Emotion and mood are deceptively simple concepts. It is easy to study emotions, intervene with clients suffering from emotional disorders, or teach related course content without adequately examining the basic tenets of what they are and how they operate in different contexts. For centuries, philosophers and scientists have tried to create exact definitions of emotion, and the result is that there is no single accepted definition. The definitions found in encyclopedias and dictionaries are general and vague and thus serve little purpose. At the core, emotion is often defined as a coordinated response to stimuli at experiential, cognitive, behavioral, and physiological levels of analysis (e.g., see Levenson, 1994). Yet, a lack of coherence among systems is quite common.

Physiological reactions are often absent in the presence of intense subjective and behavioral emotional reactivity. The degree of coherence among systems appears to be better understood as an important individual difference variable with relevance to understanding various forms of psychopathology. Thus, even after decades of accumulated findings on emotion-related phenomena, there is a continual need for books on the basic nature of emotion (Ekman & Davidson, 1994; Solomon, 2003; Watson, 2000). On reading these books, it becomes clear that there is good reason to be skeptical of how emotion has been defined, measured, and applied in past work.

Anyone interested in psychopathology has to wrestle with the nature of emotion and its variants. To be consistent with most researchers, I am using the term affect to subsume work on emotion (discrete episodes in response to triggering stimuli), mood (longer lasting states that often initiate and dissipate without clear origins), and their interplay. Many of the psychiatric conditions in the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM–IV–TR; American Psychiatric Association, 2000) are defined by some disturbance in the affect generation process, from initial experience to subsequent regulatory processes that influence its expression and duration. Yet, many of the assumptions built into these DSM–IV–TR descriptions and the study and treatment of psychopathology lack a solid empirical foundation. For example, manifest indicators of the depressed mood criterion for major depressive disorder include subjective reports of sadness and observations of tearfulness and crying.

The evidence to suggest that individuals suffering from major depressive disorder are more susceptible to tearfulness and crying has not advanced beyond retrospective reporting and clinical anecdotes (see Chapter 7). This gap between presumptions and evidence is one of many areas that are addressed in Emotion and Psychopathology: Bridging Affective and Clinical Science, edited by Rottenberg and Johnson. The editors recruited prominent researchers to carefully scrutinize the theories and evidence on how affect plays a role in the diagnosis and classification, etiology, pathogenesis, and maintenance of particular psychiatric disorders. One of the book's unique features is the collection of basic
laboratory research that supports, challenges, and advances understanding of functional and dysfunctional affective experiences, expression, and regulatory processes. In nearly every chapter, isolated bodies of basic research are coupled with clinical theories and discoveries. This synthetic approach ensures that the book is not a superfluous addition to the literature.

**Taking a Critical Lens to Affective Science and How It Can Be Enhanced**

This book is clearly intended for students and professionals in psychology with an interest in conducting or consuming research. Affective science has been limited by an overreliance on how it has been studied in the past. To this end, several innovative ideas in this book can change the way affect is approached as a target of study and intervention.

Affective processes in psychopathology are often studied without an appreciation of meaningful heterogeneity. On average, individuals with social anxiety disorder can be characterized by elevated negative affectivity and frequent avoidance behavior as well as diminished positive affectivity and infrequent appetitive behavior. Yet, recent evidence has suggested that at least some individuals with social anxiety disorder engage in risk-prone appetitive activity and do not report diminished positive affectivity (see Kashdan, 2007). For individuals with schizophrenia, there is evidence that negative symptoms such as anhedonia are more predictive of impaired social skills, isolation, and functioning than are positive symptoms. However, the presence of negative symptoms is not endemic to schizophrenia and may reflect an important subtype with an etiology, course, and reactivity to treatment different from other variants of schizophrenia (see Chapter 5).

In studying social anxiety disorder or schizophrenia, researchers mindlessly merging subgroups with and without disturbances in positive affectivity can lead to unreliable findings and misleading conclusions. For example, the existence and neglect of subgroups differing in affective processes lends doubt to claims about the neurological basis of these conditions. After all, the neurotransmitters, cortical regions, and cortical activity relevant to positive affect and appetitive activity (e.g., dopaminergic agents, left prefrontal cortex activity) are distinct from those relevant to negative affect and avoidance activity.

On synthesizing previously isolated bodies of research, one of the common themes in this volume is the existence of meaningful heterogeneity. This includes potential subtypes of existing disorders (Chapters 5 and 10), differential reactions to threat and reward stimuli within the same disorder (Chapter 6), distinct fear response patterns for separate anxiety disorders (Chapter 8), distinct patterns of emotional reactivity in response to varying degrees of mood disturbance (Chapter 7), and toxicity (Chapter 9). Taken together, these findings suggest that relying on a traditional *DSM* classification system to group individuals is insufficient for research and treatment. It is possible that the types of affective disturbances within and between psychiatric conditions can explain differential treatment response rates and the need for more refined interventions that target specific social–cognitive–affective processes (Chapters 11 and 13).

Other insights about neglected affective processes are accessible in particular chapters. Gruber and Keltner (Chapter 2) point out that two emotional response channels that have received scant scientific attention are vocal acoustics and physical touch. Vocal acoustics and touch both offer an opportunity to examine time sequential changes in emotional experiences to situational demands without the artificial obtrusive constraints of other assessment techniques. One can record and code social interactions without disrupting the flow of activity by asking for subjective ratings or requiring participants to be strapped to physiological measurement devices. The balance between internal and external validity can be improved by incorporating new measurement strategies.

