emotions that respondents in other research recognized accurately on the basis of full antecedent descriptions. We do not think that judging *other* people's emotions from antecedent descriptions necessarily represents the maximum accuracy. Adopting appraisal theory's own notions, one's own appraisals of an antecedent event should be a more accurate predictor of the consequent emotion than another person's description of an antecedent event.

2. All numbers in this chapter have been rounded up to the closest whole number.

3. There are exceptions. Harry Triandis and Michael Bond have been carrying out cross-cultural research for decades, and encouraging others to join them. But not until the late 1980s did interest in cultural questions begin to spread across the field.

4. Lewis and Granic (1999) refer to the densely populated, easily available emotional states as "attractors." Due to language and/or socialization they are like magnetic regions within multidimensional space, assimilating ill-defined nearby emotional states to the culturally coherent prototypes.

In K.R. Scherer, A. Schorr, & T. Johnstone (Eds.). (2001). Appraisal processes in emotion: Theory, methods, research. New York: Oxford.

14

Applications of Appraisal Theory to Understanding, Diagnosing, and Treating Emotional Pathology

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Emotional pathologies, such as mood disorders and anxiety disorders, are among the most prevalent of psychopathologies (Robins et al., 1984). Many clinicians, researchers, and laypersons are interested in understanding their determinants and ameliorating them. Can appraisal theories, which claim to specify causes of emotions, help?

In turn, a number of appraisal theorists (and their critics) point to the need for testing and refining their theoretical models in significant real-world contexts (see, e.g., Parkinson & Manstead, 1993). Can attempts to apply appraisal theories, to help explain and modify undesired emotional responses, contribute to these goals?

In this chapter, we will briefly discuss the nature of emotional pathology; consider how appraisal theories might be applied to help understand its etiology, diagnose particular emotion-related disorders, and guide therapeutic interventions; and explore what appraisal theorists might learn from these applications.

Normal Emotion and Emotional Pathology

Following a functional approach (e.g., Darwin, 1965), emotions can be conceptualized as mechanisms for flexible adaptation, which prepare appropriate responses that can be executed rapidly (such as freezing in fear) and organize goal-directed strategies (such as attack, avoidance, or proximity-seeking) for dealing adaptively with crises and opportunities (see Roseman, 1984; Scherer, 1984a, 1985a). This conception allows a description of normal and pathological emotion in terms of the appropriateness/inappropriateness and adaptiveness/maladaptiveness of emotional responses in particular situations.

Applying Appraisal Theory to Help Understand the Etiology of Emotional Disorders

If appraisals generate emotions (see other chapters in this book for discussions of the evidence), then *theories which specify the patterns of appraisal that give rise to various emotions may offer insights into the causation of particular inappropriate and maladaptive emotional responses.* This claim is made explicitly in the current cognitive and cognitive-behavioral theories that are among the leading models of psychogenically produced depression and anxiety (e.g., Barlow, 1988; Beck, 1976); and because appraisal theories identify determinants of many different emotions, they may help explain the etiology of dysfunction in a number of other clinical syndromes.

Of course emotional disorders may also be produced by such processes as substance abuse (see American Psychiatric Association, 1994) and noncognitive endogenous biochemical dysfunction (see, e.g., Green, Mooney, & Schildkraut, 1988). Appraisal theory, like other theories, cannot explain all cases of emotional pathology.

Appraisals eliciting depression and anxiety. It is striking that appraisal theory formulations, developed primarily in research on "normal" populations, correspond closely to some clinical accounts of the determinants of depression and anxiety, developed from work with patient populations.

By most analyses, the central emotion in depression is sadness, and the central emotion in anxiety disorders is some form of fear (see, e.g., Beck, 1991).[1] What are the differential causes of these two emotions? According to Roseman's (1996, this volume) appraisal model, portions of which are summarized in table 14.1, sadness is primarily differentiated from fear by whether motive-inconsistent events are seen as certain versus uncertain. Similarly, in Beck's (1976) clinical model, it is thoughts of loss that generate depression and thoughts of danger that produce anxiety. Consistent with the analysis in table 14.1, the crucial distinction between loss and danger is the perceived probability of negative events. For example, Beck and Emery (1985) say that the anxious person makes conditional appraisals, thinking that "If a specific event occurs, it may have adverse results" (p. 65). Here there is uncertainty about a negative outcome. In contrast, the depressed person makes "unconditional" appraisals, thinking, for example, "My present weakness means I will always be a failure" (p. 65). Here a negative outcome is certain.

Note in table 14.1 that this appraisal determines which negative emotional response occurs, not *whether* there is negative affect. Given the perception of motive-inconsistent events, misperceiving them as certain makes it likely that the resulting negative emotion will be inappropriate sadness or distress, whereas misperceiving them as uncertain makes inappropriate fear more likely. However, in these and other cases, inappropriately negative (as opposed to positive) affect would be generated by inappropriate appraisals of *motive-inconsistency* (rather than motive-consistency). In line with this view, two studies using structural equation analyses found that (when subjects took a new job or experienced the breakup of romantic relationships) the relationship between low levels of coping resources and negative emotional responses was mediated by appraisals of motive-inconsistency (McCarthy & Lambert, 1999; McCarthy, Lambert, & Brack, 1997).

An appraisal of *low* (as opposed to high) *control potential,* in addition to directly contributing to the elicitation of sadness, distress, and fear (see table 14.1), is also

Table 14.1. Hypothesized appraisals and emotions for selected emotion-related disorders (based on Roseman, this volume)[a]

Appraisal Pattern[b]	Resulting Emotion	Disorders in which May Be Prominent
Motive-inconsistency Appetitive motivation Certainty Low control potential	Sadness	Depressive Disorders Bipolar Disorders (Depressive Episodes)
Motive-inconsistency Uncertainty Low control potential	Fear	Anxiety Disorders
Motive-consistency Appetitive motivation Certainty	Joy	Bipolar Disorders (Manic/Hypomanic Episodes)
Motive-inconsistency Aversive motivation Certainty Low control potential	Distress	Suicidality Pain Disorder
Motive-inconsistency Caused by someone else High control potential[c] Instrumental problem[d]	Anger	Paranoid Personality Disorder Delusional Disorder, Persecutory Type Schizophrenia, Paranoid Type Oppositional Defiant Disorder Conduct Disorder Borderline Personality Disorder
Motive-consistency Caused by self	Pride	Narcissistic Personality Disorder
Motive-inconsistency[e] Caused by self High control potential[c] Instrumental problem[d]	Guilt	Obsessive-Compulsive Personality Disorder Obsessive-Compulsive Disorder
Motive-inconsistency Caused by self High control potential[c] Intrinsic problem[d]	Shame	Eating Disorders
Motive-inconsistency High control potential[c] Intrinsic problem[d]	Disgust	Sexual Aversion Disorder Body Dysmorphic Disorder

[a]There would be some differences in hypothesized appraisal-emotion relations from those shown here if an alternative model were used (see chapters by Lazarus, Scherer, and Smith & Kirby, in this volume, for details).

