

Emotional intelligence and the construction and regulation of feelings

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Abstract

Emotionally intelligent people are defined in part as those who regulate their emotions according to a logically consistent model of emotional functioning. We identify and compare several models of emotion regulation; for example, one internally consistent model includes tenets such as “happiness should be optimized over the lifetime.” Next, we apply that internally consistent model to the way a person can intervene in mood construction and regulation at non-, low-, and high-conscious levels of experience. Research related to the construction and regulation of emotion at each of these levels is reviewed. Finally, we connect our concept of emotionally intelligent regulation to its potential applications to personality and clinical psychology.

Key words: Emotional intelligence, Regulation of feelings

Emotional intelligence can be defined as the capacity to process emotional information accurately and efficiently, including that information relevant to the recognition, construction, and regulation of emotion in oneself and others (Salovey & Mayer, 1990). Such emotional information generally conveys knowledge about a person's relationships with the world (Frijda, 1986; Morris, 1992; Plutchik, 1980; Schwarz, 1990) and may well be processed differently from strictly cognitive information (Gardner, 1983; Zajonc, 1980). Intelligences that appear to employ their own specific processing modality, such as mental imagery, or spatial relations, are considered conceptually separable from general intelligence (Gardner, 1983), although still correlated with it. Recent intelligence research suggests that distinct forms of emotional processing might also plausibly be said to exist (Mayer & Salovey, 1993). For example, emotional creativity—the ability to create novel and effective “emotional syndromes” (Averill & Thomas-Knowles, 1991, p. 270)—is correlated but distinct from both general creativity and intelligence; similarly, expert emotional knowledge in children is distinct from measures of general intelligence (Soederberg, 1993).

Emotional intelligence marks the intersection between two fundamental components of personality: the cognitive

and the emotional systems. Standards of intelligence are most commonly applied to cognitive performance, and standards of adaption to emotional reactions. When a criterion of intelligence is applied to such a problem as the best way to feel, it raises the seemingly odd question of whether certain emotions are more intelligent than others. But it is not unheard of to apply standards of intelligence to emotional reactions, or, for that matter, to apply standards of adaptation to cognition.

Emotional intelligence has as one of its premises that emotional responses may be logically consistent or inconsistent with particular beliefs about emotion. Relatively “pure” emotional reactions such as those instances of happiness or fear displayed early in infancy may involve relatively few cognitions; these probably are best evaluated as adaptive or maladaptive. But as the person develops increasingly complex representations of situations, his or her emotional reactions may merge with more complex thoughts, to develop such cognitively saturated emotions as guilt or regret. Moreover, the person may develop sophisticated internal models that include standards of emotional functioning. These emotional reactions and models can be assessed according to their logical consistency, and hence, their intelligence. For example, a person who believes anger is bad in a particular situation and who repeatedly behaves angrily in spite of such beliefs may be considered emotionally unintelligent. This may be either because the belief is incorrect or

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because the belief is correct but the reaction is dyscontrolled due to missed opportunities for self-regulation. In fact, the rank ordering of emotional experiences according to something like their intelligence has already taken place in such diverse fields of human study as ethics (Oakley, 1991), religion (Otto, 1950; Peli, 1984; Pruyser, 1968), child development (Nannis, 1988), and clinical psychology (A. Freud, 1966). The theory of emotional intelligence requires development of criteria for such intelligent emotionality. The present paper will address a small part of this problem by discussing the basis for identifying the intelligent construction and regulation of emotions, and reviewing related current research.

Organization of the Article

Some basic issues concerning the application of emotional intelligence to emotional construction and regulation are addressed following this introduction, in the second section of the article. In particular, several models of more or less intelligent regulation are considered. The third section of the article applies one possible intelligent model to the literature on emotional construction and regulation. Emotional construction and regulation is discussed at three levels: the nonconscious, lower, and higher conscious levels. Then, literature relevant to each is reviewed. The final section further discusses the application of emotional intelligence to issues of emotional construction and regulation.

Bases for Applying Emotional Intelligence to Emotion Construction and Regulation

Potential Criteria of Emotionally Intelligent Construction and Regulation

A serious hurdle for emotional intelligence theory—as well as any other approach that suggests relative merits for emotional processing—is the problem of the criterion: What is to be gauged as an “intelligent” solution to emotional regulation? As with complex intellectual problems (see Salvia & Ysseldyke, 1991, pp. 163–165) there may be more than one correct answer, and these answers are also probably highly context sensitive.

A person generally holds some assumptions about how he or she experiences emotions, and how adaptive they are. In the absence of any relevant survey data, we have constructed one possibly representative set of such assumptions, which appear at the top of Table 1. The set includes the assumptions, for example, that “Other things being equal, pleasure is good for people; pain is bad,” another is that, “. . . People find it easier to be happy when those around them are happy also.” From this particular set of assumptions, it is possible to build consistent or inconsistent propositional models about constructing and regulating emotion. In addition, these propositional models may be more or less adaptive relative to the organism’s potential survival.

For example, one set of regulatory propositions, Model 1 of Table 1, states that people should (a) optimize their pleasures over the long-term, (b) emphasize emotions that are both proindividual and prosocial, and (c) carefully review a context before deciding what emotion is optimal to feel. We would argue that this model is mostly logically consistent with the assumptions as well as internally consistent, and that it is also largely adaptive. By way of contrast, Model 4 states that people should cause pain wherever possible. This model is logically inconsistent with the assumptions (although it might be consistent with other assumptions) and is likely to be maladaptive in that it would be unlikely to lead to survival.

Describing intelligent guidelines for mood regulation may sharpen our thinking, as well as make explicit the bases for intuitive rankings of emotional reactions already employed in the field. Model 1 of Table 1, the logically consistent and adaptive model, may be fairly close to the implicit model employed by many researchers in the field, although it is stated in a highly simplified manner and omits non-propositional knowledge that experts may employ (i.e., case-by-case reasoning). While we recognize the limitations of Model 1—that it is only one of many possible equally good or better alternatives—we shall employ it as a provisional standard for the remainder of the article so as to make explicit some of the values that (we argue) psychologists have assumed.

A Further Discussion of Model 1 As a Model of Emotionally Intelligent Regulation

Recall that Regulatory Model 1 says people should (a) optimize their pleasures by forgoing short-term pleasures for longer term ones, (b) strive toward emotions that are both proindividual and prosocial, and (c) be context sensitive. We briefly develop each of these points, illustrating them in particular with the thoughts of Aristotle, Freud, and contemporary psychologists to indicate their historical continuities.

