

## Person–Situation Interaction in Adaptive Emotional Functioning

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**Abstract** Two studies applied a person–situation model to examine the effect of emotional affordances of situations. Participants rated their emotional functioning as more extensive in situations classified as being high in emotional affordance than those classified as low in emotional affordance. Participants who scored higher on the individual difference characteristic of emotional intelligence were more interested in entering high emotional affordance situations than were individuals lower in emotional intelligence, and participants who scored higher on emotional intelligence were rated by others as being more successful in high emotional affordance situations than individuals lower in emotional intelligence. These results provide preliminary evidence that the interaction between emotional intelligence and situations may influence emotional functioning.

**Keywords** Emotional intelligence · Adaptive emotional functioning · Situations · Person–situation interaction

A recent approach to understanding adaptive emotional functioning has been the development and study of the individual difference characteristic of emotional intelligence. Salovey and Grewal (2005) described emotional intelligence as resulting from interactions between an individual's emotions and cognitions that lead to adaptive functioning. Grounded in this conceptualization of emotional intelligence is a four-branch model (Mayer et al. 2004) positing that emotional intelligence consists of the related abilities of (a) perceiving emotion in the self and others, (b) using emotion to enhance decision making, (c) understanding emotion, and (d) regulating emotion in the self and others. Other models of emotional intelligence, such as Bar-On's (2000) model, have included these functions but

broadened the definition of emotional intelligence by including skills or characteristics that may result from the effective use or regulation of emotions, such as good interpersonal relationships, problem solving ability, and stress tolerance (Table 1).

### Emotional Intelligence as an Ability and Trait

Mayer et al. (2004) argued that emotional intelligence is an ability, similar to cognitive intelligence. This conceptualization implies that emotional intelligence consists of latent potential within the individual and that this potential may or may not be displayed in the individual's everyday functioning. Emotional intelligence has also been conceptualized as a trait (Neubauer and Freudenthaler 2005; Petrides and Furnham 2003), similar to personality characteristics such as extraversion or conscientiousness. A trait conceptualization of emotional intelligence focuses on typical adaptive emotional functioning. This conceptualization emphasizes stable patterns in the manner in which individuals draw on their adaptive emotional abilities.

A trait, or typical functioning, conceptualization and measurement of emotional intelligence can be applied to a mixed model definition of emotional intelligence such as the one proposed by Bar-On (2000), and operationalized through the EQ-I, and to a narrower definition such as the one originally proposed by Salovey and Mayer (1990), which is a pre-cursor of the four-branch model, as operationalized through the Assessing Emotions measure developed by Schutte et al. (1998), or to aspects of the earlier Salovey and Mayer definition, operationalized through the Trait Meta Mood Scale (Salovey et al. 1995). Observer ratings, such as those provided by

**Table 1** Definition of key terms

Key term	Definition
Emotional functioning affordances of situations	The likelihood of a situation facilitating or prompting an emotion-related process or behavior. In the present research the focus was on situations eliciting awareness of own emotions, awareness of others' emotions, managing own emotions and managing others' emotions in the situation
Situationist perspective	Situations are determinants of individuals' behavior
Interactionist perspective	Behavior is the result of interactions between situations and individual difference characteristics
Big Five personality traits	Many behaviors and narrow personality characteristics group into dimensions that can be labeled extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience
Adaptive emotional functioning	Emotions may be essential to adaptive functioning in general (e.g., Damasio 1994), and certain emotional states and integration of emotion and cognitive processing may optimise functioning
Emotional intelligence	The study of emotional intelligence represents an individual-differences approach to understanding adaptive emotional functioning. Emotional intelligence has been described as consisting of the interrelated abilities of effectively perceiving emotion in the self and others, using emotion to enhance decision making, understanding emotion, and regulating emotion in the self and others

the Emotional Competency Inventory (Boyatzis et al. 2000) as well as self-report measures have been used to assess trait emotional intelligence. It should be noted that developers of scales such as the EQ-I (Bar-On 2000) do not necessarily describe their measures as trait measures, instead describing them as measures of skills or competencies.

### **An Interactionist Conceptualization of Adaptive Emotional Functioning**

Even though some variance in human behavior is governed by individual differences, such as differences on the Big Five personality traits (e.g., McCrae and Costa 1997, 1999), situations and the interaction between situations and traits also have a strong impact on functioning. The situationist perspective (Forgas and Van Heck 1992) is based on empirical findings (Mischel 1968) indicating that situational determinants influence much behavior. Building on the situationist model, the interactionist perspective (e.g., Hettema and Kenrick 1992) holds that human functioning is the result of a complex interaction between traits and situations.