[b]Only appraisal components that are held to be necessary for the psychological elicitation of each emotion are represented in this table. An absence of extreme unexpectedness (which would at least initially elicit surprise) is assumed as part of the appraisal pattern for all other emotions, but is not shown because it does not differentiate among these emotions. See Roseman (this volume) for additional details, and a full description of the model on which this table is based.

[c]High control *potential* is to be distinguished from high control. For example, anger may result from situations in which a person had low control over an event (e.g., someone's offensive behavior), but believes that there is something that can be done about it (e.g., taking punitive action against the offender) which may diminish the negativity of the event, or reduce the likelihood of its recurrence.

[d]Instrumental problems are perceived goal blockages or failures; intrinsic problems are perceived defects in the nature of an object, event, or person.

[e]Guilt may be elicited by events that are partly motive-consistent (e.g., cheating without getting caught). But it is the motive-inconsistent aspects of these events, such as failing to adhere to standards one wants to uphold, or hurting a valued other, that are crucial for eliciting the guilt.

likely to increase appraisals of motive-inconsistency and thus further increase negative emotions. This is because believing that one has little potential to control a negative event is itself motive-inconsistent and also predicts that motive-inconsistency will continue and recur (rather than be overcome and successfully avoided in the future). In the clinical literature, low perceived controllability has been associated with depression and anxiety by many authors (see, e.g., Barlow, 1988; Seligman, 1975).

The identification of appraisals that contribute to both anxiety and depression may help to explain their very frequent comorbidity (see, e.g., Cloninger, Martin, Guze, & Clayton, 1990). Indeed, one of the strengths of an appraisal theory analysis is its potential to account not only for disorders of individual emotions but also for dysfunction that encompasses several emotion states (as individual appraisals affect multiple emotions).

Appraisal in manic and hypomanic states. Manic and hypomanic episodes are clinical phenomena whose prototypical symptom of elevated mood (along with secondary symptoms such as distractibility, flight of ideas, loquaciousness, and increased activity level; see American Psychiatric Association, 1994) suggests a dysfunctional variant of the normal emotion of joy (e.g., see data on joy responses in Roseman, Swartz, Newman, & Nichols, 1994). In table 14.1 the determinants of joy are distinguished from those of negative emotions such as sadness and fear by an appraisal of motive-consistency (see also goal-conduciveness in the model of Scherer, 1984a, and motive-congruence in the model of Smith & Lazarus, 1993). This corresponds to Beck's (1976) description of the "inflated evaluation" of a domain that can lead to feelings of euphoria in manic and hypomanic states.

Going beyond Beck's formulation, a belief that motive-consistency is certain to occur and a focus on appetitive (pleasure-maximizing) rather than aversive (pain-minimizing) motives, which are components of the appraisal pattern that elicits joy in table 14.1, correspond to and may underlie the manic or hypomanic episode's additional symptom of excessive involvement in pleasurable activities that (to outside observers) have a high potential for painful consequences.

Appraisals eliciting distress and suicidality. Unlike other models of emotions in this book, the model presented in table 14.1 distinguishes between sadness and *distress.* Whereas sadness is marked by thoughts about what one is missing, lethargy, crying, inaction, and a goal of recovering something (results from Roseman, Wiest, & Swartz, 1994), distress is characterized by thoughts of present harm (Roseman, Wiest, et al., 1994), and, it is proposed, by agitation and a desire to terminate an aversive situation (Roseman, 1996, this book). This formulation suggests that the subset of diagnosed depressives who feel "impelled to escape" from an "apparently intolerable condition via suicide" (Beck, 1976, p. 84) may be experiencing dysfunctionally intense distress (with its behavior tendency of increased action to terminate aversive stimulation), in addition to or rather than sadness (whose response profile involves lethargy and inaction).

While both distress and sadness are elicited in part by hopelessness (certainty of negative events and low control potential, in table 14.1), the unique appraisal pattern that produces distress, in particular the focus on pain-minimizing motivation (as opposed to the perceived absence of reward or pleasure that produces sadness), might thus provide a noninvasive predictor of the clinically important outcome of suicidality.

Anger disorders. Recently, a number of clinical psychologists (see, e.g., Barlow, 1991; Eckhardt & Deffenbacher, 1995) have suggested that a diagnostic category of

anger disorders should be added to the current nosology that (in the realm of emotion-related dysfunction) highlights anxiety and mood disorders. Examination of DSM-IV diagnostic criteria suggests that hostile affect is a prominent component in such clinical syndromes as paranoid personality disorder, persecutory type delusional disorder, paranoid schizophrenia, oppositional defiant disorder, conduct disorder, and borderline personality disorder (see American Psychiatric Association, 1994). As shown in table 14.1, inappropriate anger may be produced by unwarranted beliefs that other people are causing blockages of one's own goals (distorted appraisal of other-person-agency, motive-inconsistency, and problem type) and that something can be done about this (appraisals of control potential).

Pride and disorders of the self. Clinicians have also identified syndromes involving abnormal cognition and affect toward the self. For narcissistic personality disorder, DSM-IV diagnostic criteria include pervasive grandiosity, indicated, for example, by "arrogant, haughty behaviors or attitudes" (American Psychiatric Association, 1994, p. 661). These resemble excessive or inappropriate manifestations of the emotion of pride (see Roseman, Swartz, et al., 1994). According to table 14.1, inappropriate pride may be elicited by unwarranted beliefs that the self is causing positive events (distorted appraisal of self-agency and motive-consistency).

Unrealistic appraisal of the self as a source of motive-consistency may be at the heart of "delusions of grandeur." Specific examples of such appraisal are associated with narcissistic personality disorder in DSM-IV, in such symptoms as "exaggerates achievements and talents" and "believes that he or she is 'special' and unique" (American Psychiatrist Association, 1994, p. 661).

Some clinicians maintain that a narcissist's grandiosity may be a motivated perception, a defense against believing just the opposite (that the self is intrinsically or instrumentally negative, which, if acknowledged, would elicit shame or guilt); see, e.g., Kinston (1987), Lewis (1987). Indeed, another potential advantage of using appraisal theory to help understand the etiology of emotional disorders is that it can describe cognitions generating both source and surface affects in dynamically interrelated emotion states (e.g., shame and pride in narcissism); and precisely describe the cognitive reinterpretations involved in the emotion-regulation strategies or defenses that may transform one into the other (e.g., distortion of agency or motive-consistency appraisals).