A. The optimization of pleasure (happiness) sometimes requires subduing pleasure motivations, and seeking more sophisticated behavioral patterns. Aristotle said one must judge the overall happiness of a person through his or her life for, “. . . one day or a short time does not make a man blessed and happy.” (322 B.C.E., Book I, Part 7, p. 18). To accomplish this requires a degree of self-control. Aristotle noted that a “man who abstains from bodily pleasures and enjoys doing so is self-controlled” (322 B.C.E., Book II, Part 3, pp. 36–37). Similarly, Freud’s (1920/1950) reality principle was introduced to combat immediate pleasure satisfaction, because such immediate satisfaction can deflect a person from maximizing his or her pleasure throughout the lifetime. Contemporary psychological research also recognizes the need for optimization. For example, Mischel (1974) explicitly taught children how to delay immediate pleasures for greater long-term gain.

Table 1. Possible Propositional Models Concerning Emotional Regulation, Speculatively Classified as to their Higher and Lower Internal Consistency and Higher and Lower Adaptational (Survival) Value

Common Assumptions (Multiple alternatives are possible):

1. Other things being equal, pleasure is good for people; pain is bad.
2. People naturally seek pleasure and avoid pain.
3. People cannot always attain enough pleasure to offset pain.
4. Other things being equal, people find it easier to be happy when those around them are happy as well.
5. The optimal thing to feel in a given situation is context dependent.

Emotional Regulation Model 1: Consistent and high adaptational value

1. People can optimize their pleasures by forgoing short-term pleasures for larger or more sustained long-term pleasures (see Assumptions 1 and 2).
2. People should strive toward emotions that are both pro-individual and pro-social (see Assumption 4).
3. The best emotions to feel will depend upon the situation; there are times when painful emotions are more appropriate than positive ones in the long run (see Assumption 5).

Emotional Regulation Model 2: Consistent and low adaptational value

1. People should stop reproducing and eliminate themselves and society so as to ensure that in the future pain won't exceed pleasure by more than a limited amount (see Assumption 3).

Emotional Regulation Model 3: Inconsistent and moderate adaptational value

1. People can optimize their pleasures by always taking those that are available without regard for future consequences (see Assumptions 4, 5).
2. People should optimize their own pleasures because pleasures of others will not matter or will take care of themselves (see Assumption 4).
3. People should always strive to be happy wherever possible (see Assumption 5).

Emotional Regulation Model 4: Inconsistent and low adaptational value

1. People should cause pain wherever possible (see all assumptions).

B. Happiness requires both proindividual and prosocial activity. Aristotle began with the assumption that virtue and happiness are closely related. He stated, "The happy man . . . will always or to the highest degree both do and contemplate what is in conformity with virtue . . ." (322 B.C.E., Book 1, Part 10, p.25). For Freud, a complex developmental process takes place that involves subduing instinctual desires in exchange for being mutually supported by others; in so doing, people voluntarily enter into a contract with society (Freud, 1930/1961). Although the psychological models employed by Aristotle and Freud were quite different, their conclusion was that the individual must work in cooperation with others to yield the greatest personal and social good. Contemporary research supports these positions to the extent that they have been investigated. For example, mood-regulatory research illustrates the positive effects of prosocial or altruistic behavior on mood (Salovey, Mayer, & Rosenhan, 1991). Such prosocial activity is not as common, however, when the altruistic act interferes with the helper's own mood (Forest et al., 1979). Thus, those happiness-inducing emotions that people are most likely to perform are both prosocial and proindividual.

C. Good emotional construction and regulation requires flexibility in processing. People develop theories about the best way to feel. Although a person might decide never—or always—to be emotional, such simple notions are inadequate to successful emotional self-regulation. Both Aristotle and Freud saw problems with underemotionality. Aristotle referred to individuals who lack fear as "reckless" and who lack anger as "apathetic." Freud would refer to both types as overrepressing instincts (Freud, 1915/1957).

Overemotionality is no better, however. For Aristotle, emotion-biased judgments as to how to behave override rational thought. Aristotle pointed out that "[A young man] *since he follows his emotions*, his study will be pointless and unprofitable . . ." (italics added; 322 B.C.E., Book I, Part 3, p. 6). For Freud, overemotionality was the result of the immature id under insufficient control of the ego. Aristotle believed good judgment requires the person to understand the normative emotional response in a given situation and then to deviate from it sensibly according to the needs of the circumstances. Freud echoed Aristotle, albeit working with a much different psychological model, in his view that internal personality dynamics must balance pleasure with reality; emotional reactions must therefore be modulated to fit the context. Freud and Aristotle arrived together at the conclusion that emotional reactions must be formed and regulated according to the precepts of good judgment.

Summary

There are many models for how to regulate emotion. Our Regulatory Model 1 consists of three propositions that we believe belong within a general class of intelligent ways to construct and regulate emotion. As noted before, many immediate emotional reactions are what they are because of evolutionary or biological reasons and are neither intelligent or unintelligent. But the interplay between the individual's cognitively more developed construction and regulation of emotion, on the one hand, and beliefs about emotion, on the other, can be more or less intelligent. We proposed Regulatory Model 1 in part because we believe it is already implicit (and sometimes explicit) in contemporary psychological research on emotional construction and regulation today. This

will be illustrated in the ensuing review of psychological literature.

Emotional Intelligence As Applied to Mood Construction and Regulation

Organization of the Mood Construction and Regulation Literature

Although emotion-regulatory activities occupy only a modest part of personality function as a whole, they nonetheless form too large a topic to consider all together. For this reason, we have found it useful to divide such emotional regulation into subcategories according to the levels of awareness or consciousness they involve (Mayer & Gaschke, 1988). The dimension of consciousness is important because qualitative differences emerge in emotional responses according to the amount of conscious attention available to those reactions; greater complexity and creativity of responses are possible where attention is prolonged. We have found it convenient to speak of a threefold framework of the non-, low-, and high-conscious levels of regulation.

1. The non- or unconscious construction and regulation of emotion occurs outside of conscious awareness either because it operates at a neurological level inaccessible to consciousness (Kihlstrom, 1987; 1990), because it is automatized and no longer attended to (Dollard & Miller, 1950), because it has been repressed (Freud, 1915/1957), or for other reasons (Bowers & Meichenbaum, 1984).
2. Low-level consciousness typically involves a fleeting awareness that is only attended to peripherally, unrehearsed, and unlikely to be recalled. For example, a person may deal with a pang of regret by momentarily attempting to push it out of mind (Mayer, Salovey, Gombert-Kaufman, & Blainey, 1991).
3. Higher consciousness operates at a reflective or meta-level in that it involves extended self-observation of some meaningful duration, requires attention, involves thoughts of the self, and often can be recalled. At its most sustained and complex level, such conscious experience tends to reflect back on itself (Mayer & Gaschke, 1988).

