.19	
Within-subject effects		
Attribute	0.11	
Attribute \times Performance	6.59	<.02
Attribute \times Self-View	0.84	
Attribute \times Performance \times Self-View	9.33	<.005

Note. EI = emotional intelligence; MANOVA = multivariate analysis of variance.

Table 5
Relation of Performance and Pre-Feedback Emotional Intelligence Self-View on Ratings of the Unrestrained and Restrained Attribute

Predictor variable	Attribute	
	Unrestrained	Restrained
Actual performance	.49***	.28***
Self-view of EI	-.04**	-.06
Performance \times Self-View	.22***	-.10

Note. Coefficients displayed are standardized betas. EI = emotional intelligence.
** $p < .05$. *** $p < .01$.

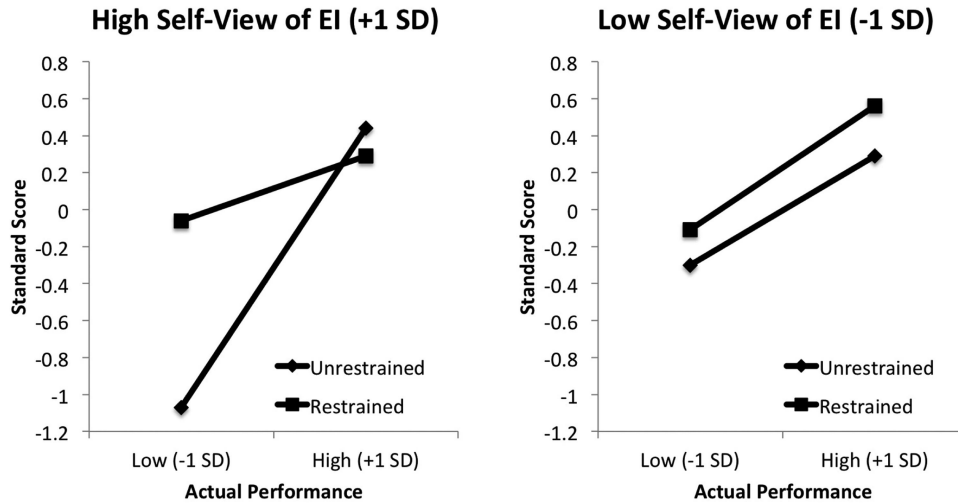


Figure 3. Evaluation of feedback along attributes (i.e., accuracy, relevance) left unrestrained or restrained by a previous rating, both as a function of actual performance and self-view of EI before feedback. Values depicted are those predicted in a multivariate analysis of variance (MANOVA). For high self-view and actual performance, predicted values are those taken at 1 SD above the relevant mean; for low self-view and performance, predicted values are taken at 1 SD below the relevant mean. EI = emotional intelligence.

in self-improvement. This fact was revealed initially in Study 2 by a logistic regression predicting decisions to buy the EI book from performance and pre-feedback self-views of emotional intelligence. Only one effect emerged (see Table 6): Participants who performed better, not worse, were more likely to buy the book, $p < .02$. Of those in the top quarter of performers, 64% were willing to buy the book. In the bottom 25% of performers, only 20% were willing, $\chi^2(1, N = 31) = 5.90, p < .02$.

Study 3 replicated this support for H4. The better their performance and feedback, the more participants displayed eagerness for self-improvement, in both their stated intentions to improve, $r(139) = .31, p < .0005$, and their willingness to pay for developmental activities, $r(139) = .39, p < .0001$. Whereas participants performing at the 90th percentile were willing to pay \$20, \$53, and \$156 (back-transformed) for a book, an hour's worth of individual coaching, and a half-day group training session, respectively, devoted to EI, those in the 10th percentile were willing to spend only \$10, \$18, and \$55, respectively, for these same items.

Expedient Escape Mediates the Link Between Performance and Self-Development

Finally, in Studies 2 and 3, mediation analyses (Mackinnon & Dwyer, 1993) using the bootstrapping method for testing indirect

effects (Preacher & Hayes, 2004) revealed that it was expedient escape that mediated the link between poor performance and lowered interest in self-improvement, thus supporting H5. As shown in Figure 4, actual performance in Study 2 was significantly linked to both perceptions of test accuracy (the presumed mediator) and decisions to buy the book (the outcome; $ps < .02$). Perceived accuracy of the MSCEIT still significantly predicted decisions to buy the book even after controlling for performance ($p < .03$). Moreover, a bootstrap analysis (2,000 random samples without replacement) showed that the 95% bias-corrected confidence intervals (CIs) of the indirect effect of MSCEIT performance on book buying that flowed through perceived accuracy (.0107) excluded zero, 95% CI [.0006, .0283], thus indicating a significant indirect effect and offering further evidence of mediation.