Guilt- and shame-related syndromes. Recently there has also been considerable interest in clinical syndromes that some contend are characterized by abnormal guilt or shame (see, e.g., Kaufman, 1989; Lewis, 1971; Nathanson, 1987). For example, it has been proposed that guilt may contribute to the etiology of obsessive-compulsive disorders (e.g., Lewis, 1979), and shame to eating disorders, domestic violence, and dissociative disorders (e.g., Kaufman, 1989; Lansky, 1987). Empirically, some researchers have found significant relationships of guilt with obsessive-compulsive symptoms (e.g., Frost, Steketee, Cohn, & Griess, 1994; Shafran, Watkins, & Charman, 1996) and shame with bulimia (e.g., Andrews, 1997; Sanftner, Barlow, Marschall, & Tangney, 1995) or anorexia nervosa (Schmidt, Tiller, Blanchard, Andrews, & Treasure, 1997).

According to table 14.1, both guilt- and shame-related disorders could be produced in part by unwarranted beliefs that the self is causing negative events (distorted appraisal of self-agency and motive-inconsistency). Consistent with self-agency hypotheses, McCarthy, Brack, and Brack (1996) found that appraisals of self-agency

predicted guilt and shame (as opposed to other emotions) in response to family-related events, although pathology was not assessed in their study. Guilt versus shame syndromes may be differentiated by appraisals that the self is blocking its own goals (whether those are moral goals, such as taking care of other people, or nonmoral goals, such as maintaining an exercise regimen), in guilt (the "instrumental problem" appraisal in table 14.1), versus appraisals that the self is in some way inherently flawed or "defective" (Miller, 1985), in shame (an "intrinsic problem" appraisal).

Dysfunction related to other emotions. Appraisal models may also help account for clinical syndromes involving dysfunctions of other emotions. For example, some disorders may be related to the emotion of disgust, such as sexual aversion disorder, in which there is extreme aversion to genital sexual contact with a sexual partner, and body dysmorphic disorder, in which there is preoccupation with an imagined defect in appearance or excessive concern about a slight physical anomaly (American Psychiatrist Association, 1994). As shown in table 14.1, inappropriate appraisals of intrinsic negativity may be involved in producing inappropriate disgust responses in these syndromes.

Still other pathologies involve abnormally low levels of emotion in general or of particular emotions, which may also be related to appraisal malfunctions. For example, Scherer (1987a) has proposed that inability to evaluate the relevance and conduciveness of events to one's goals can produce emotional apathy. Van Reekum and Scherer (1997) contend that overly rapid habituation, or strong inhibition, in appraising the novelty of stimuli may produce clinical syndromes involving stupor or lethargy. Kaiser and Scherer (1998) suggest that insensitivity to the intrinsic or learned valence of stimuli may result in anhedonia and that a tendency to underestimate the discrepancy of one's own actions with social norms may result in antisocial behavior.

Conceptualizing inappropriate appraisal as a cause of emotional pathology. As the preceding discussion illustrates, a variety of clinical syndromes may be characterized by particular patterns of inappropriate emotional response. From an appraisal theory perspective, inappropriate affect may be caused by inappropriate stimulus evaluation.

Determining what constitutes inappropriate appraisal is an important and difficult task. An attempt to define the appropriateness of appraisal in a noncircular fashion has been made by Perrez and Reicherts (1992). They distinguish objective parameters of situations that are important for adaptation (e.g., their controllability) from subjective perception (appraisal) of those parameters and contend that for successful adaptation there must be a good fit between the two. Using this approach, Perrez and Reicherts argue, for example, that depressed persons tend to underestimate the controllability of situations.[2]

What are the causes of inappropriate appraisal? As this chapter focuses on what may be gained from knowledge of appraisal–emotion relationships, an in-depth discussion of the determinants of appraisal itself is beyond our purview. But some potential causes of appraisal inaccuracy and dysfunction can be briefly mentioned.

1. General *perceptual or cognitive errors and biases* can affect emotion-eliciting appraisals. For example, hindsight bias (Fischhoff, 1982) may contribute to unwarranted appraisals of self-blame and inappropriate regret, guilt, or shame.

2. *Motivational processes* can distort appraisal. For example, in self-serving bias (Miller & Ross, 1975), people tend to attribute success to internal factors and failure to external causes, which could contribute to unwarranted pride and narcissism.

3. *Emotions* themselves can distort or bias appraisal. For example, fear or anxiety may focus attention on threat-relevant stimuli and foster catastrophizing appraisals of future outcomes, leading to unrealistic fear or distress (see MacLeod & Hagan, 1992).

4. *Physiological dysfunction* can produce inappropriate appraisal. For example, dopamine hyperactivity in the hippocampus might produce delusions of persecution (Krieckhaus, Donohoe, & Morgan, 1992), resulting in inappropriate hostility toward others.

5. *Pathogenic experiences and maladaptive learning* may be the most common sources of appraisal inaccuracy. For example, a history of exposure to uncontrollable events, in childhood or in adult life, may lead to unwarranted assessments of low control potential and thus to anxiety or depression in realistically controllable situations (see, e.g., Mineka, Gunnar, & Champoux, 1986).

6. *Dysfunctional social processes* can lead to appraisal inaccuracies. For example, in "pluralistic ignorance" (Schanck, 1934), discrepancies between private thoughts and public behaviors can lead to erroneous inferences about group norms and thus to unwarranted feelings of guilt or shame.

7. *Personality traits, cognitive styles, and existing attitudinal structures* can affect appraisal (van Reekum & Scherer, 1997) and may bias appraisal outcomes. For example, Gallagher (1990) found that neuroticism was positively correlated with threat appraisals of stressful academic events. Neuroticism, of course, is associated with a tendency to experience negative affect (see, e.g., Gross, Sutton, & Ketelaar, 1998).

Appraisal dysfunction at different levels of processing. There is increasing agreement among appraisal theorists that emotion-antecedent information processing, like other types of information processing, can occur at different levels (see Leventhal, 1979; van Reekum & Scherer, 1997; Smith & Kirby, this volume).

