

Sharpening the Focus: Emotion Regulation, Arousal, and Social Competence

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Emotions are said to help us respond effectively to opportunities and challenges. However, emotions are by no means always helpful. At times, our anxiety leads us to duck opportunities we should embrace, our anger leads us to respond in ways that harm everyone concerned, and our pride leads us to make boasts that we no sooner make than regret. Emotional competence—or knowing how to use one's emotions to full advantage—is a fine art. Skilled practitioners of this art know how and when to regulate emotions to achieve their goals.

Emotion Regulation, Arousal, and Social Competence

Why are some people gifted at this art, whereas others are certifiably emotionally incompetent? In the target article, Eisenberg, Cumberland, and Spinrad argue that parental behaviors are one important determinant of a child's capacity to regulate emotional responses in flexible, situation-appropriate ways. These regulatory capacities, in turn, determine the child's emotional responses—including the child's physiological arousal. Moreover, it is the child's arousal

that determines the child's social competence, defined as the ability to achieve social goals while maintaining positive relationships with others. In brief, Eisenberg et al. argue the following: "People who are unable to modulate the intensity, duration, and frequency of their emotional responses and emotion-related behavior are relatively likely to become physiologically overaroused and to behave in ways that undermine the quality of social interactions."

Successful emotion regulation leads to optimal physiological arousal, which facilitates social competence. Unsuccessful emotion regulation, by contrast, leads to suboptimal physiological arousal states—particularly high arousal states—that compromise social functioning.

Out of necessity, Eisenberg et al.'s broad bandwidth model levels rather than sharpens at many points to bridge the diverse literatures relevant to emotion socialization. I suggest the need for a sharper focus on emotion regulation and arousal, two processes said to mediate between parental behavior and the child's social competence. In particular, it is necessary to specify which aspects of emotion are being regulated, how this is being done, and what physiological states result from these regulatory efforts.

Sharpening the Focus: The What and How of Emotion Regulation

Prototypic examples of emotion regulation include refraining from expressing disappointment after receiving an inappropriate gift, or trying to stay calm while helping an upset friend. However, emotion regulation spans the full range of changes in *emotion dynamics* (Thompson, 1990), or the latency, rise time, magnitude, duration, and offset of responses in behavioral, experiential, or physiological domains. Given the breadth of emotion regulatory targets and processes, any discussion of emotion regulation is advanced by specifying what is being regulated and how this regulation is being achieved.

What Aspect of Emotion Is Being Regulated?

Eisenberg et al. appear to have in mind one common—and important—target of emotion regulation; namely, negative emotion experience and physiological responding. As Parrott (1993) suggested, however, individuals increase, maintain, and decrease negative and positive emotions. In addition, it is now widely agreed that emotion can be divided—at least for heuristic purposes—into three components that are only loosely coupled; namely, behavioral expression, subjective experience, and peripheral physiological re-

sponding. Minimally, therefore, any discussion of emotion regulation should specify what aspect of emotion is being regulated and what the desired endpoint is. Eisenberg et al. focus on emotion experience and physiological responding, but it seems likely that there are other important routes to shaping a child's developing emotional competence.

How Is Emotion Being Regulated?

Which aspect of emotion is targeted for emotion regulation must be distinguished from how emotion regulation is achieved. For example, one can keep one's face still in several quite different ways, such as by cognitively transforming a potentially emotion-eliciting situation so that it is emotionally cool, or by working very hard to still the facial muscles without doing anything to diminish the felt emotion. I distinguish two broad classes of emotion regulation: *antecedent-focused emotion regulation*, which occurs before emotional response tendencies are generated, and *response-focused emotion regulation*, which occurs after emotional response tendencies are generated (Gross, 1998b). Antecedent-focused emotion regulation involves modifying the inputs to the emotion system by (a) selecting situations (e.g., avoiding a quarrelsome neighbor), (b) modifying problematic situations, (c) attending to one rather than another aspect of the immediate situation, or (d) modifying the way emotion-relevant stimuli are appraised (i.e., what meaning these features of the environment are assigned). By contrast, response-focused emotion regulation comes relatively late in the emotion generative process. At this point, emotional response tendencies have been activated, and the individual modulates (diminishes or augments) the experiential-, behavioral-, or physiological-response tendencies that have been generated. Examples of response-focused emotion regulation include hiding one's delight at a strong hand in a game of cards or taking a deep breath to slow a racing heart before a long-anticipated date. In the context of Eisenberg et al.'s model, distinctions among forms of emotion regulation will prove useful because antecedent-focused forms of emotion regulation decrease emotional responding, whereas response-focused forms of emotion regulation may actually increase physiological responding (Gross, 1998a).

