CHAPTER 19

Intelligent Emotion Regulation

IS KNOWLEDGE POWER?

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John worked overtime on the advertising proposal for his firm's latest client and finally went home at 11:30 P.M., tired but satisfied. The next day, Nick, the senior consultant, started the meeting by presenting John's ideas as his own. John felt the blood rush to his face, trembled, and had a strong urge to shout. But his boss was sitting at the end of the table, and an important client was in the room as well. John did not yell. He sat quietly, and waited for the presentation to finish. He decided to talk with Nick about the situation later.

Most people would probably agree that several skills are necessary for managing and regulating emotional life, and that individuals differ markedly in their proficiency with this skill set. In our opening example, John's decision not to yell was rooted in skills that allowed him to understand his reaction quickly and efficiently and to know how his expressive behavior would be judged by others. Within the blink of an eye, John had to perceive his reaction as an emotional state (perhaps he perceived it as anger, or fear), anticipate how others might judge his reaction, know what to do to adjust his expressive behavior, and execute the chosen course of action (in our example, to inhibit the impulse to yell in favor of meeting some other goal). Because John appeared to master the situation consistently with his goal, we would say that he regulated his emotional episode in an "emotionally intelligent" manner (Salovey & Mayer, 1990).

In this chapter, we use the emotional intelligence (EI) framework originally proposed by Salovey and Mayer (1990; modified by Mayer & Salovey, 1997) to stimulate a discussion of the processes that allowed John to regulate his emotional response effectively. In doing so, we demonstrate that EI provides fertile scientific grounds for understanding how people shape their emotional episodes to a specific situation, for a desired purpose, within a particular context.

EMOTIONAL INTELLIGENCE

Salovey and Mayer (1990; Mayer & Salovey, 1997) proposed the concept of emotional intelligence as an interrelated set of skills that allow an individual to perceive, understand, use, and regulate emotional episodes in an efficient and adaptive manner, thereby allowing effective dealings with the environment. They defined EI to include four major skill sets or "branches" that are related to functionally effective behaviors in young adults (Brackett, Mayer, & Warner, 2004), the quality of social interactions (Lopes et al., 2004; Lopes, Salovey, Côté, & Beers, 2005), perceived quality of social relationships (Lopes, Salovey, & Straus, 2003), and job-related variables such as leadership potential (Lopes, Grewal, Kadis, Gall, & Salovey, in press).

First, EI involves accurately perceiving emotional episodes in others and in the self (*Branch 1: Perception of Emotion*). Most people automatically and effortlessly perceive emotional episodes in others by viewing a set of facial behaviors, vocal cues, or bodily movements (e.g., Ekman & Friesen, 1975; Johnstone, Van Reekum, & Scherer, 2001; Nowicki & Mitchell, 1998). However, there are also strong individual differences in the ability to infer emotional cues from the face and the voice (Baum & Nowicki, 1998; Nowicki & Duke, 1994; Petti, Voelker, Shore, & Hayman-Abello, 2003). Furthermore, people vary widely in the precision or granularity (complexity) with which they automatically and effortlessly perceive their own experience of emotion (Barrett, 1998, 2004; Feldman, 1995).

Second, EI involves using emotion-related information to facilitate thought and make better decisions (*Branch 2: Using Emotion to Facilitate Thought*). This set of skills involves the ability to use emotional information to focus attention on important information in the environment (e.g., Mandler, 1984), resolve control dilemmas (Gray, Schaefer, Braver, & Most, 2005), guide momentary judgments (Clore & Parrott, 1991; Damasio, 1994; Schwarz, 1990; Schwarz & Clore, 1983, 1996), and predict future behavior and outcomes (e.g., Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). Some people appear better able to harness the mental sets generated by different emotional experiences and use them to focus on various kinds of problems, such as inductive or deductive reasoning (Isen, 1987; Schwarz, 1990; Palfai & Salovey, 1993).

Third, EI involves the capacity to understand what emotions are and how they work (*Branch 3: Understanding Emotion or Emotion Knowledge*). This encompasses language and propositional thought and reflects the capacity to analyze emotions, appreciate their probable trends over time, and understand their outcomes (e.g., Frijda, 1988; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990; Roseman, 1984). It includes a broad understanding of the emotional lexicon (e.g., Barrett, 2004) and draws on conceptual knowledge about emotion (Barrett, 2006). This branch is strongly influenced by development and is therefore expected to progress with age and experience (Lewis, 2000).