For example, Leventhal and Scherer (1987) described how Scherer's stimulus evaluation checks might be performed on three different levels of processing. Evaluation at the *sensory-motor* level is proposed to occur automatically (without volitional effort), via hardwired feature detectors that respond to specific internal and external stimuli. For example, particular patterns of gastrointestinal activity or emotional expressions of other people (such as smiles and frowns) may be automatically evaluated as either goal-conducive or -obstructive. At the *schematic* level, stimuli are evaluated in relation to structures acquired from prior experiences (e.g., schemata for "mother" or "examination" that may specify learned prototypic features of the stimulus, such as its goal-conduciveness/obstructiveness, and feelings and responses to it). Schematic processing is also regarded as automatic and may generate emotional responses (e.g., to mother and examinations) without requiring abstract thinking. At the *conceptual* level, events are more effortfully evaluated using propositionally organized memory structures and an individual's capacities to reflect and reason. For example, a woman preparing for her first parachute jump might use her reasoning capacity to draw conclusions about its goal-conduciveness (e.g., based on beliefs about the psychological benefits and physical risks of skydiving), which might influence her emotional reaction to the situation.

Multilevel approaches may help explain how simultaneous and conflicting emotions could occur. For example, sensory-motor processing (of visual height cues) might generate fear in our novice skydiver while conceptual processing (about potential mastery and achievement) generates hope or pride. Such approaches may also explain why feeling (when generated by sensory-motor or schematic processing) and knowledge (processed conceptually) can sometimes be dissociated or discrepant.

As Mathews (1994) points out, such discrepancies can take different forms and be particular to specific clinical disorders. For example, a discrepancy between knowledge and feeling is often reported by phobic patients (e.g., "I know the spider is not dangerous, yet I am terrified!") but *not* by depressed patients. This difference may be related to the level of processing at which the different disorders are primarily elicited and maintained. Typically, depressive disorders seem to be characterized by cognitive preoccupation, which maintains the dysfunction through conscious worries and ruminations (Mathews, 1994). In contrast, simple phobias may be primarily evoked on the sensory-motor level, through elementary feature detectors that respond to stimulus properties of biologically relevant threats such as snakes or spiders (Öhman, 1993).

Overall, multilevel processing is increasingly being used in discussions of cognition and emotion interaction, especially in the context of memory and affect disturbance (e.g. Johnson, 1994; Power & Dalgleish, 1997; Teasdale & Barnard, 1993).

Applying Appraisal Theory to Help Diagnose Emotional Disorders

Differentiation of distinct patterns of emotion-related dysfunction. If a number of clinical syndromes (depression, anxiety disorders, etc.) are characterized by the repeated experience of particular emotions (such as sadness, fear, anger, or shame), then *it may be possible to use the appraisals that elicit these emotions to help diagnose the presence and severity of these syndromes.* Indeed, insofar as emotional states facilitate emotion-congruent perception and appraisal (see, e.g., Forgas, 1991; Keltner, Ellsworth, & Edwards, 1993), distinctive appraisal patterns are likely to be present even when emotional dysfunction is caused by noncognitive processes.

For example, the Beck Depression Inventory-IA (Beck & Steer, 1993), one of the most widely used measures for diagnosing depression (irrespective of its etiology) and differentiating it from anxiety (Beck, Steer, Ball, & Ranieri, 1996; Clark & Steer, 1996), includes a pessimism item (in the terminology of table 14.1, this reflects appraisals of motive-inconsistency and certainty). In contrast, the anxiety subscale of the Cognitions Checklist (Beck, Steer, & Eidelson, 1987), which contains "what if" future-oriented statements (reflecting uncertainty), is positively correlated with anxiety rather than depression (Clark, Beck, & Brown, 1989).[3] Thus emotion-specific appraisals are already being utilized to help diagnose and differentiate depression and anxiety.

Appraisal-based assessment would seem to be especially useful in: (1) *diagnosing emotion-related dysfunction* (e.g., inappropriate guilt) *that is manifest in thought contents but is difficult to detect in somatic symptoms or behavior* (e.g., because the underlying physiology is unknown, indefinite, or inaccessible; because a disorder is mild or in an early stage of development; or because a disorder's expression is being

controlled); (2) *helping to identify newly proposed diagnostic categories,* such as anger-related disorders (Barlow, 1991; Eckhardt & Deffenbacher, 1995), *and distinguish among relatively similar syndromes that may have different etiologies and be amenable to different interventions,* such as shame-related versus guilt-related disorders (Tangney, Burggraf, & Wagner, 1995) or sadness-related versus distress-related patterns of pathology (see the preceding discussion of suicidality); (3) *identifying individuals who are at risk for developing pathology,* as when pessimistic attributional style is used to identify those at risk for becoming depressed when negative events occur (e.g., Peterson & Seligman, 1984); (4) *identifying such actual and potential problems quickly and inexpensively;* and therefore (5) *tracking fluctuations in degree of dysfunction over time* (e.g., through changes in appraisal of events over the course of treatment).

Table 14.2 gives examples of how appraisals could be used to help assess emotion states that may be especially prominent in particular patterns of psychopathology, as discussed earlier. Included are items designed to measure the patterns of appraisal associated with four different emotions (according to research summarized in Roseman, this volume). In addition to the examples given in the table, knowledge about other appraisal-emotion relationships, also grounded in empirical research, could be used to help assess additional emotions that may be constituents of other clinical syndromes (see Roseman, this volume, and Roseman, Antoniou, & Jose, 1996, for appraisal patterns and item wording for other emotions according to this model and chapters by Lazarus, Scherer, and Smith & Kirby, in this volume, for emotion-specific appraisal patterns according to other models).

Although appraisal measures may facilitate diagnosis and differentiation of emotion-related disorders in many cases, they are not an infallible way to assess emotions. As already mentioned, emotions may sometimes be produced by nonappraisal processes. In addition, according to the syndrome conception of emotions (see, e.g., Averill, 1980a) to which most appraisal theorists adhere, an emotion may sometimes be present without its typical cognitive component (just as it may occur without its prototypical expression or behavior). Finally, appraisal patterns may be present without their typical emotional sequelae (Parkinson, 1997a)—for example, in patients who take anxiolytic or antidepressant drugs to control emotions they would otherwise experience.

If appraisals are typically but not invariably associated with emotions, then appraisal measures might best be used as a part, but not the whole, of instruments designed to assess emotions and emotion-related disorders. Indeed, this is how appraisal items are now most often employed in the assessment of depression and anxiety. For example, the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988) includes items measuring subjective feelings (e.g., nervous; terrified) and somatic symptoms (e.g., hands trembling; difficulty breathing) as well as cognitions (e.g., fear of the worst happening). The modified Beck Depression Inventory, BDI-II (Beck, Steer, & Brown, 1996), has items that would appear to measure expressive or behavioral symptoms (crying; indecisiveness) and motivational symptoms (loss of interest; loss of interest in sex), as well as subjective feelings, somatic symptoms, and cognitions (see Beck, Steer, Ball, et al., 1996).