Study 3 ratified these mediational links, offering broader evidence for expedient escape. If our expedient escape account is correct, then we should observe mediation between actual performance and self-development only when we include ratings along the unrestrained attribute in the analysis—the one participants were freer to use to achieve their presumed motivated ends. As seen in Table 7 (Model 1), MSCEIT performance was significantly related to both of our measures of self-development, intentions to

Table 6
Logistic Regression Exploring the Relation of Actual Performance and Pre-Feedback Self-View of Emotional Intelligence to Decisions to Buy the Self-Improvement Book

Predictor variable	Model 1				Model 2			
	Estimate	OR	Wald	<i>p</i>	Estimate	OR	Wald	<i>p</i>
Actual performance	0.028	1.03	6.31	<.02	0.020	1.02	2.84	<.10
Self-view of EI	0.006	1.01	0.09		0.007	1.01	0.08	
Accuracy rating					0.308	2.00	4.74	<.03

Note. EI = emotional intelligence; OR = odds ratio.

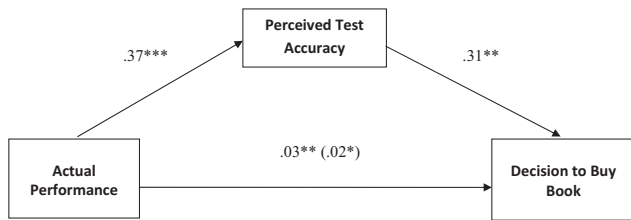


Figure 4. Perceived accuracy as a mediator of the relationship between actual performance and decision to buy book on EI (Study 2). Regression coefficients involving the decision to buy the book are log odds ratios. The one between performance on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) and test accuracy is a standardized beta. The coefficient in parenthesis between actual performance and the decision to buy the book indicated the relationship between the two variables after controlling for perceived test accuracy. ** $p < .05$. *** $p < .01$.

improve and willingness to pay for activities to do so (both $ps < .005$). Performance was also related to perceptions of restrained and unrestrained attributes ($\beta_s = .29$ and $.48$, respectively, $ps < .005$).

However, subsequent mediational analyses were successful only for the unrestrained attribute. Once previous performance and self-views of EI were controlled for, ratings of the restrained attribute failed to correlate significantly with improvement intentions and correlated only marginally ($p < .06$) with willingness to pay (see Table 7, Model 2)—thus failing a key mediational test. For the unrestrained attribute (see Table 7, Model 3, and Figure 5), ratings significantly predicted development outcomes even after controlling for performance and self-views of EI ($ps < .005$). Follow-up bootstrap analyses, each based on 2,000 random samples without replacement from the full sample, confirmed mediation, showing that the link between performance and self-development included a significant indirect effect (.140 and .0074 for intention and willingness to pay measures, respectively) involving ratings of the unrestrained attribute. For the unrestrained variable, the 95% bias-corrected confidence intervals of the indirect effects *did not* include zero, 95% CI [.0083, .0197 for intentions; .0034, .0114 for developmental activities].²

General Discussion

Prior research has reported low correlations between perceived and actual managerial skill (Mabe & West, 1982), with similar correlations observed in other social domains, including emotional intelligence (Brackett & Salovey, 2006). However, past research has left several important questions unanswered. For one, does the Dunning-Kruger effect, whereby the most unskilled are also the least self-aware, emerge in the domain of EI? Further, how do the “unskilled and unaware” react to feedback of their deficits?

In the present research, we sought answers to these questions. Across three studies, we found evidence for the Dunning-Kruger effect in EI (H1). Low performers showed little insight into just how deficient their EI performance was. Their self-evaluations of EI and MSCEIT performance were almost, but not quite, as high as those who performed best. Thus, we showed that lack of self-insight among the incompetent extends to important social skills, just as it plagues low performers on more intellectual and technical tasks, like logical reasoning. This pattern was not mere

regression to the mean; by one measure, participants’ accuracy in assessing skill and performance was still improving even among the very best of performers, whereas a regression to the mean account predicts they will show worsening accuracy as they more consistently underestimate themselves.

Beyond replicating the Dunning-Kruger pattern in a new domain, these data also support an expedient escape account of how people react to unwelcome information about their deficits. Studies 2 and 3 showed that poor performing participants were more likely to question the accuracy of the MSCEIT and relevance of EI (H2), particularly along a dimension for which participants had more freedom to disparage (H3). Such defensiveness points to one reason why the Dunning-Kruger effect may be “sticky” even in the face of explicit feedback of poor performance (Ferraro, 2010; Hacker et al., 2000).