According to Hettema and Kenrick (1992) various ways in which situations and person characteristics interact include the following: some characteristics are more compatible with certain situations (e.g., an individual high in assertiveness may function better in a competitive business setting than an individual low in assertiveness), individuals elect to enter situations that are compatible with their characteristics (e.g., a person high in nurturance may volunteer to assist in a children's hospital ward), some situations have entry requirements that favor individuals with certain characteristics (e.g., an extraverted individual may be more likely to be hired for a sales position), individuals may change situations to suit their characteristics (e.g., an employee with a low stimulation threshold may insist that co-workers not play music in common work areas), and over time situations may have an impact on the characteristics of individuals (e.g., those working in therapy settings may develop a higher level of empathy).

Various studies and reviews have attempted to identify the specific amounts of variance accounted for by these different sources, a difficult task given the complexity of person–situation interactions and the limitations created by person and situation sampling. Forgas and Van Heck (1992) provided the following influence percentages for variations in anxiety: person characteristics, 13%; situations, 10%; person–situation interactions, 21%, and unexplained, 56%. Summarizing the findings of several previous review articles, Hettema and Kenrick (1992) concluded that although person characteristics and situational determinants often do influence behavior, the interaction of the two tends to explain the most variance in functioning.

As well as providing an important model for understanding human functioning in general, the interactionist approach has been used in various research applications. For instance, Tiggemann (2001) found a significant interaction effect between situations and person characteristics of dietary restraint and body mass index in determining body image. Schmitt et al. (2003) found that justice attitudes and situational factors interact in predicting allocation of financial burden in insurance claim judgments. In recent years research applications of the interactionist

perspective have dwindled. We believe that this is unfortunate as the interactionist perspective provides a reasonably comprehensive approach to the complexities of human functioning.

As for a variety of types of human functioning both situational influences and the interaction between situations and individual difference characteristics have been found to be important, it may be that the adaptive emotional functioning of individuals is also a product of situational and interactionist influences. Different situations may afford or elicit different levels of emotional functioning. We propose that the conceptualization of adaptive emotional functioning be broadened beyond ability and trait models to include the situationist and interactionist perspectives of functioning.

## Aims

The first aim of the present set of studies was to explore whether situations can be reliably classified on emotional functioning affordances and to examine whether variance in the functioning of individuals can be explained by these situational affordances. Emotional functioning affordance is the likelihood of a situation eliciting an emotion-related behavior.

The second aim of the present set of studies was to test whether the interaction of the individual difference characteristic of emotional intelligence with situational affordances predicts individuals' willingness to enter a situation and their successful functioning in the situation as rated by others. It was predicted that those scoring higher in emotional intelligence would be more willing to enter high emotional affordance situations and would be rated by others as functioning more successfully in such situations.

## Study 1: Situational Influences on Emotional Functioning

### Creation of Situation Descriptors

Van Heck (1989) found that ten factors underlie the groupings of many situations. These ten factors, which include interpersonal conflict, joint working, intimacy, recreation, travel, rituals, sport, excesses, serving, and buying/selling, provided the basis for the creation of 32 situation stimuli descriptions for the present study. Three of the authors of the present study generated a pool of descriptions and modified these after joint discussion to arrive at the 32 descriptions. An attempt was made to balance situation descriptions that might be perceived as positive and negative and descriptions that involved interaction with known others versus strangers.

Two experts in emotion theory and research who were not involved in the creation of the situation descriptions then independently rated on a five-point scale to what extent each of the situations tends to elicit or allow four aspects of adaptive emotional functioning in people in general. The individual difference model of emotional functioning of Mayer et al. (2004) provided the basis for the ratings of emotional functioning. The four aspects of emotional functioning that were rated

are central to the identification and management branches of the model of Mayer et al. (2004) and were as follows: awareness of one's own emotions, awareness of others' emotions, managing one's own emotions and managing others' emotions. As previous research (Mayer et al. 1999, 2001) has indicated a substantial relationship between the four branches of the model, with reliabilities of a measure assessing all four branches at over 0.90, the two other branches of the model, using emotion to enhance decision making and understanding emotion, were not the focus of the ratings.

An intra-class correlation (two-way mixed model) of the experts' ratings produced a coefficient of 0.71, providing evidence of some agreement on the emotional affordances of the situations. Expert ratings of the four types of emotional functioning were then summed for each situation and averaged for the two raters to arrive at a composite emotional affordance score for each situation. The eight situations that the average expert ratings showed to have the highest emotional affordances and the eight situations that the average expert ratings showed to have the lowest emotional affordances were used in further phases of the research. The intra-class two-way mixed model correlation of the experts' ratings for just these 16 situations was 0.90. Table 2 shows the situation descriptions and the affordance values for the eight low and the eight high situations.