To provide for more comprehensive assessment of emotions, the rightmost column in table 14.2 gives sample items measuring subjective feelings, action tenden-

Table 14.2. Hypothesized items for diagnosing selected emotion-related disorders (based on Roseman, this volume)[a]

Emotion	Disorders in w. May Be Prominent	Appraisal Items	Non-appraisal Items
Sadness	Depressive Disorders Bipolar Disorders (Depressive Episode)	Believing that something is inconsistent with what I want.[d] Wanting to get or keep something pleasurable.[e] Being not at all in doubt about something that matters to me.[f] Thinking about something undesirable, and that there would not be anything that could be done about it.[g]	Feel a lump in your throat.[b] Feel very tired.[b] Feel like crying.[bc] Feel like doing nothing.[b] Want to recover something.[b] Want to be comforted.[b]
Fear	Anxiety Disorders	Believing that something is inconsistent with what I want.[d] Being very much in doubt about something that matters to me.[f] Thinking about something undesirable and that there would not be anything that could be done about it.[g]	Feel your heart pounding.[b] Feel shaky. Feel like running away.[b] Feel like screaming for help. Want to get to a safe place.[b] Want to be protected.
Anger	Paranoid Personality Disorder Delusional Disorder, Persecutory Type Schizophrenia, Paranoid Type Oppositional Defiant Disorder Conduct Disorder Borderline Personality Disorder	Believing that something is inconsistent with what I want.[d] Thinking that something is very much caused by someone else.[h] Thinking about something undesirable, and that there might possibly be something that could be done about it.[g] Something is helping or hindering me in satisfying my needs, in pursuing my plans, or in attaining my goals.[i]	Feel blood rushing through your body.[b] Feel that you'll explode.[bc] Feel like yelling.[b] Feel like saying something nasty.[bc] Want to hurt someone.[b] Want to get back at someone.[b]
Guilt	Obsessive-Compulsive Personality Disorder Obsessive-Compulsive Disorder	Believing that something is inconsistent with what I want.[d] Thinking that something is very much caused by me.[j] Thinking about something undesirable, and that there might possibly be something that could be done about about it.[g] Something is helping or hindering me in satisfying my needs, in pursuing my plans, or in attaining my goals.[i]	Feel a heaviness in your stomach. Feel a tugging sensation inside. Feel like punishing yourself.[b] Feel like scolding yourself for something. Want to make amends for something. Want to be forgiven.[b]

[a]High scores on item are characteristic of the emotion, unless otherwise indicated.

[b]Item distinguished this emotion from other emotions in Roseman, Wiest, & Swartz (1994)

[c]Wording somewhat modified from original item.

[d]Full text of item, adapted from Roseman, Antoniou, & Jose (1996): My emotion is caused by believing that something is inconsistent with what I want (1) . . . My emotion is caused by believing that something is consistent with what I want (9).

[e]Full text of item, adapted from Roseman et al. (1996): My emotion is caused by wanting to get or keep something pleasurable (1) . . . My emotion is caused by wanting to get rid of or avoid something painful (9).

[f]Full text of item, adapted from Roseman et al. (1996): My emotion is caused by being not at all in doubt about something that matters to me (1) . . . My emotion is caused by being very much in doubt about something that matters to me (9).

[g]Full text of item, adapted from Roseman (this volume): My emotion is caused by thinking about something undesirable, and that there would not be anything that could be done about it (1) . . . My emotion is caused by thinking about something undesirable, although there might possibly be something that could be done about it (9).

[h]Full text of item, adapted from Roseman et al. (1996): My emotion is caused by thinking that something is not at all caused by someone else (1) . . . My emotion is caused by thinking that something is very much caused by someone else (9).

[i]Full text of item, adapted from Roseman (this volume): My emotion is caused by my perception that something would generally be considered positive or negative independent of my personal evaluation (1) . . . My emotion is caused by my perception that something is helping or hindering me in satisfying my needs, in pursuing my plans, or in attaining my goals (9).

[j]Full text of item, adapted from Roseman et al. (1996): My emotion is caused by thinking that something is not at all caused by me (1) . . . My emotion is caused by thinking that something is very much caused by me (9).

cies, and motivational patterns found or proposed to be characteristic of the particular emotions shown in the table, derived from Roseman (this volume) and Roseman, Wiest, & Swartz (1994). (To derive items for subjective feelings, action tendencies, and motivational patterns in other emotions, see these and other references, e.g., Frijda, Kuipers, & ter Schure, 1989; Izard, 1991; Roseman, Swartz, Newman, & Nichols, 1994; Scherer & Wallbott, 1994.) Subject to careful assessment of their reliability and validity as measures of the specified emotions, both appraisal and nonappraisal items such as those in table 14.2, along with items asking about emotional state directly (e.g., how intensely are you feeling anger? guilt? see Izard, Dougherty, Bloxom, & Kotsch, 1974), could be put into self-report scales administered to patients or brought to bear on material from intake interviews and therapy sessions or included in rating scales to be completed by clinicians on the basis of structured interviews.

Note that items shown in table 14.2 could be used to measure both normal and abnormal emotions. They are *not* specifically designed to assess emotional pathology. As discussed earlier, emotional pathology would only be indicated by occurrence of emotions in contexts where they were inappropriate and maladaptive. Such pathology might be manifest, for example, in abnormal frequency or intensity of the emotion and association with significant impairment in social, occupational, or other functioning (see American Psychiatrist Association, 1994).

However, given evidence of some dysfunction, the items shown in table 14.2 could be used to help diagnose the specific nature of the problem (e.g., which disorder may be present). The universe of emotion-related disorders that could be assessed in this way includes those that primarily involve: (1) dysfunction in one or another emotion (e.g., depression); (2) nonemotional dysfunction that is characteristically triggered by a particular emotion or constellation of emotions (e.g., if anxiety and/or guilt are the emotions that are particularly likely to elicit obsessive compulsive disorder in people who are genetically vulnerable to obsessive and compulsive symptoms); or (3) a nonemotional dysfunction that tends to have particular emotional effects (e.g., when delusions of persecution tend to produce the specific symptom of unwarranted anger toward other people in paranoid schizophrenia). Such items could also be used to investigate whether there are particular emotions or patterns of emotions that are characteristic of other clinical syndromes, such as alcohol dependence (which Miller, 1987, found to be shame-related rather than guilt-related), hypochondriasis (fear- or anxiety-related?) and dissociative disorders (shame- or distress-related?).