Finally, and of perhaps greater relevance to the realm of managerial behavior, we found that such reactions to feedback had troubling implications for just how interested low performers were in self-improvement. Specifically, Studies 2 and 3 found that intentions to improve were correlated positively—not negatively—with actual performance, whether those intentions were measured directly, as willingness to pay for EI-development activities and materials, or as actual purchases of a book (H4). This pattern could be traced back to the expedient escape effects noted above. Participants rating the MSCEIT as less accurate or less relevant were the ones who showed less interest in self-improvement (H5). Importantly, however, it was the variable that they had not rated in advance (and hence were least restrained on) that mattered most (Study 3). For participants restrained by a pre-feedback rating of the MSCEIT’s accuracy, it was EI relevance that predicted explicit interest in improvement—and that mediated a link between actual performance and that interest. For those who had previously rated EI’s relevance, it was perceived test accuracy that significantly correlated with desire for improvement, and which mediated the performance/self-improvement link. This selective use of beliefs to reach congenial conclusions about future action is a signature of motivated reasoning (Dunning, Leuenberger, & Sherman, 1995; Kunda, 1987; Uhlmann, Pizarro, Tannenbaum, & Ditto, 2009).

Together, these findings suggest that at least one fruitful avenue for future research would be to explore ways to disarm this defensive stance among low performers when apprising them of their deficits. Many ways to circumvent possible defensiveness have been proposed. Feedback-givers can focus on concrete behavior and avoid making more general statements about character and competence (Kluger & DeNisi, 1996). Additionally, feedback can be more frequent, and thus less of a monumental event (Ashford, 1989). Whatever the strategy, feedback givers must also take into account the specific manner in which lower performers’

² An alternative analysis is to focus away from actual performance and ask whether vaulted, and presumably mistaken, views of EI led participants to shun opportunities for development. We found that overestimation of performance in Study 3 (i.e., high self-views of EI after feedback minus actual performance) was similarly linked to less enthusiasm for development, as assessed by both our intention and willingness to pay measures. This lack of enthusiasm was similarly mediated by ratings of the unrestrained quality variable. That is, those who preserved high self-views in the face of lackluster performance feedback denigrated the MSCEIT or EI on the unrestrained quality variable, which was then tied to lack of desire for development and self-improvement.

Table 7

Multiple Regression Analyses Exploring the Relation of Actual Performance, Pre-Feedback Self-View of Emotional Intelligence, and Ratings of Quality Attributes (Restrained Versus Unrestrained) to Self-Development Measures

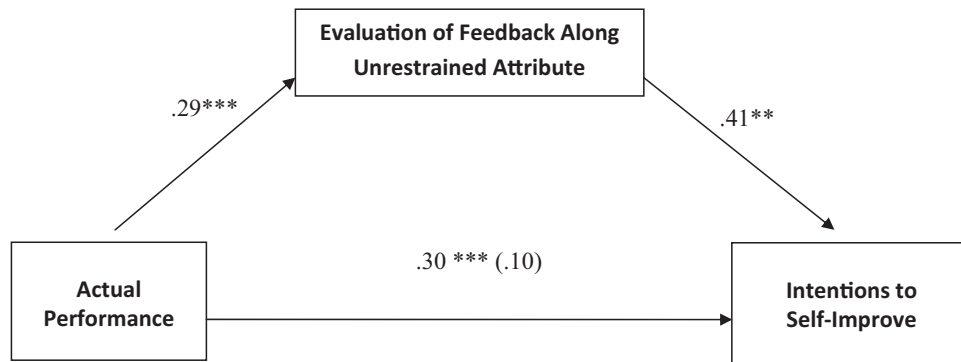
Predictor variable	Model 1		Model 2		Model 3	
	Intentions	Willingness to pay	Intentions	Willingness to pay	Intentions	Willingness to pay
Actual performance	.30***	.38***	.28***	.34***	.10	.22**
Self-view of EI	-.13	-.06	-.12	-.05	-.08	-.02
Restrained attribute			.07	.16*		
Unrestrained attribute					.41***	.34***

Note. Coefficients displayed are standardized betas. EI = emotional intelligence.
 ** $p < .05$. *** $p < .01$.

reason about negative feedback. Broadly speaking, our data suggest that one reason why the Dunning-Kruger pattern persists is that low performers have multiple escape routes for avoiding the acceptance of negative feedback. They can say the results are “bunk” or they can say that none of it matters.