In the next section, we examine emotional construction and self-regulation at each of these three levels. Within each level, we make a further distinction between the *construction* of emotion, by which we refer to the formation and modification of the emotion before it is fully complete or felt, and the *regulation* of emotion, which involves modifying the emotion after it is felt. That is, emotions are constructed, and once experienced, they are regulated. Although the distinction between construction and regulation

is fuzzy, it will serve the organizational purpose of dividing processes that seem different into separate categories. After examining each level of self-intervention, we comment on the relation of a given intervention type to emotional intelligence.

Construction and Regulation at the Nonconscious Level

Nonconscious Construction of Emotions

We describe emotional construction at the nonconscious level only in passing because intentional regulation is so little involved in it. Parents and infants engage in emotional transactions essentially from birth (Murray & Trevarthen, 1985). It is undoubtedly the case that both physiological dispositions and early learning history affect the emotion system at this time. Emotions are often thought to be constructed at their lowest level by biologically programmed combinations of physiological experience and cognitive reactions (Buck, 1985; LeDoux, 1989; Plutchik, 1994; Thayer, 1989). These emotional reactions also involve automatic-seeming appraisals of the environment that emerge from early reinforcement history (Bandura, 1965; Parkinson & Manstead, 1992) and are therefore likely to include only the most basic cognitions. At this level, the construction of emotion is likely to involve few self-initiated regulatory cognitions and for that reason is better judged as adaptive rather than as intelligent. Nonetheless, a child who learns to love and fear the "right things" will have a headstart in such emotional processing as a result of it. Because this paper focuses on more cognitively saturated emotion and intentional forms of self-regulation, however, we turn immediately from construction to self-regulation.

Nonconscious Regulation of Emotions

Various types of nonconscious regulation of emotion also exist. Some are so biologically determined as to be of little interest in the present context. For example, opponent-process theory states that as one emotion emerges, its opposite is physiologically activated so as to prevent the original emotion from entering into a "run away" reaction (Mauro, 1988; Solomon & Corbit, 1974). But some forms of nonconscious emotion regulation may well reflect emotional intelligence. Regulatory Model 1 states that people need to exercise good judgment and context sensitivity in their emotional reactions. Because such good judgment can better be carried out if the person has access to relevant information, any psychological processes that block the flow of information may well reduce emotional intelligence. Defenses against emotion such as denial, projection, and intellectualization (A. Freud, 1966, p. 32) may impede judgment because they reduce both pain and the information about the world that accompanies it. Increased defensiveness (and concomitant closing off of information) may lead to a reduced sensitivity to others, less social understanding, and

poorer health (Weinberger, 1990, pp. 359–360). Moreover, the choice of defense may be personally controlled in at least two ways. First, certain defenses may originate as conscious strategies of better or worse quality and then become nonconscious through repetition and automatization (Dollard & Miller, 1950, Chapter XII). And second, once defenses are formed, healthy individuals may become conscious of them and attempt to weed out those that are most maladaptive (Dollard & Miller, 1950, pp. 285–320). Thus, only those defenses that preserve reality will allow people to respond emotionally in an optimal way.

A. Freud (1966) suggested a rough hierarchy of defense mechanisms consistent with cognitive complexity. According to her scheme, denial would be fairly primitive because it fails to distinguish between external and internal reality. Repression is slightly more sophisticated because it requires a sufficiently complex self to hide emotions from itself. Sublimation is more sophisticated still because it requires the person to compromise his or her (unacceptable) desires with societally condoned activities (A. Freud, 1966, pp. 51–53). Thus, more sophisticated defenses maintain better reality contact, enhancing the individual's chance of exercising good judgment concerning emotion over the long-term.

Empirical tests supportive of A. Freud's scheme come from research with two scales of defense. The first performance-based test (Gleser & Ihilevich, 1969; see also Santostefano, 1962) distinguishes among five specific defenses: *reversal*, including denial, negation, repression, reaction formation, and repression, *principalization*, including intellectualization, isolation, and rationalization, *projection*, including that defense alone, *turning against others*, including displacement and aggression against others, and *turning against the self*, which involves directing negative affect inward, sometimes with displacement. In a review of research with the scale, Cramer (1988) concluded its Reversal scale, which measures the most primitive defenses (denial/negation/etc.), appeared related to psychological immaturity including field dependence, low levels of education, and psychopathology. In contrast, the Principalization scale, which measures more sophisticated defenses (intellectualization/isolation/rationalization), correlates with more education, greater internal locus of control, and people's more accurate estimates of their own behavior.

Further evidence for a hierarchy of defense comes from a study by Bond and Vaillant (1986), who employed a self-report measure that classifies defense as *maladaptive* (worst), *image-distorting*, *self-sacrificing*, and *adaptive* (best). They found that psychiatric patients (as defined by DSM-III) tended to use the first three defenses, whereas nonpatients (and some manic depressives) relied more on adaptive defenses. Findings from both scales are consistent with the idea that more sophisticated defenses co-occur with healthier personalities in general. Such results are consistent with the idea that more sophisticated defenses leave intact the individual's capacity for better reasoned emotional regula-

tion, whereas less sophisticated defenses may interfere with such capacity.

Construction and Regulation at the Lower Conscious Level

Emotional construction and regulation also take place at a low level of consciousness at which ideas and sensations are noticed but fleeting. Mental interventions at this level are primarily ones felt as direct mental action (e.g., "pushing out thoughts," or "opening the door to feeling," etc.). The construction of emotion at this level will be treated first, followed by its regulation.

Low-level Conscious Emotion Construction

People's emotions appear to develop in complexity over time as evolutionary-based systems are influenced by social and cultural learning. There is some controversy concerning the complexity of emotions in infants. But whether the infant's feelings commence merely with the ability to feel good or bad or with some more substantial differentiation (e.g., happy, angry, afraid, and sad; Izard, 1991; Plutchik, 1980), there can be little doubt that the array of experienced emotions builds in complexity with age. Clore, Ortony, and Foss (1987) recognize hundreds of emotion terms in the adult affective lexicon. In his well-known chapter on emotion, James (1890/1980, Chapter XXV) specifically isolated what he referred to as the aesthetic emotions, which are a part of these latter more highly developed emotions. Complex cognitive emotions may regulate social activity in important ways: psychologists and ethicists have noted the existence of emotions particularly apt to disrupt social equilibrium such as envy and jealousy (Salovey & Rothman, 1991), as well as those emotions that preserve the equilibrium such as guilt, shame, and repentance (guilt expiation). These emotions heavily involve cognitive activities; Oakley (1991) has argued that without such cognitively saturated emotions, ethical behavior is impossible.