Finally, EI involves efficient emotion regulation in both self and others (*Branch 4: Managing Emotion*). It includes the ability to maintain awareness of emotion-related events, even when they are unpleasant, as well as the ability to solve emotion-laden problems in the most effective manner possible. Although the emotional management branch refers to two domains of skill, managing emotions in the self and managing emotions in other people, research has focused mainly on how individual variation in managing one's own emotional episodes produces better interpersonal outcomes.

The fourth branch of EI, managing emotion, most obviously demonstrates a link between emotionally intelligent skill sets and effective emotion regulation. In John's

case, this may mean that he has the ability to inhibit his desire to yell and to control his trembling. Yet to be truly effective, John must have other skills available to him. For example, John's emotion regulation would be facilitated by his ability to perceive and give meaning to his own reaction quickly and effortlessly (Branch 1). In addition, he apparently believed that yelling in front of his boss and the client would not be appropriate, knew that he could control this affective behavior, and planned on talking to Nick at a later time to resolve the problem that triggered his affective response. As a result, the skills associated with understanding emotion (Branch 3) and knowing what behaviors are most appropriate for a chosen goal or situation (Branch 2), as well as actually having the skills to manage the emotions as planned (Branch 4), are all evident in our example. In other words, an individual must tap into his or her skills within all four branches of EI to generate emotion regulation strategies that will allow him or her to adapt to the diverse challenges of the social world in an emotionally intelligent manner.

Although skills from all four branches of EI are important, it may be that skills for understanding emotion (Branch 3) are at the heart of intelligent regulation, influencing the other branches and acting as the driving force. In particular, individual differences in the knowledge of emotion expressions and emotion situations are related to positive social behaviors such as empathy, prosocial behaviors, and peer status in children (for a review, see Denham, 1998). In addition, there appears to be a reciprocal relationship between social competence and specific verbal skills (McCabe & Meller, 2004). For example, labeling of emotional expressions at ages 3 and 4 predicts aggressive behavior in subsequent years (Denham et al., 2002). Yet, correlations between emotion knowledge and cognitive ability are moderate, suggesting that factors other than cognitive ability play a role in explaining individual differences in children's emotion knowledge (Bennett, Bandersky, & Lewis, 2005). Beyond the normal developmental maturation of emotion knowledge there are individual differences that are acquired though childhood and influence emotion regulation in adulthood (Saarni, 1999). This understudied link between emotion knowledge (Branch 3) and emotion regulation (Branch 4) is the major focus of this chapter.

EMOTION KNOWLEDGE AND EMOTION REGULATION

When is a particular emotion regulation behavior "intelligent" and how can emotion knowledge help individuals to use more intelligent emotion regulation strategies? First, we need to consider how individuals acquire emotion knowledge and what this emotion knowledge entails. As defined by Gross and Thompson (this volume), an emotion can be understood as some combination of physiological activation, facial and vocal expressions, and actions that individuals try to understand. Typically, children first learn to identify and appreciate basic emotion categories such as *anger, fear,* and *happiness,* and they acquire these categories in an incremental sequence (Widen & Russell, 2003). Part of what a child learns to do is identify facial cues associated with these basic emotion categories and retrieve verbal labels in memory associated with the facial behaviors (Russell & Widen, 2002a, 2002b; Widen & Russell, 2004). Emotion situation knowledge allows a child to infer and anticipate emotions of others and of the self from social cues (Ackermann & Izard, 2004). However, although many adults categorize their feeling-state, or the state of someone else, as belonging to one or more specific categories, such

as *fear, anger, sadness,* many other types of descriptions and labels are also used (Scherer, Wranik, Sangsue, Tran, & Scherer, 2004). Indeed, adults have rich and complex affective lives, and emotion vocabulary and conceptual knowledge about emotion in most languages and cultures mirrors this complexity (Averill, 1975; Wierzbicka, 2005).