Sharpening the Focus: Beyond Generic Arousal

When we are emotional, our bodies respond. We sweat, our hearts pound, and we breathe more quickly. If emotion regulation alters emotions, it stands to reason that emotion regulation should alter

these physiological responses. Eisenberg et al. are thus on solid ground when they suggest that a child's physiological state can be powerfully shaped by emotion regulation. However, the conception of generalized arousal that they employ is now viewed with quite some suspicion in many quarters. In fact, some have gone so far as to argue that the notion of generalized arousal is so ill-defined as to be "scientifically meaningless" (Blascovich, 1992, p. 217). Eisenberg et al.'s model might be sharpened, therefore, by more clearly specifying the specific physiological changes that mediate between parents' behaviors and a child's social competence.

To explain what needs fixing in arousal theory, a little background is helpful. Arousal theory had three major contributory streams: (a) Cannon (1929) and Selye's (1956) discussion of global sympathetic and endocrine responses to stressors, (b) Hull's (1943) description of a general drive that energizes behavior, and (c) Lindsley's (1951) investigation of the role of the reticular activating system and electroencephalogram (EEG) changes in arousal. In its classic form, arousal theory postulated a unidimensional continuum of whole-organism activation ranging from quiescence to states of great agitation and excitement (Duffy, 1962; Malmö, 1959). Heightened arousal was thought to involve sympathetic and endocrine activation, energized behavior, and EEG activation. This was a very powerful conceptual scheme because it allowed researchers to plot an organism's behavior with respect to both direction (approach or withdrawal) and activation (varying states of general arousal). In the data-rich but theory-poor field of psychophysiology, this overarching unidimensional continuum of arousal organized a wide range of findings.

Questions about the unitary nature of arousal began to gather with growing urgency in the 1960s. Lacey's (1967) critique of arousal theory was a particularly important catalyst. In this critique, Lacey elaborated on the notion of directional fractionation, which referred to the fact that, at times, one physiological response system showed a change in one direction, whereas another response system showed either no change, or a change in another direction. Take, for example, a night watchman who hears a noise. He freezes—still as can be—and his heart rate slows as he stares intently into the dark. At the same time, his sweating increases, and he shows EEG changes consistent with heightened activation. A unitary conception of arousal has great difficulty accounting for these changes, and over the past 30 years, there has been a growing sentiment that the notion of generalized arousal is no longer tenable in its classical form.

A number of efforts to refine the notion of generic arousal have been made in both animal and human literatures. For example, the animal literature supports a distinction between the defense reaction and the vigilance reaction (Fisher, 1991). Both reactions involve

increased physiological activation, but the defense reaction (also known as the *fight-or-flight response*) leads to increased arterial pressure, heart rate, and cardiac output, with little change in total peripheral resistance, whereas the vigilance reaction (also known as the *freezing response*) leads to decreased heart rate and decreased cardiac output, but increased total peripheral resistance. In the human literature, Tomaka, Blascovich, Kelsey, and Leitten (1993) proposed a similar distinction, which they referred to as *challenge* versus *threat*.

These distinctions among different forms of "arousal" are important. Eisenberg et al. see the child's state of physiological arousal as mediating between emotion regulation and social behavior. Thus, when a child is confronted with another child who is upset, Eisenberg et al. argue that, if the child is emotionally competent (and has learned to regulate emotions well), the child's response will be empathic. On the other hand, if the child has not learned these emotion regulatory skills, the other child's distress will lead to increased physiological responding and to distress rather than empathic responding. However, what are the physiological-response parameters that affect the child's ability to produce socially competent behavior? Only by moving beyond global conceptions of arousal will it be possible to ascertain which specific types of physiological activation (e.g., threat responses) are responsible for compromised social competence.

Note

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COMMENTARIES

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