Facial and vocal expression may also be used to help assess emotions (e.g., Banse & Scherer, 1996; Ekman & Friesen, 1978) and emotional pathology. On the basis of postulated links between appraisal dimensions and facial expressions during normal emotional episodes (Scherer, 1987b), Kaiser and Scherer (1998) have presented specific hypotheses concerning the expressive symptomatology of different groups of affectively disturbed patients. For example, patients characterized by emotional apathy, insofar as they are having difficulty making goal conduciveness appraisals, are predicted to show hypotonus of the facial muscles; whereas patients with anhedonia, insofar as they are making excessively negative pleasantness evaluations, are predicted to show brow lowering, nose wrinkling, upper lip raising, and related muscle movements.

Kaiser and Scherer (1988) also maintain that some disorders may be characterized by discrepancies between emotional feeling and expression. As an example, they refer to a patient discussed by Krause and Lütolf (1988), who unconsciously provoked interaction partners to anger, which he consciously wanted to avoid. Although this patient subjectively experienced worry or fear, his facial expression showed a recurrent submissive smile (perhaps reflecting this consciously experienced emotion) along with sporadic micromomentary expressions of contempt and anger (which may indicate emotions of which the patient was not consciously aware). Such discrepancies between conscious and unconscious emotions, or between felt and expressed emotions, may reflect underlying discrepancies between high-level conceptual processing and low-level automatic processing of appraisal information.

Applications of Appraisal Theory to the Treatment of Emotional Pathology

Treatment implications of particular appraisal theory hypotheses. According to appraisal theory, *changing the evaluations that produce particular emotions may both alter an existing affective state and change the likelihood of experiencing particular emotions in the future and thus have a significant impact on emotional pathology.* Indeed, some of the most successful psychological interventions now used to treat emotional disorders are guided by or are quite consistent with hypotheses in particular appraisal models.

For example, key targets of intervention in Beck's cognitive therapy for depression and anxiety (Beck, 1976; Beck & Emery, 1985) are specific thought patterns that can produce these syndromes. For example, therapists may aim to change perceptions that events are and will be pervasively negative and impossible to cope with by helping the patient to "expect the best" (Beck & Emery, 1985, p. 324) rather than the worst, and to find "solutions to problems that he considered insoluble" (Beck, 1976, p. 273). In terms of the appraisal model shown in table 14.1, this method modifies appraisals of situational state from motive-inconsistent to motive-consistent, and appraisals of control potential from low to high. Outcome studies have found that Beck's cognitive therapy is one of the most effective treatments for nonbipolar depression among outpatient populations (Engel & DeRubeis, 1993) and is also an effective treatment for generalized anxiety disorder (Durham et al., 1994).

Successful behavioral therapies for depression may alter the same appraisals. For example, the behavioral treatments for depression discussed by Lewinsohn and Gotlib (1995) aim to increase pleasant activities, decrease unpleasant events, or teach problem-solving, relaxation, self-control, or social skills. It is not difficult to see that the first two of these should increase appraisals of motive-consistency (as opposed to motive-inconsistency) and that the other four should enhance perceived control potential.

Other effective therapies may owe some of their success to altering the same appraisals. For example, according to Karasu (1990), the major goals and mechanisms of change in interpersonal therapy (see, e.g., Klerman, Weissman, Rounsaville, & Chevron, 1984) are resolution of current interpersonal problems, reduction of work and/or family stress, and improvement of interpersonal communication skills. The

first two of these are likely to increase appraisals of motive-consistency and the latter to enhance perceived control potential in interpersonal relationships.

Perceived motive-consistency and control potential may also be increased by techniques of psychoanalytically oriented psychotherapy, as described by Luborsky (1984), in which a patient's ongoing relationship with a therapist is used to understand and alter problematic response patterns (represented in the transferential "core conflictual relationship theme"). Through the therapist's sympathetic understanding, acceptance, and collaboration with the patient, his or her relationship with the therapist can be experienced as more gratifying than relationships were previously; and insofar as this can be a new model for relationships, the expected responses of other people to the patient's wishes may become more gratifying. Through insight, the patient may also come to change his or her own way of responding and experience increased control over maladaptive behavior patterns and the attainment of important goals.

Thus cognitive, behavioral, interpersonal, and psychodynamic therapies for depression may use different approaches that modify similar pathogenic appraisals. Of course, this does not mean the different therapies can be reduced to a general appraisal-altering strategy. Individuals in different situations and interpersonal contexts, or with different histories, response tendencies, skills, or personalities (or differences in underlying biological processes) may require different interventions to modify their appraisals and emotional responses; and in many if not all cases, the most important part of the therapeutic enterprise is creating and sensitively implementing the interventions that can facilitate change in different groups of patients. But appraisal theory may provide an integrative framework for (1) *understanding what very different therapies might have in common* (i.e., effects on emotion-eliciting appraisals); (2) *specifying therapeutic goals* (e.g., in therapy for depression, modifying appraisals of pervasive motive-inconsistency and low control potential); and (3) *helping to predict which therapies are likely to be helpful for which patients* (as patient characteristics affect which interventions, e.g., behavioral or insight-oriented, are most likely to influence appraisals).

Although depression and anxiety have received the most research attention, therapies for disorders involving other emotions, such as dysfunctional distress, anger, guilt, and shame, may also make effective use of appraisal theory formulations.

For example, dysfunctional distress may be a central feature of pain disorder (see American Psychiatrist Association, 1994) and some cases of intractable pain resulting from a medical condition. According to table 14.1, distress may be alleviated by altering appraisals of motive-inconsistency. If so, attending to attainment of other goals than pain reduction (especially when pain reduction is impossible) may lessen the extent to which motive-inconsistency dominates appraisal of the current situation and thus evoke more positive emotion. Consistent with this view, Pancyr and Genest (1993), citing a summary of laboratory pain studies by Karoly and Jensen (1987), note that a focus on attaining goals other than relief of pain may be a key ingredient in effective coping.

Deffenbacher and his colleagues have used cognitive restructuring to diminish patients' anger. According to Deffenbacher (1995), this restructuring targets anger-engendering or -exacerbating appraisals, such as perceived injustice, and the controllability, intentionality, and blameworthiness of the harmdoer's behavior. The success of such interventions is consistent with theories claiming that anger is produced by appraisals of other-blame (e.g., Ortony, Clore, & Collins, 1988; Smith & Lazarus, 1993) or attributions of controllability and responsibility (Weiner, 1995).