Acquiring Emotion Knowledge

One way to understand the variety and depth of emotion language and related emotion knowledge is to consider how abstract knowledge is stored and processed. For example, Barsalou (1999) suggests that the conceptual system is strongly linked to perception and that knowledge about abstract concepts (such as concepts for emotion) is stored as perceptual symbols. These perceptual symbols are dynamic and changeable (not fixed), componential (not holistic) and need not represent prototypical exemplars (such as a single prototypical instance of anger). Moreover, the symbol formation process to acquire complex emotion knowledge is multimodal, including all sensory modalities as well as proprioception and interoception.

More specifically, individuals acquire knowledge about a concept such as anger from at least three sources (Barsalou, 1999; Mandler, 1975). First, anger involves a series of evaluations or appraisals of the situation. Second, anger involves a set of physiological sensations that are perceived to some degree (e.g., heart racing and tenseness). Finally, anger often involves behavioral responses and action tendencies (Frijda, 1986). Each time an adult labels a child's behavior with an emotion term, or a child observes the emotion term being used to label someone else's behavior, the child extracts information about that instance, including the psychological situation and interoceptive environment in which the label was used, the behavioral responses that correspond to the label in that context, as well as the regulation strategies that worked and those that did not. All this new information is integrated with past information associated with the same category that is stored in memory. In addition, because emotions are dynamic processes involving numerous sensorimotor components (e.g., physiological activation and facial and vocal behaviors), the child acquires a host of exemplars of what different emotions "feel like" and "look like" and stores these as fuzzy categories. Whether these categories are linked to core affect (Russell, 2003), to core themes (Lazarus, 1991), or to particular underlying appraisal processes (Scherer 2001; Smith & Ellsworth, 1985) is still a matter of debate and warrants further examination.

In this way, multisensory perception and conceptual knowledge about emotions are closely interrelated. As a result, conceptual knowledge influences the way the emotional world is perceived. Conceptual knowledge shapes perception for colors (Roberson, Davies, & Davidoff, 2000) and people (Gilbert, 1998); it seems reasonable that it also helps shape emotion perception (Barrett, 2006). To date, most of the empirical evidence suggesting this relationship comes from face perception. For example, supplying individuals with verbal information about faces improves facial recognition, and learning to group faces into separate categories improves discrimination of different facial expressions (Gauthier, James, Curby, & Tarr, 2003). Furthermore, interfering with the processing of emotion words interferes with emotion perception (Lindquist, Barrett, Bliss-Moreau, & Russell, 2006). Thus, individuals with complex emotion knowledge will perceive and adapt to a variety of emotional signals or feelings and will probably generate more suitable plans for regulation, whereas those with less complex knowledge may be comparatively limited.

Although children's ability to distinguish between abstract perceptual cues increases with their linguistic development (Yoshida & Smith, 2005), the influence of conceptual emotion knowledge on emotion regulation is probably not limited to lexical ability. Recent research suggests that using an action-related concept (such as an emotion concept) may be separate from naming that concept (Tranel, Kemmerer, Adolphs, Damasio, & Damasio, 2003). Thus, John may "know" not to let his anger show in front of his boss but may not be able to describe the emotion he experienced or why he behaved in a particular way. This is consistent with the research on visual processing which has identified separate processing streams for conscious perception (the ventral stream) and action (the dorsal stream; Faw, 2004). Given that multisensory pathways are involved in conceptual knowledge formation, regulation action tendencies are probably stored as complicated "if . . . then . . . " rule packets, much like the rules described in the area of personality by Mischel and his colleagues (e.g., Mischel, 2004; Mischel & Shoda, 1995). These "rules" will influence emotional behaviors just as primed category knowledge can influence behaviors and actions outside conscious awareness. For example, when the concept "old" is activated, college-age participants walk slower, and when the concept "African American" is activated, European American participants act more aggressively (Bargh, Chen, & Burrows, 1996). Thus, when "injustice" is activated, the concept anger may be activated. When the concept "anger" is activated, specific action tendencies may automatically follow under different situational or contextual cues unless the individual has elaborate emotion knowledge structures that can react quickly to changes and modify behaviors accordingly.