Transient self-instructions can change the construction of an emotion at a low level of consciousness. For example, when Lazarus and Alfert (1964) asked participants to view films of a painful-appearing genital surgery (part of a coming-of-age rite in another culture), they instructed one group to view the procedure "from a distance," as would an anthropologist. The group so-instructed probably felt more interest and clearly exhibited less measured anxiety. Reinforcements can also construct or limit certain emotions. Bandura's (1965) classic studies with aggression against life-size dolls indicate how aggression (and presumably anger) can be learned vicariously and/or inhibited through viewing a model. An important part of good functioning may therefore involve spending time among people who model feeling the right things.

People may also learn rules as to when emotions are appropriate to feel in a given context. For example, people plainly learn and can state the rules for when it is appropri-

ate to feel *hope*. Although people consider it morally acceptable to hope for an inheritance, for instance, they consider it unacceptable to hope for someone's death in order to obtain the inheritance (Averill, 1991). At times, however, society may encourage emotional responses in conflict with intelligent responding. Averill (1989) suggests the possibility that when a large number of mental health professionals generate public talks and articles concerning stress, some people recognize certain features of the problem in themselves, and thereby inadvertently begin constructing more such feelings until they finally comply with the professionally described syndrome. In this way, reports of negative emotionality may rise with the number of psychotherapists who speak publicly about stress. Alternatively, however, individuals may simply be being taught by professionals to recognize real responses that went unrecognized before.

Low-level Conscious Regulation of Emotion

In addition to constructing particular emotions at the lower level of awareness, people may direct their attention toward or away from emotional experience. For example, while awaiting important medical news, people can divert their attention toward or away from their fears (Miller, Brody, & Summerton, 1987). Fleeting though such redirections of attention may be, they may be central to thinking about affect, because further mental processing cannot occur without some initial attention to the problem. Our Model 1 suggests that some awareness of emotion is necessary to assist the individual in forming emotional expressions consistent with prevailing display rules and other social sanctions.

Emotional awareness can be measured in part with the Levels of Emotional Awareness Scale (LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990). The scale asks test-takers to report how story characters, and how they themselves, would feel in 20 standardized interpersonal scenes. The test-takers' response is then graded according to its emotional sophistication. Unaware-of-emotion responses involve thoughts rather than feelings (e.g., "I would probably feel I knew what I was doing."); midlevel responses include feeling words (e.g., "I'd feel happy about it"); whereas aware responses include multiple feeling words, with differentiation between oneself and other people (e.g., "I'd feel proud I won the game; my friend might feel angry . . . etc.). Higher scorers on the LEAS also exhibit higher ego development on a Parental Description Scale (Blatt, 1974) and a Sentence Completion task (Loevinger & Wessler, 1970).

Another way to measure emotional awareness is during an ongoing state. Most contemporary mood scales instruct participants to report their moods by indicating how much of each of a number of emotions, such as *happiness*, *anger*, and *sadness*, they feel. One can embed additional items in such scales that indicate attention toward moods, such as

feeling this feeling, or *blocking the feeling out*. Measures of attention versus inattention to mood that have been embedded in mood scales can increment predictions of important clinical phenomena. For example, whereas a negative mood correlates with Beck's (1967) depression inventory, negative mood plus mood inattention correlates even more highly, suggesting that a primary indicator of depression is the active attempt to avoid emotional pain (Mayer et al., 1991). Although little research has been conducted on these midlevel regulatory styles thus far, such regulation is likely to be important because it occurs so rapidly in response to a feeling that it may foreclose subsequent conscious processing.

Construction and Regulation at the Higher Conscious Level

Construction of Emotion at High Levels of Consciousness

Earlier, we noted that mid-level conscious construction of emotions can occur as people reframe their situations, or are reinforced for the experience of an emotion. The higher level of conscious emotional construction is accompanied by intentional, extended attempts to understand, define, and (possibly) enhance emotion. A great deal of such activity takes place in political, aesthetic, ethical and religious scholarship.

For example, the 1960s phenomenon of "sensitivity groups" may be conceived of as an enterprise in which participants agreed to construct new emotions among themselves to promote interpersonal and intergroup respect. Similarly, the development of serious artistic understanding can be thought of as requiring one to change feelings toward certain pieces of art by changing one's perceptual relations to them (i.e., by studying the feelings of previous critics). Emotions can be understood in a religious context as well. Soloveitchik's sermons on repentance (Peli, 1984) described in detail the manner by which a person should free him or herself from past behaviors that caused harm to the community to expiate guilt feelings. Soloveitchik's analyses carefully enumerated various levels of repentance, from the unsure feeling of the gambler who stops but retains his dice "just in case," to a deeper and more complete form of repentance. Another example is Otto's (1950) analysis of *numinousness*, a feeling related to holiness that involves a sense of oneself as a creature before the overpowering majesty of God. People who read such volumes are expected by their authors to understand such emotions as repentance and *numinousness* better, and also possibly construct and appreciate such emotions more completely at appropriate moments. Such descriptions can be thought of as constituting expert knowledge within the emotional intelligence domain.

Regulation of Emotion at a High Level of Consciousness

At a lower level of consciousness, emotional regulation is little more than deciding to attend or not attend to a feeling. Regulation becomes more interesting at a higher, more re-

flective level. Mayer and Gaschke (1988) first described this higher level as consisting of a reflective, or *meta-*, experience of emotion. At this level, the individual reflectively monitors emotions by attending to them, evaluates the qualities of the emotions, and may also attempt to regulate them. Such meta-experience is more temporally extended, more memorable, and more plastic than direct regulation. It is worth noting that most of the work at this level of consciousness concerns the regulation of mood rather than emotions (in this context, moods are viewed as longer-lasting than emotions). Mayer and Gaschke (1988) distinguished between meta-experiences that evaluate and meta-experiences that regulate mood. A number of meta-experience dimensions have been studied; we will here examine several examples (for a further comparison of scales see Mayer & Stevens, 1994).