Kubany and Manke (1995) propose that trauma-related guilt arises from hindsight-based perceptions (e.g., of personal responsibility, wrongdoing, and lack of justification) and recommend helping patients to more accurately assess their guilt-eliciting perceptions. Although the effectiveness of this approach has not yet been adequately tested, it is clearly congruent with analyses of guilt as elicited by appraisals of self-blame and attributions of responsibility (e.g., Ortony et al., 1988; Smith & Lazarus, 1993; Weiner, 1995).

As mentioned earlier, in recent years a number of psychologists have argued that shame is a factor in producing or maintaining eating disorders (see, e.g., Kaufman, 1989; Scheff, 1998). If this is true in certain cases, how could an appraisal theory be used to help design effective interventions? As shown in table 14.1, shame may be produced by appraisals of motive-inconsistency, caused by the self, intrinsic to the self, with relatively high control potential. Changing any of these appraisals could change the experienced emotion.

For example, reducing appraisals of motive-inconsistency should lessen shame (and all other negative emotions). Attempts to produce such appraisal shifts are included in the therapy for anorexia nervosa described by Vitousek and Orimoto (1993). Although they do not mention shame explicitly, Vitousek and Orimoto claim that anorexia nervosa may result when patients come to believe "that 'being too fat' is an important contributor to their personal distress" (p. 195). Among other goals, the authors' cognitive-behavioral treatment program attempts to change "the *evaluation* that thinness is desirable" (p. 210; italics in original).

An alternative strategy would aim to diminish shame by changing appraisals of self-agency. This too is represented in Vitousek and Orimoto's (1993) treatment program, which seeks to modify clients' "*attribution* that weight is under personal control" by providing "contrary data about set-point theory, the heritability of weight and shape, and the ineffectiveness of dieting" (p. 210; italics in original). Altering appraisals of self-agency, rather than appraisals of motive-inconsistency, might be particularly appropriate in cases where the fundamental stimulus to shame is not body image itself but an experience of sexual abuse (see Andrews, 1997), which prompts characterological self-blame. Changing appraisals of self-agency but not motive-inconsistency would leave the individual feeling negative emotion about the situation or other people perceived to have caused it (emotions that might be much more appropriate) but not self-directed negative emotion.

A third approach would aim to change the problem type appraisal from intrinsic (involving a perceived flaw or defect, e.g., in the self) to instrumental (involving a goal blockage or failure). According to table 14.1, changing only this appraisal would change the experienced emotion from shame to guilt. Although this would leave the individual experiencing a self-directed negative affect, one can argue that guilt may be an appropriate emotional response in some cases of self-caused goal blockage, which could help prompt corrective behavior (Izard, 1991; Mowrer, 1976). According to several authors (e.g., Tangney et al., 1995), guilt is also typically less toxic an emotion than shame, because it can be more easily alleviated by reparative action.

It would also be possible to try to change appraisals of control potential from high to low, which could change the experienced emotion from shame to regret (accord-

ing to Roseman, this volume). If along with this change, perceived self-agency was changed to other-person-agency, dislike would be experienced (toward the people perceived as causing the negative event; see figure 4.1 for a full delineation of which combinations of appraisals elicit which emotions according to this model and which changes in appraisal would result in which emotion changes). Whichever appraisal model one employs, these theories provide a way of predicting the differential affective consequences of alternative modifications in the evaluation of events, which may be useful in designing alternative treatment interventions and in tailoring interventions to particular individuals or patient groups.

As the foregoing examples illustrate, concepts found in appraisal theories are already being used in treatments for a wide variety of disorders, and additional applications may be identified by considering other cases where emotions may be maladaptive or contribute to dysfunction.

McCarthy, Brack, Brack, and Beaton (1997) have proposed a four-stage procedure for using the appraisal model of Roseman, Spindel, and Jose (1990) to help clients in therapy understand and alter their appraisals and emotions. In the first stage, the theory is explained, including the concept that appraisals are linked to emotions and the hypothesized relationships between particular appraisal patterns and particular emotions. In the second stage, clients apply the theory to emotional experiences that they have had, tracing back from an emotion to the appraisals that elicit or maintain it. In the third stage, proceeding from particular experiences, clients are encouraged to see whether they tend to make some appraisals rather than others and consequently experience only a restricted range of emotions. In the fourth stage, clients learn they may have options in appraising situations that would increase appraisal and emotion flexibility.

Brack, Brack, and McCarthy (1997) suggest that clinical supervisors can also use the model to help novice therapists understand emotions they themselves experience in doing therapy, and decrease their negative emotional responses. According to McCarthy, Lambert, & Brack (1997, p. 63), in clinical contexts "what is unique about appraisal theory is that it specifies what types of thoughts would have to be changed to experience other discrete emotions."

Treatment implications of different levels of processing. In addition to the treatment implications of appraisal theory hypotheses linking particular appraisals and emotions, the delineation of multiple levels of appraisal processes may make significant contributions to the treatment of emotional pathology.

Greenberg, Rice, and Elliott (1993) propose that *emotion schemata* are primary targets for therapeutic change. According to Greenberg (1993), to restructure an emotion schema, the schema must first be evoked, which may involve attending to sensations, expressions, images, and other experiential aspects of emotion, rather than purely conceptual aspects. Then information incompatible with the existing schema must be made available for a new schema to be formed. In this view, schematic processing vividly evokes an emotion, which makes a client's *core organizing beliefs* available and verbalizable. At that point, the therapist shifts to a more conceptual form of processing to produce a change.

Alternatively, if different disorders are produced by dysfunctions at different levels of processing, then they may be amenable to interventions tailored to those levels. For example, depression may be elicited and maintained primarily on the conceptual level (Mineka & Gilboa, 1998) and thus be more amenable to cognitive therapy techniques that focus on the detection and restructuring of false beliefs. In contrast, social phobias may be elicited more on the schematic level, through prototypical situations and events, such as oral exams (Öhman, 1993), and therefore require interventions that affect schematic processing.

Along the same lines, Power and Dalgleish (1997) propose a model in which emotions may be generated either by controlled or automatic processing. The most effective treatment for emotional dysfunction depends on which of these two "routes to emotion" is producing the problem. Cases in which emotional dysfunctions are generated or maintained via controlled processing should profit most from classic cognitive therapy approaches. As these techniques produce change through conscious learning, recovery can occur relatively quickly. Recovery is expected to be much slower for emotional dysfunction generated or maintained by automatic processing. In these cases, change is produced by associative learning and thus patients should profit more from exposure therapy.

