Emotion
2012, Vol. 12, No. 4, 685–689

1528-3542/12/$12.00 DOI: 10.1037/a0027149

BRIEF REPORT

When Getting Angry Is Smart: Emotional Preferences and Emotional Intelligence

Brett Q. Ford
University of Denver

Maya Tamir
The Hebrew University of Jerusalem and Boston College

People who prefer to feel useful emotions, even when they are unpleasant to experience, must understand emotions and seek to regulate them in strategic ways. Such people, therefore, may be more emotionally intelligent compared with people who prefer to feel emotions that may not be useful for the context at hand, even if those emotions are pleasant to experience. We tested this hypothesis by measuring emotional intelligence and preferences to feel pleasant and unpleasant emotions in contexts in which they are likely to be useful or not. We found significant positive associations between emotional intelligence and preferences for useful emotions, even when controlling for trait emotional experiences and cognitive intelligence. People who prefer to feel anger when confronting others tend to be higher in emotional intelligence, whereas people who prefer to feel happiness in such contexts tend to be lower in emotional intelligence. Such findings are consistent with the idea that wanting to feel bad may be good at times, and vice versa.

Keywords: emotional intelligence, emotion regulation, anger, happiness

Wanting to feel bad does not sound smart. One would expect that those who prefer to feel bad would be lower in emotional intelligence (EI). But is that always the case? Feeling bad may not necessarily be bad when experienced in a context in which such feelings might be useful. For instance, anger can be useful when people need to fight with others (e.g., Tamir, Mitchell, & Gross, 2008). Similarly, feeling good may not necessarily be good when it is experienced in a context in which such feelings may not be useful. Therefore, we set out to test the link between EI and preferences for emotions in contexts where they might be useful or not.

EI concerns the ability to understand, reason about, and use emotions and emotional knowledge to enhance thought and action (Mayer, Roberts, & Barsade, 2008). According to the four branch model (e.g., Salovey & Grewal, 2005), EI involves four subcomponents that comprise two primary domains. Two of these components—the perception of emotion and the integration of emotion into thought—compose the experiential domain of EI. The other two components—understanding emotion and managing emotion—compose the strategic domain of EI.

This article was published Online First February 6, 2012.

Brett Q. Ford, Department of Psychology, University of Denver; Maya Tamir, Psychology Department, The Hebrew University of Jerusalem, Israel, and Psychology Department, Boston College.

This work was supported by National Science Foundation Grant SES 092091 to Maya Tamir. We thank Peter Salovey for his support and for his helpful comments on a draft of the article.

Correspondence concerning this article should be addressed to Brett Q. Ford, Department of Psychology, University of Denver, Frontier Hall, 2155 South Race Street, Denver, CO 80208. E-mail: Brett.Q.Ford@du.edu

EI is associated with greater mental health and well-being (e.g., Austin, Saklofske, & Egan, 2005) and more pleasant emotional experiences over time (e.g., Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). It is reasonable to expect, therefore, that people who are more emotionally intelligent seek pleasant emotions and try to avoid unpleasant emotions. In fact, one might expect that the more people want to feel good, the more emotionally intelligent they probably are. In contrast, the more people want to feel bad, the less emotionally intelligent they probably are. We suggest that this is not always the case.

According to the instrumental approach to emotion regulation (e.g., Tamir, 2009), people may be motivated to experience emotions for various reasons. Over time, most people want to feel good and avoid feeling bad. However, in the short term, people may want to feel certain emotions not just for hedonic reasons, but also for instrumental reasons. For instance, happiness promotes sociability and friendliness and is therefore potentially useful during collaborations (e.g., Forgas, 1998). Indeed, happiness can lead people to be more helpful and cooperative toward negotiation partners (Cunningham, 1988; Tamir & Ford, in press). In contrast, anger promotes aggressiveness and competitiveness and is therefore potentially useful during confrontations (e.g., van Kleef, De Dreu, & Manstead, 2004). Indeed, angry negotiators yield greater concessions from their negotiation partners (Tamir & Ford, in press; van Dijk, van Kleef, Steinel, & van Beest, 2008).