Clarity. Dimensions of mood "Clarity" measure how clearly one understands one's mood and are found in nearly all factor analyses of meta-experience-related scales. Sample items include, "I can clearly describe my feelings" (positive loading) and "I don't know how I feel" (negative loading). Although the clarity label is used most commonly (Goldman, Kraemer, Salovey, & Mayer, 1993; Mayer & Gaschke, 1988; Salovey & Mayer, 1990; Salovey et al., 1993), the factor is also called "mood-labeling" (Swinkels & Giuliano, 1993; Taylor, Ryan, & Bagby, 1985). Clarity correlates with pleasant-unpleasant mood and as a consequence it is incumbent upon researchers to partial mood out from predictions so as to ensure its differential predictive validity. Mayer et al. (1992) found that clarity predicts more positive judgments, even after the effect of pleasant-unpleasant mood is partialled out. Several researchers have recently found that clarity predicts positive mood change after stressful experiences with pleasant-unpleasant mood partialled out (Swinkels & Giuliano, 1993; Salovey et al., 1993).

Attention. A second common factor of meta-experience is how much attention people pay to their moods. A sample item would be, "I pay a lot of attention to how I am feeling." High attention to one's moods correlates positively with private self-consciousness, depression, and neuroticism (Salovey et al., in press), over-self-consciousness and overinvolvement with mood (Swinkels & Giuliano, 1993) and more physical symptoms when feeling distress, with pleasant-unpleasant mood partialled out (Goldman et al., 1993). It is a challenge to the theory that attention is correlated negatively with mood in these studies.

Emotional ambivalence. Another interesting dimension is that of "Ambivalence" over emotional expression (King & Emmons, 1990). A sample item includes, "After I express anger at someone, it bothers me for a long time." Emotionally ambivalent individuals express greater negative emotionality on a variety of scales, as well as more psychiatric symptoms. Emotional ambiguity reflects an inability to cope properly with or accept the standard limitations of

emotions, and so might reflect lower emotional intelligence. In fact, the dimension correlates negatively with the Clarity dimension (Salovey et al., in press).

Acceptance, typicality, and influence. Additional meta-evaluative scales measure "Mood Acceptance," "Typicality," and "Influence," but because these have emerged through more recent innovations in factor analytic approaches they are as of yet less studied (see Mayer & Stevens, 1994). Mood acceptance ("It is okay to feel this way") and Typicality ("This is a typical mood for me") are both associated with the desire to maintain, rather than repair or dampen mood (see below). Interestingly, Influence ("My mood is affecting my judgment"), fails to correlate with whether a person's judgment is actually influenced by his or her mood in a mood-congruent fashion (Mayer et al., 1992). Perhaps Influence may correlate with the more noticeable disruptions of mood such as those caused by general anxiety.

Self-efficacy of regulation. A person's self-efficacy at improving negative moods is measured by such items as, "When I'm upset, I believe that I can do something to feel better" (Catanzaro & Mearns, 1990). Self-efficacy in changing negative mood has been used to predict people's ability to become happy after controlling for their levels of initial depression.

Meta-regulation of mood. Up to now, we have been discussing the meta-evaluation of mood. But researchers have also examined three meta-regulatory dimensions including "Mood Repair," "Mood-Maintenance," and "Mood Dampening" (Isen, 1984; Mayer & Stevens, 1994). Early factor analyses were only able to obtain a single Mood Repair dimension from most meta-experience scales, but more recent procedures involving multiple-domain factor analysis clearly indicate all three exist (Mayer & Stevens, 1994).

Repair correlates positively with optimism (Mayer & Stevens, 1994) and negatively with depression, suggesting that only moderately unhappy people try to raise their moods and that very depressed individuals give up doing so (Salovey et al., in press). Less is known regarding the newer Maintenance and Dampening dimensions (but see Parrott, 1993). It does appear, however, that a certain amount of clarity about one's positive mood is required before dampening it. This idea makes sense because the discrimination between appropriate and inappropriate positive feelings is likely a challenging intellectual task given that positivity tends to make most or all things look good (Mayer et al., 1992).

The application of emotional intelligence theory to the area of meta-experience raises the interesting question of which meta-experiences are best. Perhaps those experiences that are most adaptive involve better reported understanding of emotion. But this raises certain complications. The self-report of a clear mood would seem to reflect emotional intelligence—especially after positive mood is controlled for. But the self-report of clarity could be as much a func-

tion of optimism or social desirability as a clear differentiation of feeling. Perhaps clarity might even reflect an optimistic willingness to overlook nuances of one's feelings rather than a real expertise at deciphering them. An alternative possibility might involve a particular pattern of scales, such as those involving mood-acceptance coupled with high mood repair and/or mood dampening. Such a pattern would indicate that a person accepts his or her moods, but also attempts to change them where appropriate. Either clarity or a more complex profile may be related to emotional intelligence.

Other Issues Concerning Emotional Construction and Regulation

Throughout this article, we have discussed general properties of emotionally intelligent regulation without examining their more specific concrete manifestations within individual personality types or situations. It is worth noting that there is a critical individual knowledge base upon which any attempt at emotion or mood regulation relies. This includes knowledge of what makes oneself happy, angry, or sad, knowledge of which interventions change emotions and moods for oneself, and so forth. This knowledge is probably personalized to some extent. For example, an extrovert, but not necessarily an introvert, may be cheered up by socializing. A number of researchers have begun to construct a knowledge base concerning what successfully improves mood for people (reviewed by Morris & Reilly, 1987). Some important work in this area includes Lazarus and Folkman's (1984) investigations of coping styles, Larsen's (1993) survey of the outcomes of mood-regulation, and Parrott's (1993) analysis of reasons to adjust downward a positive mood.

General Discussion

At the outset of this paper, we outlined one among several possible frameworks of consistent and adaptive propositions concerning the construction and regulation of emotion. This intelligent (e.g., consistent) and adaptive model (Model 1 of Table 1) stated that: (a) happiness requires an optimization of positive feelings over the lifespan, (b) such positive feelings must be both proindividual in the sense of benefiting the individual's long-term welfare and also prosocial in the sense of assisting those people around the individual, and (c) emotional construction and regulation must be open and flexible. Regulatory Model 1 makes explicit many of the underlying rationales of the research reviewed here on the construction and regulation of emotion. Fewer defenses, greater openness, and more knowledge of emotions and their variations seem emphasized by many of the articles reviewed. Model 1 converts the heretofore implicit intuitions of such research into a more explicit group of propositions. In essence, the application of intelligence to

emotion has been present in psychological writing in this area for some time, but researchers have not always acknowledged it.