Components of Emotion Knowledge

Knowledge is stored as components and not as holistic exemplars (Barsalou, 1999). Thus, complexity of emotion knowledge can be assessed by examining the underlying components, such as cognitive appraisal processes. A cognitive appraisal perspective suggests that the way a particular individual will interpret a specific event will influence and reflect the experience of emotion (e.g., Arnold, 1960; Frijda, 1986; Lazarus, 1968; Roseman, 1991; Scherer, 1984, 2001; Smith & Ellsworth, 1985). In particular, appraisals reflect the conceptual knowledge (both conscious and unconscious) an individual has about the self, the context, and emotions in general, and at the self-reported level, they reflect the explicit knowledge he or she is willing or able to report. For example, appraisals reflect which situations and events an individual considers to be personally relevant, based on current goals and motivations, or personality factors (Smith & Pope, 1992), beliefs about who (self or other) caused a specific event (Weiner, 1986), and how much control one has to do something to change the event (Lazarus & Folkman, 1984). Evaluations also reflect the relative weight an individual places on personal and cultural norms within specific contexts (Scherer, 2001). These subjective evaluations are thought to occur very rapidly, at conscious and unconscious levels, and can essentially lead to as many different affective experiences as there are combinations of cognitive appraisal outcomes (Ellsworth & Scherer, 2003; for a detailed account of appraisal theory, see Scherer, Schorr, & Johnstone, 2001). It is also widely held that there are distinct relations between certain configurations of evaluations and specific emotion categories. For example, fear/anxiety is thought to be associated with evaluating the situation as threatening; sadness with helplessness in an undesirable situation where there is little or no hope of improvement; anger with blaming someone else for an undesirable situation; and guilt with blaming oneself (Smith & Lazarus, 1993).

Emotion Knowledge Influences Regulation

A better understanding of how appraisals fit into the overall conceptual emotion system would be helpful in understanding the role that emotion knowledge plays in successful emotion regulation. Indeed, adults within a given culture, and between cultures to a certain extent, share fundamental agreements in content and structure of their emotions (Russell & Fehr, 1994; Scherer, 1997; Scherer & Wallbott, 1994; Shweder, 1993; cf. Barrett, 2006). Measuring the extent to which people know these prototypes may be, in and of itself, an aptitude that constitutes an important cultural competence that may predict intelligent emotion regulation. However, there are also individual differences and levels of complexity that underlie an emotion concept such as *anger*, and one should not assume that the use of similar terms, evaluations, or expressions reflects similar experiences or rules about their management.

Wranik (2005; Wranik & Scherer, 2006) examined cognitive appraisals and emotion labels in a stressful interactive task. Although anger was a frequently reported emotion, the responses on the appraisal questions indicated that participants were reporting at least two distinct forms of anger—anger at the self and anger at the collaborative partner. Because anger is usually considered to be an other-directed emotion (Averill, 1982; Lazarus, 1991), the emotion label "anger" could easily lead to the erroneous conclusion that those reporting anger in this situation are angry with the interaction partner.

Knowledge of both emotion categories and associated appraisal processes therefore provides a richer understanding of the emotional experience, which should in turn influence which regulation strategies are considered appropriate in a particular situation. For example, if an individual is angry with a colleague, the most effective emotion regulation strategy may be to question why he or she is blaming this person for a particular action and then to focus regulation energy on acquiring additional information. In our example, John realized that the relationships with his boss and the client were important, and that the situation merited careful examination before jumping to conclusions. However, if an individual is angry at the self for mistakes found in an important proposal, then the most effective strategy may be to focus regulation energy on correcting these mistakes and devising strategies to avoid similar mistakes in the future. In other words, intelligent emotion regulation will be related to underlying appraisal processes, conceptual knowledge about specific evaluations and emotions, and the functional utility of different regulation strategies for personal and social goals. If individuals have a less elaborate knowledge system, they may find themselves resorting to simple rules such as "if I feel angry . . . then I suppress all expression of this emotion when I am in public."