People who prefer emotions that are useful in the context at hand, regardless of how pleasant they are, are engaging in instrumental emotion regulation. Instrumental emotion regulation can promote goal attainment and improve task performance (e.g., Tamir & Ford, in press; Tamir et al., 2008). Nonetheless, when unpleasant emotions are useful or pleasant emotions are not useful, instrumental emotion regulation involves a hedonic cost (i.e., one

must feel worse to attain instrumental benefits). To what extent, therefore, is instrumental emotion regulation emotionally intelligent?

EI involves optimizing pleasure in the long term while considering the implications of emotions in the short term (Mayer & Salovey, 1995). People who are emotionally intelligent are able to "harness emotions, even negative ones, and manage them to achieve intended goals" (Salovey & Grewal, 2005, p. 282). Being higher in EI, according to this view, should predispose people to use emotions in a way that enables them to achieve their goals—namely, they should prefer to experience useful emotions. Therefore, we propose that people who prefer emotions that are useful in the given context, regardless of whether these emotions are pleasant or not to experience, would be higher in EI.

To test our hypothesis, we measured individuals' EI as well as their preferences to feel emotions in contexts where they might be more (vs. less) useful. Specifically, we measured preferences for anger and happiness in the context of confrontational and collaborative goal pursuit. These were chosen because research has demonstrated that happiness is typically pleasant to experience (e.g., Ford & Tamir, 2011; Russell, 1980) and often useful in collaboration (e.g., Cunningham, 1988) and anger is typically unpleasant to experience (e.g., Ford & Tamir, 2011; Russell, 1980) and often useful in confrontation (e.g., van Kleef et al., 2004). By choosing these emotions and goals, we were able to compare preferences for emotions that are useful (e.g., anger in a confrontation) with preferences for emotions that are pleasant (e.g., happiness in any context).

This study was also designed to rule out two alternative hypotheses. First, past studies have emphasized the importance of controlling for trait emotions when examining EI (e.g., Gallagher & Vella-Brodrick, 2008). Therefore, to test whether participants' emotional preferences index how they want to feel in a particular context or how they typically feel, we measured trait happiness and anger.

Second, previous research has emphasized the importance of distinguishing between EI and cognitive intelligence (e.g., Derksen, Kramer, & Katzko, 2002). People higher in EI also tend to be smarter (Côté & Miners, 2006). Consequently, it is possible that people reporting preferences for a useful emotion are doing so because they are more intelligent and know what might be normative in their culture, but not necessarily because they have a deeper understanding of emotions per se. To test whether the relationship between emotional preferences and EI is driven by cognitive intelligence, we also measured participants' college grade point average (GPA) as an indirect index of cognitive intelligence.

Method

Participants

Participants ($N = 136$, 56% women, $M_{age} = 20.23$ years) were recruited to complete this study as part of a larger research project for which they received $100 or course credit.[1] Two participants whose scores were 3 standard deviations above the mean were omitted from the analyses.

Materials

Emotional intelligence. EI was assessed using an Internet version of the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT, V2.0; Mayer, Salovey, & Caruso, 2002). The psychometric properties of the MSCEIT have been described elsewhere (Mayer, Salovey, Caruso, & Sitarenios, 2003). The MSCEIT was scored using the consensus method, in which respondents are given credit for a correct answer based on responses of a normative sample. Reported here are the two domain scores (experiential EI and strategic EI) as well as a total EI score (αs = .89, .80, .91, respectively).

Cognitive intelligence. As a proxy of cognitive intelligence (e.g., Brown, 2003; Murphy, Hall, & Colvin, 2003), we averaged across participants' reported college GPA during the fall and spring semesters (test–retest reliability was $\alpha = .92$).[2] Although not a direct index of cognitive intelligence, GPA assesses similar abstract reasoning skills and it appears to be positively associated with other measures of cognitive intelligence (see Hogan et al., 2010; Steinmayr, Ziegler, & Trauble, 2010; Wonderlic & Associates, 1992).