Regulatory Model 1 also has many limitations. It is stated very simplistically at present. For example, identifying feelings that are both proindividual and prosocial may be extremely complex in practice. Sometimes it will be optimal for individuals to be angry at certain aspects of their societies, and societies as a whole may benefit from such anger, yet no rules for identifying such instances are given. Similarly, the statement that emotional construction and regulation must be context-sensitive avoids a number of complex questions about how exactly one decides on what to feel in various situations. Those with contrasting social philosophies are likely to behave differently when facing particular circumstances. Working out such problems involves many questions of values, but then, emotional intelligence is in at least a limited sense a science of values.

Moreover, how is one to decide whether the tenets of Model 1 really serve as a good set of criteria to begin with? At present, consideration of mood-construction and regulation is so simplistic that the model would probably benefit from the generation of several alternatives. Some of these might come from alternative interpretations of Western thought concerning emotions; others might come from other cultures; Eastern and other views may vary considerably (Markus & Kitayama, 1991). Such alternative models could be tested against one another. For example, if different people use different models, their happiness and other equally-important outcomes could be compared.

Another approach is to employ alternative criteria being developed for the measure of emotional intelligence, that is, that do not involve emotional construction and regulation. Emotional intelligence refers not only to emotional construction and regulation, but to other aspects of emotional processing as well. Some of these other tasks include ordering emotional information optimally for its most positive impact (Salovey et al., in press), studies of emotional creativity in which people must generate productions requiring an understanding of emotion (Averill & Thomas-Knowles, 1991), studies of emotional openness, in which more open individuals better solve certain intellectual tasks (Mayer, DiPaolo, & Salovey, 1990; Mayer & Kirkpatrick, 1993), and so forth. If Model 1 is correct, then people who regulate accordingly should also better perform on other independent measures of emotional intelligence.

Implications for Clinical and Personality Psychology

In our review, we have examined component processes of mood-regulation by examining mood construction and regulation at the non-, low-, and high- (reflective) levels of consciousness. Table 2 summarizes the sort of activities that take place at each level. It is divided into three columns depicting nonconscious, low-conscious, and high-conscious regulation, moving from left-to-right. Each column lists

Table 2. *Non-, Low-, and High-Conscious Types of Intervention by Model 1's Propositions and Their Hypothesized Outcomes*

Propositions and Outcomes	Nonconscious construction and regulation	Low-level conscious construction and regulation	High-level conscious construction and regulation
Optimization of pleasure over lifetime	Modeling and non-evaluative learning from the emotional reactions of those who are able to do this.	Planning and weighing alternatives based on prior experience.	Forming conscious, considered models as to the best ways to optimize pleasures over the lifetime.
Proindividual and Prosocial activity	Unlikely to occur at this level of consciousness.	Accessing contact with one's own feelings coupled with immediate empathic awareness of the processes of others.	Sustaining conscious attempts to maximize pleasure in ways that suit both oneself and society. Development of expert knowledge of certain emotions and emotional interventions; such knowledge can be applied both to oneself and others.
Responsiveness to context	Learning on a case-by-case basis; defensiveness depends on whether emotional training is consistent with expectations of family and society.	Openly receiving onto outgoing emotional experience to allow for more sensitivity to context; case-by-case learning continues.	Observing self and others in interpersonal relations with one another; case-by-case learning continues.
Outcomes			
High emotionally intelligent construction and regulation	Biologically/environmentally adaptive with non-defensive character.	Reframes emotions, chooses good rather than poor emotional models, able to communicate and discuss feelings, general openness to others.	Develops expert knowledge of particular emotional areas, be it in aesthetic emotions, moral/ethical feeling, or spiritual/religious feeling. Development of explicit emotional knowledge of oneself and others and the interventions that may change such feelings.
Low emotionally intelligent construction and regulation	Poorly adapted emotional responses with resulting need for more defenses.	Does not reframe, and does not choose, or chooses poor emotional models; unable to attend to emotions.	Little or no expert knowledge or knowledge is inconsistent with assumptions, or is maladaptive.
Summary of positive characteristic	Emotionally oriented: Oriented emotionally to an adaptive framework of emotional reactions and therefore requiring little defensiveness.	Emotionally involved: Openness and willingness to intervene in the construction of emotions by framing the situation to encourage those emotions that are adaptive or consistent with one's outlook on emotional responding.	Emotionally expert: Involves expert knowledge about both emotions and their regulation.

the construction and regulation of emotion possible at that level, roughly arranged according to the three tenets of Model 1. The bottom portion of Table 2, labeled, "Outcomes" contains a description of the possible outcomes of that given level of regulatory activity. Activities at each level of construction and regulation can be summarized roughly by discussing a sort of thematic or trait-like personality component in each case. These themes may characterize a given type of emotionally intelligent functioning that synthesizes portions of the underlying systems of cognition and emotion (Mayer, in press). These three themes are "emotional oriented" at the unconscious level, "emotionally involved" at the lower conscious level, and "emotionally expert" at the reflective level.

For example, an emotionally oriented style which emerges at the nonconscious level and refers to the person's reactive orientation within a given adaptive framework of emotional responsivity. Such people possess good nonconscious construction and regulation of emotion, and have adequately learned socially acceptable emotional responding. A person who is oriented within a socially acceptable framework probably develops a low need for defensiveness. In regulatory terms they are often labeled as nondefensive or open, as opposed to being defensive.

The second theme, which is under more voluntary control, might be called emotional involvement. Emotional involvement includes a person's openness and willingness to frame situations so as to encourage in themselves those

emotions consistent with their outlook on emotional responding. The low-level conscious construction of emotion also may lead people to form proindividual and prosocial emotions for most situations. These individuals are typically viewed as healthy and empathic. Regulatory involvement at this minimally conscious level is considered open, flexible, and aware (i.e., of feelings).

The third theme, which corresponds to the highest level of awareness, could perhaps be called emotional expertise because it involves both expert knowledge about particular emotions and also about the degree and manner by which they can be regulated. Here are found people who consciously develop their emotions so as to respond with aesthetic, ethical, or religious feelings. Regulators at this reflective level tend to be self-observing and circumspect.

Let us assume that each of these three regulatory themes is somewhat independent of the other. Then, a given person might possess one or more of these themes but not others. For example, a depressed person might report constantly attending to his or her depression and attempting to look on the bright side of things, but with little relief. Individuals such as this might be emotionally expert but suffer from a deficit at the level of emotional orientation. That is to say, although such individuals may be able to intervene to construct more positive emotions, working against them is the fact that their early biological/learning history may have predisposed them to automatic depressive cognition. Such individuals are essentially regulating at the wrong level and may need to alter various automatized defense patterns learned long ago.