More generally, knowledge about emotion, shaped by prior experiences and culture, will influence how emotional episodes unfold. For example, John apparently comes from an individualistic society (such as the United States or Western Europe), where people expect to receive personal credit for hard work. John's emotional reaction therefore reflects both the evaluation that Nick has violated an important norm (taking credit for someone else's work) and the assumption that Nick shares the same values and therefore should have known better than to take credit for his work. We can therefore imagine that John evaluated Nick's behavior as goal obstructive, unjust, and intentional (Averill, 1982; Lazarus, 1991), and that he categorized the psychological event as anger. Most likely, many of us who share John's cultural heritage would also categorize the emotional episode as anger and applaud his ability to inhibit the urge to yell in this

particular situation. But what if this situation had taken place in a culture in which individual achievement is less important and where senior partners always present the ideas of their younger colleagues to clients? In this cultural context, John's angry feeling would probably be considered narcissistic and unnecessary and not as emotionally intelligent. Moreover, if he is aware of these cultural norms, John probably would not expect credit for his work, would evaluate Nick's behavior as normal and nonrelevant, and may experience no emotion at all. Or else, John might be proud that his idea was being presented to the client.

Now imagine that John has just started working in East Asia, and that our opening example reflects John's first client meeting in a new environment. Emotion knowledge skills will help determine if John "intelligently" perceives, understands, and regulates his emotion in at least three ways. First, if John correctly perceives that he is having an emotional episode in response to Nick's behavior, then he can consider strategies to minimize the overt physical behaviors until he has decided on a plan of action. Second, if John knows that emotional episodes are generated from his perception and meaning analysis of a particular situation, then he can quickly question if he correctly perceived and evaluated the event and search for missing clues and alternative explanations. Third, the more complex his emotion knowledge, the more alternative explanations he can generate and the more likely he will be able to question his perception and evaluation of emotional events in the future. Of course, most individuals are not aware of their conceptual knowledge about emotion until forced to acknowledge or modify it (e.g., when living or traveling in a country where emotion rules and feeling rules are different, or in therapy). These processes may therefore be relatively unconscious and, if they function, will not be questioned. However, the more complex John's knowledge of emotion, the more likely he can rapidly adjust perception and ensuing interpretation of events to accommodate a variety of novel situations.

Expanding the Process Model of Emotion Regulation

Examining how this conceptual knowledge of emotion influences emotional responding expands Gross's (1998) process model of emotion regulation. There is now considerable evidence to suggest that antecedent strategies provide more effective regulation outcomes than response-focused strategies. Suppression (as a response-focused strategy) decreases positive emotion experience, impairs memory for social information, and compromises social functioning, whereas reappraisal (as an antecedent-focused strategy) has none of these effects (John & Gross, 2004). Furthermore, there are general and systematic differences in the chronic use of antecedent-focused strategies for emotion regulation (Gross & John, 2003). Individuals using cognitive reappraisal strategies are more "intelligent" regulators than suppressors in the situations examined. As a next step, it could be useful to understand how successful reappraisers wield emotion knowledge during emotion perception and regulation.

Although much of the empirical work is yet to be done, there is general support for the idea that elaborate knowledge about emotion is related to better emotion regulation in adults. For example, a series of studies by Philippot and his colleagues (Philippot, Baeyens, Douilliez, & Francart, 2004) suggests that processing emotional information at a general level results in more intense emotional feelings and arousal than does elaborating it on a specific level, and that voluntarily focusing on specific personal emotional information induces less emotional arousal than does thinking about the same information at a general level. In other words, more specific and targeted

knowledge positively influences both the generation and regulation of emotion. Similarly, there is evidence that participants with greater ability to differentiate between negative emotional states report a wider range of regulation strategies (Barrett, Gross, Christensen, & Benvenuto, 2001).

More recently, two experience-sampling studies have indicated that representing negative emotion episodes in a highly differentiated manner facilitated targeted emotion regulation (using a set of emotion regulation strategies consistently), whereas representing positive emotion episodes in a highly differentiated manner facilitated exploratory emotion regulation (using emotion regulation strategies variably) (Tugade, Barrett, & Gross, 2006). These findings suggest that the way individuals represent their emotions shapes the way they regulate them. Finally, sophisticated conceptual knowledge of emotions is related to social adaptation. In particular, individuals who describe themselves as having higher emotional complexity, defined as having emotional experiences that are broad in range and well differentiated, are more attentive to their feelings, are more open to new experiences, are more emphatic toward others, and show greater interpersonal adaptability (Kang & Shaver, 2004).