Emotional preferences. To assess preferences for emotions, we asked participants to rate the extent to which they preferred to feel *anger* or *happiness* in two situations that give rise to collaborative goals (i.e., "reaching a compromise" or "collaborating with another") and two situations that give rise to confrontational goals (i.e., "confronting a partner you suspect of cheating" or "arguing with someone who wronged you"). Responses were made on a scale of 0 (*not at all*) to 6 (*extremely*), and all items were presented in a predetermined random order that was consistent across participants. A pilot test ($N = 15$) confirmed that when considering confrontational goals, participants were more motivated to confront ($M = 7.50$, $SD = 0.68$) than to collaborate ($M = 3.50$, $SD = 2.32$), $t(14) = 6.40$, $p < .001$, $\eta_p^2 = .75$, and when considering collaborative goals, participants were more motivated to collaborate ($M = 7.53$, $SD = 0.55$) than to confront ($M = 3.23$, $SD = 2.31$), $t(14) = 7.45$, $p < .001$, $\eta_p^2 = .80$.

To establish the reliability of the measures, we asked participants to rate their emotional preferences in two sessions. We averaged across responses in the two sessions (αs = .64 –.70) and across items that represent the same motivational contexts (αs = .65–.87). This resulted in four preference ratings: (a) anger in confrontation, (b) anger in collaboration, (c) happiness in confrontation, and (d) happiness in collaboration.

Trait emotions. To measure trait anger, we asked participants the extent to which they generally felt *angry*, *annoyed*, and *irritated* ($\alpha = .89$); to measure trait happiness, we asked them the extent to which they generally felt *happy*, *cheerful*, and *joyful* ($\alpha = .89$). Responses were made on a scale of 0 (*not at all*) to 6

[1] Subsets of this sample participated in a larger research project, portions of which have been reported elsewhere (e.g., Tamir & Ford, 2011).

[2] This estimate refers to the reliability of GPA estimates, based on students' reports of their cumulative GPA in the fall semester and their cumulative GPA in the following spring semester. Given that a new set of grades had been incorporated into the spring semester's cumulative GPA, the fall and spring semester's GPAs are similar, although not identical ($\alpha = .92$).

(*extremely*), and all items were presented in a predetermined random order that was consistent across participants.

Procedure

Participants completed the study in four sessions. During the first session, participants completed an online version of the MSCEIT. During the second session, participants rated their cognitive intelligence (average time between first and second sessions = 3.0 days; range = 1–7 days). During the third session, participants rated their emotional preferences (average time between second and third sessions = 3.9 days; range = 2–10 days). During the fourth session, participants rated their emotional preferences and cognitive intelligence for the second time, as well as their trait emotions (average time between third and fourth sessions = 19.0 weeks; range = 13.6–27.6 weeks).

Results

We predicted that preferences for more useful emotions (i.e., anger in confrontation, happiness in collaboration) would be associated with higher EI and preferences for less useful emotions (i.e., anger in collaboration, happiness in confrontation) would be associated with lower EI. To test whether emotional preferences were associated with EI, we ran a series of zero-order correlations between the four measures of emotional preferences and MSCEIT scores. As seen in Table 1, preferring useful emotions, such as anger when pursuing a confrontational goal or happiness when pursuing a collaborative goal, was associated with higher EI. On the other hand, preferring emotions that are not useful, such as anger when pursuing a collaborative goal or happiness when pursuing a confrontational goal, was associated with lower EI. The strength of the correlations was not significantly different across the experiential and strategic EI domains, ts < 1.2.

Examining the Role of Trait Emotions

People may prefer to experience emotions because of how pleasant they are, because of how useful they are, or because of how familiar they are (Ford & Tamir, 2011). For instance, people who often feel angry may prefer to feel angry in confrontations, simply because they often feel angry across contexts. To confirm that participants' emotional preferences were independent of how they typically felt, we controlled for trait emotions. We ran a series of partial correlations between emotional preferences and MSCEIT scores, controlling for trait anger and trait happiness. As seen in Table 1, our findings remained unchanged when controlling for trait emotions. Preferences for useful emotions were positively correlated with EI, whereas preferences for emotions that are not useful were negatively correlated with EI. For descriptive statistics on trait emotions, see Table 2.