## Method

Sixty-five participants were recruited in Queensland and New South Wales, Australia, and Ross on Wye in England. Participants included staff and counselors

**Table 2** Situation descriptions and emotional affordance values

Situation description	Affordance value
High emotional affordance situations	
A friend of the opposite sex to whom he/she is attracted flirting with him/her when no one else is present	20.00
Receiving a telephone call from a dissatisfied customer	19.50
Being accused in private of incompetence by a work supervisor	19.50
Being criticized by a family member in the presence of other family members	19.50
A friend teasing him/her about a sensitive topic while other friends are present	18.00
Witnessing a severe automobile accident while driving with friends	18.00
Having an intimate conversation with a romantic partner	18.00
Receiving a declaration of love from a romantic partner	17.00
Low emotional affordance situations	
Eating dinner at home with his/her family	9.50
Together with friends being a spectator at a sports event	9.00
Betting at a horse race event he/she is attending alone	7.50
Watching a film at a cinema with friends	7.50
Attending a religious service with members of his/her family	6.00
Bidding in person at an auction where he/she knows no one	6.00
Riding on an elevator with one other person who is a stranger	5.00
Traveling on a crowded airplane by himself/herself	4.50

Emotional affordance values are based on ratings of to what extent the situations elicit or allow awareness of own emotions, awareness of others' emotions, managing own emotions and managing others' emotions in the situation. Higher scores indicate greater affordance.

at a community-based organization, police staff, employees from an international telephone and internet business, members of a mothers group, and university students. Participation in the study was voluntary. Twenty-four participants were men and 41 were women. Participants' mean age was 36.52 years ( $SD=9.59$ ).

Participants rated their own emotional functioning in the 16 situations on a five-point scale (on which 1="I do not do this" and 5="I do this extensively"). Participants rated their identification of their own emotions, identification of others' emotions, management of their own emotions, and management of others' emotions for each situation. Participant responses were anonymous.

Participants' ratings of identification of their own and others' emotions and management of their own and others' emotions were summed for each situation to arrive at a composite emotional functioning score for each participant for each situation. The internal consistency, as assessed through Cronbach's alpha, of summed ratings for the eight high emotional affordance situations was 0.87 and the internal consistency of summed ratings for the eight low emotional affordance situations was 0.91.

## Results

The average emotional functioning score for the high emotional affordance situations ( $M=118.81$ ,  $SD=15.82$ ) was significantly greater than the average emotional functioning score for the low emotional affordance situations ( $M=90.54$ ,  $SD=14.87$ ),  $t(64)=12.48$ ,  $p=0.0001$ .

## Study 2: Person–Situation Interactions in Emotional Functioning

### Method

#### *Participants*

Sixty-seven participants were recruited from several regions of New South Wales, Australia. Recruitment was from various groups including public occupational health and safety inspectors, administrators and accountants employed by a hospital, a fitter and turners association, university students and retirees. Twenty-nine participants were men and 38 were women. Participants' mean age was 41.15 years ( $SD=16.95$ ).

#### *Procedure and Materials*

Participants were asked to indicate on a five-point scale (on which a 1 indicated that they "would not want at all to enter the situation" and 5 indicated that they "would very much want to enter the situation") how much they would wish to enter each situation. The internal consistency of these ratings, as assessed through Cronbach's alpha, for the eight high emotional affordance situations was 0.43 and the internal consistency for the eight low emotional affordance situations was 0.65.

Participants were also asked to complete the Assessing Emotions Scale (Schutte et al. 1998), a measure of trait emotional intelligence. The 33-item scale assesses how well respondents typically identify, understand, regulate, and harness emotions both in themselves and others. Items are rated on a five-point scale on which a 1 indicates “strongly disagree” and a 5 indicates “strongly agree.” In previous research the scale was found to have an internal consistency of between 0.87 and 0.90, 2-week test–retest reliability of 0.78, and evidence of validity (Schutte et al. 1998). In the present study the internal consistency of the scale, as assessed by Cronbach’s alpha, was 0.90. Participant responses were anonymous.

Finally, each participant was requested to ask someone who knows him or her well, such as a close friend or family member, to confidentially rate how well the participant functions in a number of situations. Participants provided the raters with the rating material, which the raters posted back for 58 of the participants.