Practical Implications

If more complex conceptual knowledge of emotion leads to a broader repertoire of regulation strategies, then this also has consequences for training and therapeutic intervention. For example, interventions could teach individuals about social norms related to specific emotion categories as well as educate them concerning the underlying evaluations and the impact these may be having on their emotional lives and regulation efforts. In particular, stable individual differences can influence perception and interpretation of events in a relatively consistent manner and may explain why some people generally experience emotions more frequently or intensely, or experience certain types of emotions under specific conditions (Van Reekum & Scherer, 1997). For example, an impatient person chronically may overestimate the urgency of situations, or a perfectionistic individual the importance of particular events. In both cases, these individuals may be faced with many more opportunities to experience emotions that they will then have to regulate effectively. The more elaborate the knowledge about emotion categories and underlying appraisal processes, the more likely the individual will learn to quickly reappraise a situation on specific evaluative criteria before an emotion episode becomes problematic or else to recover by focusing on those appraisals and elements of an event or the self that may matter most for the emotional episode. Thus, perfectionistic individuals can learn to question the importance they attach to many events and adopt strategies to reappraise situations effectively tailored to fit within their overall conceptual knowledge system. Although increased knowledge and understanding of emotions will not necessarily mean that a person can put it into practice, it is probably a first and necessary step.

ABILITY AND EMOTION REGULATION

Thus far, we have argued that emotion regulation can be understood within a broad definition of EI. We have argued that understanding emotion, and using that knowledge to perceive and shape emotional episodes, is an important yet understudied contribution to effective emotion regulation. In this final section, we focus on the premise that effective regulation is not only based on what we know but also on our ability to

use what we know (cf. Barrett & Gross, 2001; Barrett, Tugade, & Engle, 2004). Indeed, John may know that he should not yell at his boss; however, if he is a very impulsive person he may not be able to inhibit his desire to do so (Whiteside & Lynam, 2001). Or else, he may be particularly stressed or tired and therefore not have the necessary resources to regulate his emotion within this particular situation (Vohs, Baumeister, & Ciarocco, 2005). Finally, some individuals may be especially challenged to regulate emotions effectively, because cognitive skills in the form of working-memory capacity (WMC) may play an important role.

WMC is best characterized as the ability to control attention during controlled information processing (Barrett et al., 2004). Controlled processing is not necessarily explicit, conscious, or deliberate processing but, instead can be characterized as goal-directed or top-down, conceptual processing (Barrett et al., 2004; Barrett, Ochsner, & Gross, in press). Complex mental processes and social behavior may operate without conscious awareness (cf. Bargh & Ferguson, 2000), but they rarely occur without the control of attention, especially in social situations. Control of attention is necessary for deliberate activation of knowledge, maintenance or enhancement of already activated knowledge, and suppression of unwanted knowledge. Control of attention may also be implicated in the ability to acquire complex and flexible conceptual representations and provide the cognitive muscle to motivate controlled processing that shapes bottom-up, automatic forms of processing (Barrett et al., 2004).

People differ in their ability to control attention and therefore in their ability to engage in all forms of controlled processing, particularly in circumstances in which there is interference or distraction. Individuals higher in WMC can be thought of as motivated tacticians who have multiple information-processing strategies available to them and can select among them on the basis of goals, motives, and the constraints of the environment (Barrett et al., 2004). A motivated tactician, like a person with a large WMC, should have the resources to bring controlled attention to bear on goal-relevant information processing (and all that it implies about managing activation levels of relevant and irrelevant knowledge structures). Individuals lower in WMC can be thought of as cognitive misers who have severely limited attentional resources and as a result adopt strategies that simplify the need for controlled attention (Barrett et al., 2004). Although they may have an array of goals or motives, they do not have the attentional resources to maintain goal-relevant processing in the face of complex situations, such that they end up emphasizing efficiency over any other processing goal.

Individual differences in WMC contribute to proficiency in a wide range of real-world cognitive activities, such as reading and language comprehension, storytelling, following directions, and problem solving (for a review, see Barrett et al., 2004). Significantly, WMC is also strongly related to measures of fluid intelligence, defined by Cattell (1943) as the ability to reason, solve novel problems, and adapt to new situations (Conway, Cowan, Bunting, Therriault, & Minkoff, 2002; Engle, Tuholski, Laughlin, & Conway, 1999; Kyllonen & Christal, 1990). Some consider WMC to be the main processing component that supports fluid intelligence (Kyllonen, 1996).