Consequently, to stimulate development, practitioners need to consider, in advance, all potential escape routes that feedback recipients might travel. It is not enough to swear that the test is accurate, because low performers might reply that it is irrelevant. Likewise, it is also not enough to show that the domain is relevant

A. Intentions to Self-Improve



B. Willingness to Pay for Development

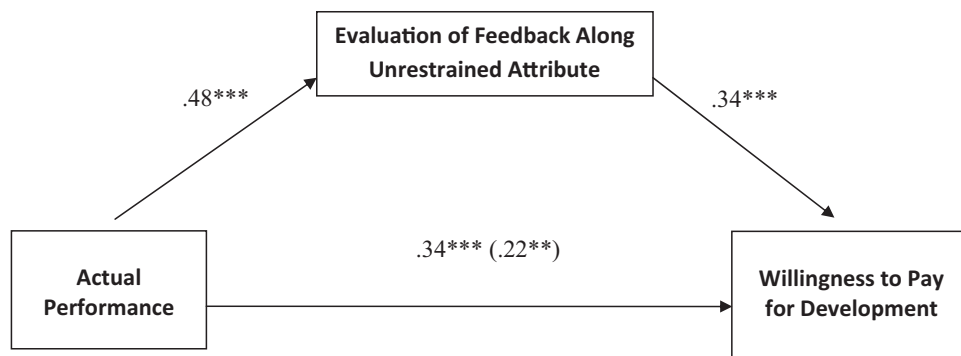


Figure 5. Evaluation of feedback along unrestrained attribute as a mediator of the link between actual performance and interest in self-development activities (Study 3). Relationships between variables expressed as standardized regression coefficients. The standardized coefficient in parentheses between actual performance and measures of self-development interest are those after those after controlling for evaluations along the unrestrained attribute. ** $p < .05$. *** $p < .01$.

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because people might answer that the test is inaccurate. Rather, practitioners seeking to stimulate development among those who need it most need to find thoughtful, sensitive ways to foreclose multiple escape routes. For instance, in advance of feedback, they might ask participants for their impressions of the test or its relevance. Or, they might ask people to consider the following “if-then”: If I learn that I do not excel in this important domain, I will take one of the following self-improvement steps.

Before concluding, it is critical that we highlight a few important limitations of the present work. First, it is an open question whether our findings generalize to broader feedback processes in organizations, such as work-related feedback concerning skills and competencies of a more concrete or technical nature (although see Haun et al., 2000). It is possible that feedback about emotional or interpersonal competencies, skills that are arguably more abstract and difficult to grasp than certain other types of job-related competencies (e.g., writing, ensuring that one’s subordinates complete projects on time and under budget), might allow significantly more leeway for the types of motivated reactions we observe here among low performers.

Second, we tested reactions of managerially oriented students to feedback about a test. In the workplace, however, feedback instead often centers on performance data collected on the job itself, typically delivered by a manager. As such, feedback about job performance might be seen as more relevant and accurate than a test, such as EI, that is only obliquely relevant to such performance. However, even if this is so, our analysis suggests that constraining motivated reasoning is a key to nudging people to accept feedback. Negative feedback about job performance may be even more threatening than the feedback provided here.

Third, despite introducing the MSCEIT as an well-validated and widely used measure of EI, employed by numerous Fortune 500 companies and large organizations, it is possible that our sample perceived the skills it assessed as less relevant or instrumental to their careers than other, potentially more concrete (e.g., quantitative) skills. Thus, low performers in our sample may have been less motivated to improve than they would have otherwise. Still, given that they rated EI’s relevance highly in Study 3, and given prior work showing that low performers are just as unaware of their deficits and reject self-discrepant negative feedback just as vigorously in intellectual and technical domains, our concern is somewhat attenuated.

Finally, a few other unanswered questions are also worth noting. For instance, it is possible that at least some relationships we document, such as that between performance and self-improvement, might be attributable in part to individual differences, such as achievement motivation—a possibility to explore empirically in future research. Additionally, it is important to highlight that the development outcomes we focused on for the most part represented participants’ intentions to improve their EI or to pay for specific development materials and activities, not concrete development-oriented behavior. Although some participants in Study 2 laid down actual money for a book on improving their EI, we do not know whether they ultimately read this book. As such, future research might profitably examine whether the effects for intentions we document here translate into concrete development-oriented behavior.

In closing, the present findings carry clear and important suggestions for self-awareness, self-management, and development

among managers—particularly for managers early on in their careers. Accurate self-assessment is considered an important skill that enhances effectiveness and decreases the risk for derailment (Goleman, 1998; Renn, Allen, Fedor, & Davis, 2005). Our data suggest, however, that accurate self-assessment is not an outcome people can just assume developing managers will attain on their own. Left to their own devices, some people will overstate their social abilities because their deficits in these abilities are invisible to them. In particular, those lowest in emotional intelligence may be largely unaware of their deficits and yet remain skilled at dismissing feedback to the contrary. Consequently, the emotionally least skilled may benefit most not simply from receiving feedback on their EI, but from receiving it in a way that mitigates their defensiveness and propels them toward constructive development.

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