There is no doubt that conscious affective processes are important to psychopathology, but it is equally important to acknowledge contributions at the automatic, nonconscious level. Individuals suffering from emotional disturbances can be defined by difficulties in managing emotional experiences to adequately respond to situational demands or unrelenting attempts to control or suppress emotional experiences and their expression (Cicchetti, Ackerman, & Izard, 1995). In each case, individuals have begun to react in habitual, rigid manners that occur outside of conscious awareness. Methodologies to assess nonconscious emotional processing lag behind the prominent attention given to
dual-processing theoretical models (Fazio & Olson, 2003). Failing to empirically account for both conscious and nonconscious levels of emotional processing can lull scientists into a false sense of security about how emotion plays a role in life disruptions. Variance attributable to conscious, effortful processes might be subsumed by or interact with automatic, habitual processes. More complex methodologies and analytic techniques are needed to decompose these and other constituent parts of psychiatric conditions. Although some chapters deal with the issue of nonconscious emotion activation and regulatory processes, other chapters fail to provide any analysis of this issue.

The uneven amount of attention given to conscious, effortful emotional processing dovetails with the substantial attention given to a small number of affect regulatory strategies, particularly cognitive reappraisal, rumination and worry, and suppression, at the expense of other commonly used internal and external strategies. This is not surprising, as scientists are inspired by the cutting-edge work conducted by their colleagues. To make strides in understanding any particular process, multiple researchers systematically collect and rationally analyze evidence under multiple conditions over the course of time. This is a cumulative, time-consuming process, which is why areas that possess clear utility deserve ample resources for replication and extension. However, to advance affective science, an argument can be made for abandoning preconceived notions in favor of using simple, descriptive approaches as a starting point.

To best understand how people handle their emotions, it is useful for researchers to conduct open-ended interviews with exemplars of psychological health and dysfunction. How are people responding to their negative and positive emotions? Do they try to attenuate or end negative emotions? Do they try to elevate or prolong positive emotions? If so, what, exactly, are they doing? How do their strategies differ for specific, discrete emotional states (e.g., anger vs. fear vs. disgust)? How do their strategies differ when responding to major life stressors or traumatic events or intense positive events? What do they do when they simply want to elevate their mood? By asking these and related basic questions across healthy and unhealthy populations and theoretically meaningful subgroups (e.g., age, sex, socioeconomic status, and culture), we can consider promising areas that are now being overlooked.

Affective science can advance more rapidly by avoiding the pitfalls of premature cognitive commitment to particular constructs and methodologies. Far too often, psychopathology is restricted to variants of excessive negative affect, avoidance behavior, threats, and stressors. However, this is only half the spectrum of human functioning, and there has been a proliferation of work on positive affect, approach behavior, incentives, and positive life events. Indeed, researchers have started to delineate strategies to regulate positive events and experiences that cannot be subsumed by methods to manage negative events and experiences. For example, savoring involves conscious awareness of, and deliberate attentional orientation to, pleasant experiences to prolong them (Bryant & Veroff, 2006). Attention is purposely directed toward the anticipation of upcoming positive events, appreciation of present pleasant moments as they unfold, and reminiscences about past positive experiences. Several of the chapters in Rottenberg and Johnson devote balanced attention to the experience and management of positive and negative affect (as well as of rewards and threats), respectively. These processes are often independent and provide unique information in conceptualizing, distinguishing, and treating different forms of psychopathology.

Perhaps no different from other areas of study, affective science is plagued by variable terminology, definitions, and theoretical models for the same phenomena. Even the basic structure of emotion remains unresolved as scientists debate whether to use categories or dimensions, hierarchies or circumplexes. And of those adopting two-dimensional circumplex models, there is no consensus as to the content of these relatively independent dimensions. Moreover, the entire positive spectrum of human functioning is often neglected to varying degrees in the theory, measurement, and study of normative emotion processes and relevant disturbances. As another example, regulatory strategies such as cognitive reappraisal (or attempts to alter emotional experiences by modifying perceptions about the self or events being confronted) are alternately viewed as functional or dysfunctional, depending on the theoretical orientation espoused (cognitive–behavioral vs. acceptance and mindfulness based). These unresolved issues have implications for theory, measurement, and analysis that can make it difficult to synthesize separate research programs and translate them for applied purposes (e.g., clinical practice or organizational leadership).

Rottenberg and Johnson consciously selected authors to represent diverse perspectives. In the absence of evidence to support the definitiveness of any particular terminology or theoretical model for emotions, an unconditional allegiance to any single approach prevents readers from flexibly asking questions and creatively applying methodological advances from one area of study to another. However, it can also be cognitively demanding when the simple relation between
emotions and moods differs from one chapter to the next. In a different book, Ekman and Davidson (1994) dealt with this issue by writing commentaries after each conceptually linked series of chapters to orient the reader to some degree of consilience. Although Rottenberg and Johnson do not take the same approach, the chapters in their book are comprehensive enough to be digested as independent entities or appreciated for the multiple possibilities of how affective science can be conducted.

The best compliment that can be given to this book is to say that it inspires serious contemplation about topics whose complexity tends to be underestimated. The reader is bound to appreciate the vast number of ways in which emotion can be studied in the laboratory or the course of intervention. On the basis of some of the nascent methodologies and theoretical formulations discussed in individual chapters, it becomes clear that future editions will be warranted and welcomed as additional data accumulate.

References