The raters were asked to indicate success of participants in the situations using a five-point scale on which a 1 indicated “not successful” and a 5 indicated “very successful.” For the raters success was defined as follows: “By successful we mean that the individual meets the challenges of the situation well and is able to accomplish his or her goals in the situation.” The internal consistency of these observer ratings, as assessed through Cronbach’s alpha, for the eight high emotional affordance situations was 0.79 and the internal consistency for the eight low emotional affordance situations was 0.53.

## Results

### Situation Influences

Composite scores consisting of the sum of participants’ interest in entering the high emotional affordance and the low emotional affordance situations were calculated. Further, composite scores consisting of raters’ judgments of participants’ success in the high emotional affordance and low emotional affordance situations were calculated.

There was a significant association between level of emotional intelligence and level of interest in entering the high emotional affordance situations. Participants with higher characteristic emotional intelligence were significantly more interested in entering high emotional affordance situations (see Table 3). Further, participants with higher emotional intelligence were judged by raters as being significantly more successful in high emotional affordance situations. A Fisher’s test for same-sample correlation differences, using simple interactive statistical analysis, examined whether there was a stronger association between emotional intelligence and interest in entering the high affordance situations than emotional intelligence and interest in entering the low affordance situations. The results showed that the difference between the correlations was not statistically significant,  $t(63)=1.22$ ,  $p=0.11$ . According to Fisher’s test for same-sample correlation differences, the association between level of emotional intelligence and other-rated success was significantly higher in high emotional affordance situations than in low emotional affordance situations,  $t(63)=1.94$ ,  $p=0.03$ .

**Table 3** Correlations of characteristic emotional intelligence with interest in entering situations and observer rated success in situations

	Emotional intelligence
Interest in entering	
High emotional affordance situations ( $N=66$ )	0.37*
Low emotional affordance situations ( $N=66$ )	0.21
Observer rated success in	
High emotional affordance situations ( $N=57$ )	0.43*
Low emotional affordance situations ( $N=58$ )	0.16

High emotional affordance situations were pre-rated as being likely to elicit awareness of own emotions, awareness of others' emotions, managing own emotions and managing others' emotions in the situation. Level of emotional intelligence was assessed as an individual difference characteristic of participants. Participants reported their interest in entering situations. Observers rated participants' success in situations. \* $p=0.01$

## Discussion

The aim of the present research was to explore whether situations can be classified on emotional functioning affordances and to examine whether the individual difference characteristic of emotional intelligence interacts with these situational affordances in determining wish to enter a situation and others' ratings of individuals' effectiveness in situations.

In Study 1 participants rated their emotional functioning as significantly more extensive in expert-rated high emotional affordance situations than in expert-rated low emotional affordance situations.

In Study 2 participants who scored higher on emotional intelligence, conceptualized as an individual difference characteristic in emotional functioning, were significantly more interested in entering high emotional affordance situations than individuals lower in emotional intelligence. Level of emotional intelligence was not significantly associated with interest in entering low emotional affordance situations. The difference between the magnitudes of these associations was not significant.

Further, in Study 2 participants who scored higher on emotional intelligence were rated by others as being significantly more successful in high emotional affordance situations than individuals lower in emotional intelligence. Level of emotional intelligence was not significantly associated with other-rated success in low emotional affordance situations. The difference between the magnitudes of these associations was significant.

These findings lend some support to an interactionist perspective on emotional functioning. The interactionist perspective holds that behavior is a product of individual difference characteristics and situational influences. Level of emotional intelligence accounted for more of the variance in success in high emotional affordance situations than low emotional affordance situations. This finding can be interpreted in light of Hettema and Kenrick's (1992) tenet that some individual difference characteristics are especially compatible with certain situations. Those with higher emotional intelligence may be more receptive to emotional cues, challenges and opportunities presented by high emotional affordance situations and thus experience more success in these situations.



Level of emotional intelligence was related to participants' wish to enter high emotional affordance situations. The finding that those higher in emotional intelligence were more willing to enter high emotional affordance situations can be understood in the context of Hettema and Kenrick's (1992) tenet that individuals elect to enter situations that are compatible with their characteristics.

Internal consistency analyses of participants' emotional functioning and wish to enter situations ratings and observer ratings of participants' success in situations provided further information regarding the nature of the situation stimuli. Internal consistency for participants' emotional functioning ratings for both the high and the low emotional affordance situations was good, with Cronbach's alpha of 0.87 and 0.91, indicating that for a given participant emotional functioning levels in one situation tended to be closely associated with emotional functioning levels in the other situations.