By way of comparison, other types of people may have generally good emotional orientation. These people may feel and act healthy and normal under most life circumstances as long as these circumstances are consistent with the learning environment in which the person was brought up. As a result, however, individuals may not have developed much emotional involvement or emotional expertise. Such individuals, although often without problems, may find it more difficult to adjust to people or cultures employing different emotional models than themselves, or to novel, potentially troubling emotional events.

The present scheme can enable a therapist to point out a discrepancy in regulatory levels at which an insightful client

is operating. For example, the depressed person described above may possess a lot of emotional expertise—and as a result obsess over the depression when there really is a problem at the level of emotional orientation. By recognizing such cross-level distinctions, the therapist and client can together negotiate a solution by working at more than one level of regulation at once. Once enlisting the patient's involvement through a clear statement of the problem, it may be possible to prescribe treatments or assignments to the patient that will assist emotional construction and regulation at the correct level of experience. As psychologists build their knowledge base concerning emotional construction and regulation at each level, it may be possible to prescribe increasingly potent methods to assist people with their emotional difficulties.

Conclusion

We have argued in this article that it makes sense to apply the concept of intelligence to emotion. Although basic emotion is often spoken of in terms of adaptation, more cognitively saturated emotion and emotional regulation may be evaluated in terms of intelligence. In the latter case it makes sense to ask whether such emotions and regulatory activities are consistent with regulatory assumptions and frameworks constructed by the person. We introduced a regulatory model that we argued may be one of many that is both intelligent and adaptive.

A fair amount of psychological research was reviewed that can be conceptualized according to our intelligent and adaptive model. We suggested three themes as summaries of the sorts of qualities people possess relative to the non-, lower, or upper conscious level of emotional construction and regulation they typically carry out. Corresponding to the unconscious level was a concept we termed emotional orientation, which refers to the person's basic adaptational learning of emotion. Corresponding to the low level of conscious emotionality was a concept we termed emotional involvement, which refers to an openness to emotion and skillfulness at framing situations so that the right emotions emerge. Corresponding to the higher level of consciousness was a concept we termed emotional expertise, which refers to expert knowledge about feelings and their regulation.

REFERENCES

- Aristotle (c. 322 B.C.E./1962). *Nicomachian ethics*. New York: Bobbs-Merrill.
- Averill, J. (1989). Stress as fact and artifact: An inquiry into the social origins and functions of some stress reactions. In C. D. Spielberger, I. G. Sarason, & J. Strelau (Eds.), *Stress and Anxiety* (Vol. 12, pp. 15–38). New York: Hemisphere.
- Averill, J. (1991). Intellectual emotions. In C. D. Spielberger, I. G. Sarason, Z. Kulcsar, & G. L. Van Heck (Eds.), *Stress and anxiety* (Vol. 14, pp. 3–16). Washington, DC: Hemisphere.
- Averill, J. R., & Thomas-Knowles, C. (1991). Emotional creativity. In K. T. Strongman (Ed.), *International review of studies on emotion* (Vol. 1, pp. 269–299). London: Wiley.
- Bandura, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology*, 1, 589–595.
- Beck, A. T. (1967). *Depression: Causes and treatment*. Philadelphia, PA: University of Pennsylvania Press.
- Blatt, S. J. (1974). Levels of object representation in anaclitic and

- introjective depression. *Psychoanalytic Study of the Child*, 29, 107–157.
- Bond, M. P., & Vaillant, J. S. (1986). An empirical study of the relationship between diagnosis and defense style. *Archives of General Psychiatry*, 43, 285–288.
- Bowers, K. S., & Meichenbaum, D. (1984). *The unconscious reconsidered*. New York: Wiley.
- Buck, R. (1985). Prime theory: An integrated view of motivation and emotion. *Psychological Review*, 92, 389–413.
- Catanzaro, S. J., & Mearns, J. (1990). Measuring generalized expectancies for negative mood regulation: Initial scale development and implications. *Journal of Personality Assessment*, 54, 546–563.
- Clore, G. L., Ortony, A., & Foss, M. A. (1987). The psychological foundations of the affective lexicon. *Journal of Personality and Social Psychology*, 53, 751–766.
- Cramer, P. (1988). The Defense Mechanism Inventory: A review of research and discussion of the scales. *Journal of Personality Assessment*, 52, 142–164.
- Dollard, J., & Miller, N. E. (1950). *Personality and psychotherapy*. New York: McGraw Hill.
- Forest, D., Clark, M. S., Mills, J., & Isen, A. M. (1979). Helping as a function of feeling state and nature of the helping behavior. *Motivation and Emotion*, 3, 161–169.
- Freud, A. (1966). *The ego and the mechanisms of defense*. Madison, WI: International Universities Press, Inc.
- Freud, S. (1920/1950). *Beyond the pleasure principle*. (E. Jones, Ed.; J. Strachey, Trans.) New York: Liveright.
- Freud, S. (1915/1957). Repression. *The Standard Edition (Vol 14)*. London: Hogarth.
- Freud, S. (1930/1961). *Civilization and its discontents*. (J. Strachey, Ed.) New York: W.W. Norton.
- Frijda, N. H. (1986). *The emotions*. Cambridge: Cambridge University Press.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
- Gleser, G. C., & Ihlevich, D. (1969). An objective instrument for measuring defense mechanisms. *Journal of Consulting and Clinical Psychology*, 33, 51–60.
- Goldman, S. L., Kraemer, D. T., Salovey, P., & Mayer, J. D. (1993). *Trait meta-mood moderates the relation of stress to illness and symptom reporting*. Manuscript submitted for publication.
- Isen, A. (1984). Toward understanding the role of affect in cognition. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (pp. 179–236). Hillsdale, NJ: Erlbaum.
- Izard, C. E. (1991). *The psychology of emotions*. New York: Plenum Press.
- James, W. (1890/1980). *The principles of psychology*. Cambridge: Harvard University Press.
- Kihlstrom, J. F. (1987). The cognitive unconscious. *Science*, 237, 1445–1452.
- Kihlstrom, J. F. (1990). The psychological unconscious. In L. A. Pervin (Ed.), *Handbook of personality: Theory & Research* (pp. 445–464). New York: Guilford Press.
- King, L. A., & Emmons, R. A. (1990). Conflict over emotional expression: Psychological and physical correlates. *Journal of Personality and Social Psychology*, 58, 864–877.
- Lane, R. D., Quinlan, D. M., Schwartz, G. E., Walker, P. A., & Zeitlin, S. B. (1990). The levels of emotional awareness scale: A cognitive-developmental measure of emotion. *Journal of Personality Assessment*, 55, 124–134.
- Larsen, R. J. (1993, August). Mood regulation in everyday life. In D. M. Tice, *Self-regulation of mood and emotion*. Symposium presented at the 101st Annual Convention of the American Psychological Association. Toronto, Ontario.
- Lazarus, R. S., & Alfert, E. (1964). Short circuiting of threat by experimentally altering cognitive appraisal. *Journal of Abnormal and Social Psychology*, 69, 195–205.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- LeDoux, J. E. (1989). Cognitive-emotional interactions in the brain. *Cognition and Emotion*, 3, 267–389.
- Loevinger, J., & Wessler, R. (1970). *Measuring ego development. Vol. 1: Construction and use of a sentence completion test*. San Francisco: Jossey-Bass.
- Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- Mauro, R. (1988). Opponent processes in human emotion? An experimental investigation of hedonic contrast and affective interactions. *Motivation and Emotion*, 12, 333–351.
- Mayer, J. D. (in press). A framework for the organization of the components of personality. *Journal of Personality*.
- Mayer, J. D., DiPaolo, M., & Salovey, P. (1990). Perceiving the affective content in ambiguous visual stimuli: A component of Emotional Intelligence. *Journal of Personality Assessment*, 50, 772–781.
- Mayer, J. D., & Gaschke, Y. N. (1988). The experience and meta-experience of mood. *Journal of Personality and Social Psychology*, 55, 102–111.
- Mayer, J. D., Gaschke, Y. N., Braverman, D. L., & Evans, T. W. (1992). Mood-congruent judgment is a general effect. *Journal of Personality and Social Psychology*, 63, 119–132.
- Mayer, J. D., & Kirkpatrick, M. (1993). Emotional openness and the processing of information. Manuscript submitted for publication.
- Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, 17, 433–442.
- Mayer, J. D., Salovey, P., Gombert-Kaufman, S., & Blainey, K. (1991). A broader conception of mood experience. *Journal of Personality and Social Psychology*, 60, 100–111.
- Mayer, J. D., & Steven, A. A. (1994). An emerging understanding of the reflective (meta-) experience of mood. *Journal of Research in Personality*, 28, 351–373.
- Miller, S. M., Brody, D. S., & Summerton, J. (1987). Styles of coping with threat: Implications for health. *Journal of Personality and Social Psychology*, 54, 142–148.
- Mischel, W. (1974). Processes in delay of gratification. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7). New York: Academic Press.
- Morris, W. N. (1992). A functional analysis of the role of mood in affective systems. *Review of Personality and Social Psychology*, 13, 256–293.
- Morris, W. N. & Reilly, N. P. (1987). Toward the self-regulation of mood: Theory and research. *Motivation and Emotion*, 11, 215–249.
- Murray, L., & Trevarthen, C. (1985). Emotional regulation of interactions between two-month-olds and their mothers. In T. M. Field & N. A. Fox (Eds.), *Social perception in infants*. Norwood, NJ: Ablex.
- Nannis, E. D. (1988). Cognitive-developmental differences in