Examining the Role of Cognitive Intelligence

We believe that people who show preferences for useful emotions understand emotions better and know how to regulate them effectively. An alternative explanation, however, is that such people are simply more intelligent, and therefore more aware of cultural or social norms, regardless of their understanding of emotions per se. To examine whether participants' emotional

Table 1
Descriptive Statistics and Correlations Between Emotional Intelligence (EI) and Preferences for Emotions in Contexts in Which They Might Be Useful or Not

		EI score									
		Experiential domain			Strategic domain			Total			
Emotional preference	Mean (*SD*)	Zero-order	Controlling for trait emotions	Controlling for cognitive intelligence	Zero-order	Controlling for trait emotions	Controlling for cognitive intelligence	Zero-order	Controlling for trait emotions	Controlling for cognitive intelligence
Anger in confrontation	3.60 (1.20)	.09	.14	.13	.19*	.22*	.20*	.15**	.20*	.18*
Happiness in collaboration	4.19 (0.96)	.17**	.14	.17**	.19*	.19*	.15**	.20*	.18*	.18*
Anger in collaboration	0.81 (0.87)	−.34*	−.30*	−.35*	−.32*	−.31*	−.31*	−.38*	−.34*	−.37*
Happiness in confrontation	1.06 (0.98)	−.30*	−.31*	−.33*	−.34*	−.34*	−.33*	−.35*	−.36*	−.37*

* $p < .05$. ** $p < .10$.

Table 2
Descriptive Statistics and Correlations Between Both Trait Emotions and Grade Point Average (GPA) and Both Preferences for Emotions and Emotional Intelligence (EI) Scores

		Emotional preferences				EI score		
Variable	Mean (*SD*)	Anger in collaboration	Anger in confrontation	Happiness in collaboration	Happiness in confrontation	Experiential domain	Strategic domain	Total
Trait anger	1.91 (1.27)	.29*	.09	−.04	.14	−.20*	−.18*	−.23*
Trait happiness	3.73 (1.16)	−.12	−.01	.49*	.10	.09	.10	.12
GPA	3.34 (0.37)	−.15**	.09	.18*	−.13	−.08	.21*	.04

* $p < .05$. ** $p < .10$.

preferences represent what they know about emotions and what they want to feel, rather than simply reflect their intelligence level, we controlled for cognitive intelligence. We ran a series of partial correlations between emotional preferences and MSCEIT scores while controlling for participants' GPA. As seen in Table 1, our findings remained largely unchanged when controlling for cognitive intelligence. Preferences for useful emotions were positively correlated with EI, whereas preferences for emotions that are not useful were negatively correlated with EI. For descriptive statistics on GPA, see Table 2.

Discussion

To our knowledge, no research to date has examined the link between EI and preferences for emotions in particular contexts. We have done so here and found that people who prefer to feel useful emotions, even when they are unpleasant to experience, are higher in EI. That is, people who indicate that they want to feel angry more than others are more, rather than less, emotionally intelligent when anger is likely to serve them well. In contrast, people who want to feel happy more than others are actually lower in EI when happiness is unlikely to be useful. Such findings raise the possibility that wanting to feel good at all times may not necessarily be an intelligent choice.

Moving Beyond Previous Research

First, although much research has linked EI to what people actually feel (e.g., Furnham & Petrides, 2003), there has been little empirical research linking EI to what people want to feel. Emotional preferences are an important precursor to emotion regulation and reflect emotion regulatory goals. As such, examining the relationship between EI and emotional preferences is a critical step in understanding how EI interacts with emotion regulation.

Second, previous literature linking EI to what people feel focused primarily on trait EI, measured with self-report indices (e.g., Furnham & Petrides, 2003). Such trait measures of EI are typically not strongly related to ability measures of EI, such as the MSCEIT (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). By examining EI as an ability, the present research was able to link individual differences in emotion skills to instrumental motives in emotion regulation.

Third, our research examined not only the links between EI and emotional preferences broadly speaking, but also the links between EI and emotional preferences as they vary across contexts. As such, we were able to demonstrate that people who are higher in EI are not only more skilled in making themselves feel better (e.g., Schutte et al., 2002), but they may also be more skilled in using their emotions flexibly to attain instrumental goals. When unpleasant emotions might be useful, people who are higher in EI are more likely to be motivated to experience such unpleasant emotions, despite their hedonic cost.