Participants' ratings of their wish to enter the high and low emotional affordance situations did not show good internal consistency. This may be because the situations in the sets, and especially in the high affordance set, consisted of what might be perceived as a mix of positive and negative situations, and participants would be more likely to wish to enter situations perceived as positive, regardless of the situations' emotional affordance. Observer ratings of success showed good internal consistency across the high emotional affordance situations but not low emotional affordance situations. It may be that variables not examined in the present research exert stronger influence in the low emotional affordance situations than the high emotional affordance situations. This may have led to the differences in internal consistency of the observer success ratings for the low emotional affordance situations.

In interpreting the findings it is useful to consider the limitations presented by the sample of participants and the sample of situation descriptions. The participants were all residents of Australia or the UK and thus were likely to have shared a somewhat common experience with the high and low emotional affordance situations that served as stimuli. Participants from quite different cultures may have different reactions to the situation descriptions used in the present research. The rather low internal consistency of participants' ratings of willingness to enter situation and others' ratings of participants' functioning in low emotional affordance situations indicates that that perhaps the situations selected for the sample of situations were too diverse.

An interactionist perspective of human functioning was a theoretical foundation for the present research. This perspective, which holds that behavior is a product of the interaction of individual differences and situations, influenced the formulation of the research design and measurement approach. As is the case with much theoretically based research, the theoretical foundation of the research may have biased the research towards model-confirming results as well as conceptually anchoring the results.

The present set of studies may be viewed as exploratory efforts in what may be a fruitful research avenue. Future research in the area of situational aspects of adaptive emotional functioning might examine an expanded range of situations, additional factors proposed by the interactionist perspective, and additional individual characteristics. In future research situation descriptions that fall into specific areas of application, such as work settings, or that fall into pre-selected areas of emotional functioning, such as situations in which it is beneficial to help others regulate emotions, might be studied.

As well as suggesting that some characteristics are more compatible with certain situations and that individuals elect to enter situations that are compatible with their characteristics, the interactionist perspective (Hettema and Kenrick 1992) holds that some situations have entry requirements that favor individuals with certain characteristics, that individuals can change situations to suit their characteristics, and that over time situations may have an impact on the traits of individuals. These additional three interactional mechanisms could be the focus of future research on adaptive emotional functioning.

## References

- Bar-On, R. (2000). Emotional and social intelligence: Insights from the emotional quotient inventory. In R. Bar-On, & J. D. A. Parker (Eds.) *The handbook of emotional intelligence* (pp. 363–388). San Francisco: Jossey-Bass.
- Boyatzis, R. E., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence: Insights from the emotional competence inventory (ECI). In R. Bar-On, & D. A. Parker (Eds.) *Handbook of emotional intelligence* (pp. 343–362). San Francisco: Jossey-Bass.
- Damasio, A. (1994). *Descartes' error*. New York: Putnam.
- Forgas, J. P., & Van Heck, G. L. (1992). The psychology of situations. In G. Caprara, & G. L. Van Heck (Eds.) *Modern personality psychology* (pp. 418–455). Hertfordshire: Simon and Schuster.
- Hettema, J., & Kenrick, D. (1992). Models of person–situation interactions. In G. Caprara, & G. L. Van Heck (Eds.) *Modern personality psychology* (pp. 393–417). Hertfordshire: Simon and Schuster.
- Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267–298.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197–215.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion*, 1, 232–242.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509–516.
- McCrae, R. R., & Costa, P. T. (1999). A five-factor theory of personality. In L. A. Pervin, & O. P. John (Eds.) *Handbook of personality: Theory and research* (pp. 139–153). New York: Guilford.
- Neubauer, A. C., & Freudenthaler, H. H. (2005). Models of emotional intelligence. In R. Schultz, & R. D. Roberts (Eds.) *Emotional intelligence: An international handbook* (pp. 31–50). Cambridge, MA: Hogrefe.
- Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioral validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality*, 17, 39–57.
- Salovey, P., & Grewal, D. (2005). The science of emotional intelligence. *Current Directions in Psychological Science*, 14, 281–285.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185–211.
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.) *Emotion, disclosure, and health* (pp. 125–154). Washington, DC: American Psychological Association.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., et al. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167–177.
- Schmitt, M., Eid, M., & Maes, J. (2003). Synergistic person x situation interactions in distributive justice behavior. *Personality and Social Psychology Bulletin*, 29, 141–147.
- Tiggemann, M. (2001). Person x situation interactions in body dissatisfaction. *International Journal of Eating Disorders*, 29, 65–70.
- Van Heck, G. L. (1989). Situation concepts: Definitions and classification. In P. G. Hettema (Ed.) *Personality and environment: Assessment of human adaptation* (pp. 53–69). Chichester: Wiley.