Working-Memory Capacity and Emotion Regulation

WMC may be related to intelligent emotion regulation in several ways. First, individuals high in WMC may have a greater wealth of exemplar-based information available to them because they may learn more from their prior experience. For example, a rule-based processing system encodes information as exemplars, creating a situated representation of how or when an episodic event occurred, thereby leaving an enduring

source memory trace that can be retrieved at a later time (Lee-Sammons & Whitney, 1991). As a result, it is possible that those high in WMC may develop a richer conceptual system for emotion than do those lower in WMC, providing the basis for more flexible and precise evaluations and conceptualizations. In other words, they will have more complex representations of what different emotions "look like" and "feel like."

Second, individuals higher in WMC may have greater resources to bring conceptual emotion knowledge to bear during antecedent forms of emotion regulation that involve shaping an emotional episode. Individuals low in WMC will probably not have sufficient control of their attentional resources to attempt controlled processing. Their emotional episode will therefore often be the direct result of whatever conceptual emotion knowledge is evoked by bottom-up automatic processing. Thus, they are more likely to use the simple "if I feel angry . . . then I suppress all expression of this emotion when I am in public" rules already discussed, even if they know that other strategies may be more useful. In contrast, those higher in WMC will have the attentional resources to engage in controlled processing and to generate emotional episodes in more strategic and flexible manner. Of course, under conditions of extreme cognitive load, such as very stressful situations, this advantage would disappear. And it is also possible that individuals lower in WMC may fare better in situations that call for quick action when those higher in WMC may engage in unnecessary top-down attentional control, such as excessive rumination.

Third, individuals higher in WMC may be better able to implement effortful control during response-focused emotion regulation and inhibit unwanted but strong behavioral or cognitive responses when they desire to do so. These differences would be most apparent under cognitive load, such as during an emotional episode that emerges in a complex social situation like the one described at the beginning of the chapter. Individuals who are low in WMC may show "functional modularity" to their emotional episodes, such that processing constraints make emotional responses appear more modular and cognitively inflexible than those with higher WMC (see Barrett et al., 2004, for a more detailed discussion). As a result, these individuals will have difficulties reappraising events that triggered an emotional episode, to rapidly imagine alternative hypotheses that explain the behaviors of other persons, or to come up with different regulation strategies for various goals. Thus, if John has low WMC, he may engage in some form of verbal protest during the meeting with the client and his boss and not immediately understand the implications of his actions until it is too late. He may "know" that he should not allow his anger to show under these conditions (e.g., such as when asked on a questionnaire) but may not have the cognitive resources to disentangle the "emotion module" once it is triggered.

Finally, WMC may assist in the ability to resist the attentional capture from negative information and may influence the ability to suppress previously learned affective associations. As a consequence, individuals higher in WMC may have affective systems that are perturbed less often, resulting in fewer events to regulate in the first place.

CONCLUSION

The EI model (Mayer & Salovey, 1997; Salovey & Mayer, 1990) can be seen as an organizing framework for understanding individual differences in effective emotional transactions within a social world. Our goal with this chapter was to use the EI framework as a starting point to open up new lines of inquiry into the scientific understanding of

effective emotion regulation. Within this framework, emotion regulation is both a component of EI (e.g., Branch 4) as well as a complex set of abilities anchored within the entire emotion process. However, it may be that skills related to emotion knowledge (Branch 3) are center stage for predicting intelligent emotion regulation and the royal road for interventions when regulation is less than optimal. In particular, conceptual knowledge is used to support perception and action (Branch 1) and will help an individual to decide when and how to regulate (Branch 2). What we know about emotions, ourselves, and our social world will determine what we perceive, if and why we chose to regulate, and the strategies we ultimately employ.

Of course, we are not suggesting that individuals need to be certified emotion psychologists to be emotionally intelligent regulators. The implicit knowledge learned through prior experiences and social interactions allow most of us to function relatively well. In addition, actual performance in emotion regulation is a combination of skills and motivation. Some individuals will be more challenged than others in their regulation attempts because they lack important cognitive resources, are blessed with highly reactive or anxious temperaments, or did not have the kinds of social interactions that foster the conceptual knowledge required. However, we are hopeful that many can improve their emotion regulation skills by learning more about emotions and by putting new knowledge into practice.

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