- emotional understanding. In E. D. Nannis, & P. A. Cowan (Eds.), *Developmental psychopathology and its treatment* (pp. 31–49). San Francisco: Jossey-Bass.
- Oakley, J. (1991). *Morality and the emotions*. London: Routledge.
- Otto, R. (1950). *The idea of the holy* (2nd ed.). Oxford: New York.
- Parkinson, B., & Manstead, A. S. R. (1992). Appraisal as a cause of emotion. *Review of Personality and Social Psychology*, 13, 122–149.
- Parrott, W. G. (1993). Beyond hedonism: Motives for inhibiting good moods and for maintaining bad moods. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 278–305). Englewood Cliffs, NJ: Prentice Hall.
- Peli, P. (1984). *Soloveitchik on repentance*. New York: Paulist Press.
- Plutchik, R. (1980). *Emotion: A psychoevolutionary synthesis*. New York: Harper & Row.
- Plutchik, R. (1994). *The psychobiology of emotions*. New York: Harper Collins.
- Pruyser, P. W. (1968). *A dynamic psychology of religion*. New York: Harper & Row.
- Salovey, P., Hsee, C. K., & Mayer, J. D. (1993). Emotional intelligence and the self-regulation of affect. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 258–277). Englewood Cliffs, NJ: Prentice-Hall.
- Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, & Personality*, 9, 185–211.
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (in press). *Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale*. In J. Pennebaker (Ed.) *Emotion, disclosure, and health*. Washington, DC: American Psychological Association.
- Salovey, P., Mayer, J. D., & Rosenhan, D. L. (1991). Mood and helping: Mood as a motivator of helping and helping as a regulator of mood. *Review of Personality and Social Psychology*, 12, 215–237.
- Salovey, P., & Rothman, A. J. (1991). Envy and jealousy: Self and society. In P. Salovey (Ed.), *The psychology of jealousy and envy* (pp. 271–286). New York: Guilford Press.
- Salvia, J., & Ysseldyke, J. E. (1991). *Assessment* (5th ed.). Boston: Houghton Mifflin.
- Santostefano, S. (1962). Performance testing of personality. *Merrill-Palmer Quarterly*, 8, 83–97.
- Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & E. M. Sorrentino (Eds.), *Handbook of Motivation and Cognition* (Vol. 2, pp. 527–561). New York: Guilford Press.
- Soederberg, L. M. (1993). *Differences between experts and novices in the domain of emotions*. Unpublished master's project, University of New Hampshire, Durham, NH. (Also available as submitted manuscript).
- Solomon, R. J., & Corbit, J. D. (1974). An opponent-process theory of motivation: I. Temporal dynamics of affect. *Psychological Review*, 81, 119–145.
- Swinkels, A., & Giuliano, T. A. (in press). The measurement and conceptualization of mood awareness: Attention directed toward one's mood states. *Personality and Social Psychology Bulletin*.
- Taylor, G. J., Ryan, D., & Bagby, R. M. (1985). Toward the development of a new self-report alexithymia scale. *Psychotherapy and psychosomatics*, 44, 191–199.
- Thayer, R. E. (1989). *The biopsychology of mood and emotion*. New York: Oxford University Press.
- Weinberger, D. A. (1990). The construct validity of the repressive coping style. In J. L. Singer (Ed.), *Repression and dissociation: Implications for personality theory, psychopathology, and health* (pp. 337–386). Chicago: University of Chicago Press.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35, 151–175.