Fourth, this research advances the understanding of EI. In particular, this is the first empirical support for a link between EI and the motivation to use emotions in ways that promote current goal pursuit. As might be expected theoretically (Salovey & Grewal, 2005), people who are higher in EI may be more likely to use their emotions to attain their goals, even at short-term hedonic costs.

Limitations and Future Directions

This research suggests that seeking unpleasant emotions or trying to avoid pleasant emotions may be an emotionally intelligent choice, given the right context. Our findings, however, are preliminary and can be extended in several directions.

First, because the current research was part of a larger longitudinal research project, we were obliged to use relatively brief measures. Future studies can assess emotional preferences in other ways, including longer and more extensive self-report measures or behavioral indices of preferences (e.g., Erber, Wegner, & Therriault, 1996). To establish that the measures capture motives in emotion regulation, it would be important to link such measures to real-time choices in emotion regulation. In addition, future studies should use standard intelligence tests to assess cognitive intelligence, rather than GPA.

Second, our findings point to an association between EI and preferences for useful emotions. Now that the association has been established, one could explore the nature and the implications of this association. Clearly, the current correlational design did not allow us to make causal arguments. Future research, therefore, could directly test causal accounts. At least two such accounts are plausible. EI may lead to greater preferences for useful emotions. Alternatively, preferences for useful emotions may increase EI. Future studies employing longitudinal designs could explore these possibilities. In addition, it would be interesting to test whether people who are higher in EI are also better at changing their emotions accordingly and whether they are more likely to benefit from useful emotions.

Third, the current findings suggest that preferring emotions that are useful for the context at hand is linked to higher EI. EI, in turn,

has been linked to a variety of desirable life outcomes such as life satisfaction, social relationships (Austin, Saklofske, & Egan, 2005), and health (Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Perhaps preferences for useful emotions are themselves associated with adaptive outcomes. It could be, for instance, that people who prefer to feel more angry and less happy in confrontations actually experience greater well-being in the long run because they are able to pursue their goals more effectively (Tamir & Gross, 2011). In the future, it would be interesting to examine the relationship between emotional preferences and a variety of psychological outcomes in a longitudinal design while controlling for EI. Such studies could test whether preferences for useful emotions are not only more emotionally intelligent, but also more adaptive in the long run.

References

Austin, E., Saklofske, D., & Egan, V. (2005). Personality, well-being and health correlates of trait emotions intelligence. *Personality and Individual Differences, 38,* 547–558. doi:10.1016/j.paid.2004.05.009

Brackett, M. A., Rivers, S., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91,* 780–795. doi:10.1037/0022-3514.91.4.780

Brown, T. C. (2003). The effect of verbal self-guidance training on collective efficacy and team performance. *Personnel Psychology, 56,* 935–964. doi:10.1111/j.1744-6570.2003.tb00245.x

Côté, S., & Miners, C. (2006). Emotional intelligence, cognitive intelligence and job performance. *Administrative Science Quarterly, 51,* 1–28.

Cunningham, M. (1988). Does happiness mean friendliness? Induced mood and heterosexual self-disclosure. *Personality and Social Psychology Bulletin, 14,* 283–297. doi:10.1177/0146167288142007

Derksen, J., Kramer, I., & Katzko, M. (2002). Does a self-report measure for emotional intelligence assess something different than general intelligence? *Personality and Individual Differences, 32,* 37–48. doi:10.1016/S0191-8869(01)00004-6

Erber, R., Wegner, D. M., & Therriault, N. (1996). On being cool and collected: Mood regulation in anticipation of social interaction. *Journal of Personality and Social Psychology, 70,* 757–766. doi:10.1037/0022-3514.70.4.757

Ford, B. Q., & Tamir, M. (2011). *Preferring familiar emotions: As you like it (or want it)?* Manuscript submitted for publication.