These different routes to emotional dysfunction and its treatment may occur in different cases of the same disorder. For example, Power and Dalgleish (1997) distinguish between posttraumatic stress disorder (PTSD) cases in which individuals had extreme invulnerability beliefs that were "shattered" by a traumatic experience, processed consciously, and cases in which individuals had repressive coping styles that were overwhelmed by recurrences of trauma-related events, processed automatically. Power and Dalgleish predict that individuals with shattered beliefs would benefit more from cognitive therapy, whereas individuals experiencing automatically generated negative emotions would be helped more by exposure techniques.

Caveats about appraisal-focused treatment. Before going on, it is important to clearly state that as appraisals are not the only causes of emotions (Izard, 1993), appraisal-guided interventions are not the only ways or always the best ways to try to regulate emotions and emotional behaviors. Other approaches are especially needed when emotions are being produced by nonpsychological factors. For example, generally speaking, pharmacological interventions should be more effective for mood or anxiety disorders of biochemical origin.

However, as illustrated by the effectiveness of cognitive and cognitive-behavioral interventions in treating many cases of depression, anxiety, anger, and panic disorder (see, e.g., Clark et al., 1994; Dobson, 1989; Hollon, Shelton, & Loosen, 1991; Tafrate, 1995), the strategy of attempting to modify cognitive processes in order to affect emotion is often a very productive approach. Moreover, many problems have more than one cause. For example, a pattern of hostility and aggressiveness may be produced by a biologically based neuropsychological deficit, attentional problem, or difficult temperament, in combination with a tendency to blame others and attribute hostile intent when things go wrong (see, e.g., Crick & Dodge, 1994; Moffitt & Lynam, 1994). In such cases, appraisal-focused interventions may be an important component of a combined treatment approach designed to maximize therapeutic success (see discussion in Kazdin, 1998). Additional attempts to use appraisal-guided interventions can be expected to shed further light on both the circumstances in which they are useful and their limitations.

The Promise of Partnership

Much of our presentation to this point has emphasized the potential benefits to clinicians and clinical researchers of using appraisal theories to help explain, diagnose, and treat emotional dysfunction. Perhaps equally important are the lessons basic researchers can learn from attempts to utilize appraisal concepts in the clinic and in other applied settings.

One lesson concerns the richness and complexity of the processing that can be involved in producing emotion. Clinical psychologists from a variety of theoretical orientations have described and analyzed cognition and affect in individuals from many different diagnostic categories as well as from "normal" comparison groups. For example, a patient described by Wessler (1993) had learned from a critical mother to interpret having fun as a sign of frivolity and stupidity and stupidity as incompatible with being a good person, which made it impossible to have a good time without self-condemnation; this led her to feel depressed (in terms of table 14.1, because it seemed some motive-inconsistency was certain and there was nothing she could do about it). Another patient, described by Luborsky (1984, pp. 99–100), believed that if she let go of control in sexual situations she would become obligated to comply with her partner's wishes, which would destroy her enjoyment; but if she retained control in the face of what another person wanted, that person would feel deprived; these potential consequences (in table 14.1, uncertain motive-inconsistent outcomes, with low control potential) led her to feel anxious about sexual interactions with her husband.

Examples such as these, abbreviated here because of space considerations, indicate that to fully understand the process of emotion generation in many real-world situations, it is important to flesh out the cognitive and affective structures that can influence appraisal.

Clinicians and clinically oriented researchers have developed models of major types and variants of such structures. Among them are *schemas of the self, other people, and particular domains,* which organize and shape perception and appraisal of their objects (e.g., Beck & Emery, 1985); *role relationship models,* which represent the motives, characteristics, and actions of two or more people who are expected to interact in a particular pattern (Horowitz, 1987); and *core conflictual relationship themes,* which describe constellations of beliefs about responses of the self and others to a person's most important wishes (Luborsky, 1984). General models of appraisal can benefit greatly by integrating models, concepts, and content from these and other lines of relevant, sophisticated, and already quite advanced clinical work.

A second lesson concerns the importance of behavior as an input to appraisal. As practitioners of cognitive-behavioral therapies have demonstrated (e.g., Lewinsohn, Clarke, Hops, & Andrews, 1990; Ozer & Bandura, 1990), the behaviors that an individual is able to enact have a major influence on the events the person will experience and thereby, for example, on the experienced rewardingness of events (appraisals of motive-consistency) and perceived self-efficacy (control potential).[4]

A third lesson is that motivation can influence appraisal. As the concept of *defense* suggests, when appraising situations there may be strong incentives and disincentives for particular appraisal outcomes. For example, one may be highly motivated to perceive one's marriage as successful (motive-consistent), one's career aspirations as attainable (high control potential), and interpersonal conflicts as caused by other people rather than oneself (agency appraisals). Although Freud may have overstated the determination of cognition by motivation, many clinicians (see, e.g., Horowitz, 1998) would caution appraisal theorists not to make the opposite mistake.

A fourth lesson concerns the importance of the interpersonal context within which appraisals are made and might be modified. In clinical practice, even cognitively oriented clinicians stress the importance of a strong relationship as the environment within which cognitive change can be pursued (e.g., Sacco & Beck, 1995). Because of the social nature of much emotion elicitation and the social regulation of emotion, significant research on the generation of both normal and disturbed emotions should be conducted in social contexts, particularly *interactive* settings such as conversations, interviews, or therapy sessions (e.g., Bänninger-Huber & Widmer, 1996; Steimer-Krause, Krause, & Wagner, 1990).

Concluding comments. In this chapter we have proposed that appraisal theory's specification of cognitive and motivational determinants of many different emotions can be applied to help explain the etiology of both well-established and newly recognized patterns of psychopathology, provide differential diagnoses, and guide effective treatment. This makes appraisal theory of great interest and utility to clinicians of many different specializations and orientations.

In addition, the application of appraisal theories to clinical cases and the therapeutic enterprise (where theories claiming to specify causal relationships must confront the challenge of producing change) can inform appraisal theorists about what must be added to current models, so as to adequately represent the complex determinants of emotion-eliciting appraisals and the full range of factors that can influence emotions.

Notes

1. Barlow (e.g., Rapee & Barlow, 1993) contends that some anxiety disorders (such as panic disorder) are characterized by fear, while others (such as generalized anxiety disorder) are characterized by general negative affectivity.

2. Taylor and Brown (1988) have presented evidence that some "positive illusions" (overly positive views of the self, the future, and personal control over events) are associated with successful coping. The evidence has been challenged by Colvin and Block (1994), with a response by Taylor and Brown (1994).

3. Clark and Steer (1996) report that threat and danger cognitions have more reliably distinguished panic disorder, rather than generalized anxiety disorder, from major depression.

4. Behavior may also have direct effects on appraisal, as self-perception theory (e.g., Bem, 1972) would predict.