Forgas, J. P. (1998). On feeling good and getting your way: Mood effects on negotiator cognition and bargaining strategies. *Journal of Personality and Social Psychology, 74,* 565–577. doi:10.1037/0022-3514.74.3.565

Furnham, A., & Petrides, K. (2003). Trait emotional intelligence and happiness. *Social Behavior and Personality, 31,* 815–823. doi:10.2224/sbp.2003.31.8.815

Gallagher, E., & Vella-Brodrick, D. (2008). Social support and emotional intelligence as predictors of subjective well-being. *Personality and Individual Differences, 44,* 1551–1561. doi:10.1016/j.paid.2008.01.011

Hogan, M. J., Parker, J. D. A., Wiener, J., Watters, C., Wood, L. M., & Oke, A. (2010). Academic success in adolescence: Relationships among verbal IQ, social support and emotional intelligence. *Australian Journal of Psychology, 62,* 30–41. doi:10.1080/00049530903312881

Mayer, J. D., Roberts, R., & Barsade, S. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology, 59,* 507–536. doi:10.1146/annurev.psych.59.103006.093646

Mayer, J., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology, 4,* 197–208. doi:10.1016/S0962-1849(05)80058-7

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) user's manual.* Toronto, ON: Multi-Health Systems.

Mayer, J. D., Salovey, P., Caruso, D., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion, 3,* 97–105. doi:10.1037/1528-3542.3.1.97

Murphy, N. A., Hall, J., & Colvin, C. (2003). Accurate intelligence assessments in social interactions: Mediators and gender effects. *Journal of Personality, 71,* 465–493. doi:10.1111/1467-6494.7103008

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39,* 1161–1178. doi:10.1037/h0077714

Salovey, P., & Grewal, D. (2005). The science of emotional intelligence. *Current Directions in Psychological Science, 14,* 281–285. doi:10.1111/j.0963-7214.2005.00381.x

Schutte, N., Malouff, J., Simunek, M., McKenley, J., & Hollander, S. (2002). Characteristic emotional intelligence and emotional well-being. *Cognition & Emotion, 16,* 769–785. doi:10.1080/02699930143000482

Schutte, N., Malouff, J., Thorsteinsson, E., Bhullar, N., & Rooke, S. (2007). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences, 42,* 921–933. doi:10.1016/j.paid.2006.09.003

Steinmayr, R., Ziegler, M., & Trauble, B. (2010). Do intelligence and sustained attention interact in predicting academic achievement? *Learning and Individual Differences, 20,* 14–18. doi:10.1016/j.lindif.2009.10.009

Tamir, M. (2009). What do people want to feel and why? Pleasure and utility in emotion regulation. *Current Directions in Psychological Science, 18,* 101–105. doi:10.1111/j.1467-8721.2009.01617.x

Tamir, M., & Ford, B. Q. (2011). *Should people pursue feelings that feel good or feelings that do good? Emotional preferences and well-being.* Manuscript submitted for publication.

Tamir, M., & Ford, B. Q. (in press). When feeling bad is expected to be good: Emotion regulation and outcome expectancies in social conflicts. *Emotion.*

Tamir, M., & Gross, J. J. (2011). Beyond pleasure and pain? Emotion regulation and positive psychology. In K. Sheldon, T. Kashdan, & M. Steger (Eds.), *Designing the future of positive psychology: Taking stock and moving forward* (pp. 89–100). New York, NY: Oxford University Press.

Tamir, M., Mitchell, C., & Gross, J. J. (2008). Hedonic and instrumental motives in anger regulation. *Psychological Science, 19,* 324–328. doi:10.1111/j.1467-9280.2008.02088.x

van Dijk, E., van Kleef, G. A., Steinel, W., & van Beest, I. (2008). A social functional approach to emotions in bargaining: When communicating anger pays and when it backfires. *Journal of Personality and Social Psychology, 94,* 600–614. doi:10.1037/0022-3514.94.4.600

van Kleef, G. A., De Dreu, C., & Manstead, A. (2004). The interpersonal effects of emotions in negotiations: A motivated information processing approach. *Journal of Personality and Social Psychology, 87,* 510–528. doi:10.1037/0022-3514.87.4.510

Wonderlic, E. L., & Associates (1992). *Wonderlic Personnel Test and Scholastic Level Exam.* Libertyville, IL: Wonderlic Personnel Test.

Received November 30, 2010
Revision received November 29, 2011
Accepted December 15, 2011 ■