An overarching, comprehensive cognitive model of bipolar disorder as yet remains elusive. Nevertheless, recent advances in theory and research from a number of quarters have converged to give the field a clearer understanding of the role that cognition plays in the development and course of bipolar episodes. Current research on bipolar disorder focuses on such cognitive factors as attributional styles (Alloy et al., 1999); perfectionism, problem-solving deficits, and elevations in sociotropy and autonomy (Lam et al., 2000; Scott, in press); decision-making biases (Leahy, 1999); maladaptive schemas (A. T. Beck, Freeman, & Associates, 1990; J. E. Young, 1994, 1999); and “modes,” or integrated networks of cognitive–affective–behavioral functioning (A. T. Beck, 1996). These cognitive factors appear to be significant variables in the bipolar patient’s vicious cycle of problematic functioning, including interactions with (a) abnormalities in brain chemistry, (b) deleterious changes in behavior (ranging from the vegetative to the impulsive), (c) reactions to and creation of psychosocial stressors (e.g., major life events and interpersonal problems), and (d) disruptions in optimal chronobiological functioning, and in responsivity and adherence to medications. These disparate factors appear to aggravate one another in ways that are not yet fully understood, although our appreciation of their
interaction is leading the field toward the application of more comprehensive treatment packages, including cognitive therapy.

In this chapter, we endeavor to describe how the cognitive factors in bipolar disorder represent particularly fruitful areas for assessment and intervention. Understanding and using these factors can assist patients and clinicians in interrupting the cycles that otherwise might result in extreme affective symptoms and a deteriorating course (see Basco, 2000; A. T. Beck, 1996; Leahy & Beck, 1988; Lam et al., 1999; Scott, 1996a, 1996b, in press). First, we explain how the cognitive therapy treatment model can be explained to patients, and then we examine the current state of research and theory in this evolving, complex field.

PRESENTING THE TREATMENT MODEL TO PATIENTS

Therapists should not assume that patients who enter cognitive therapy already understand the cognitive model or the role that understanding cognition can play in helping them manage their disorder. Instead, it is wise for therapists to orient patients to the work of cognitive therapy, thus clearing up misunderstandings right from the start and helping patients to become effective and active participants in their own treatment (Basco & Rush, 1996).

"Diathesis–Stress" Nature of Bipolar Disorder

Therapists can start by acknowledging that bipolar disorder involves a “brain chemistry problem,” a notion with which many patients are generally familiar. They can also explain that manic depression is a “diathesis–stress” disorder, which means that the biological problem does not stand alone; it interacts with stress. Although stress is a broad, vague term, cognitive therapists ought to zero in on the notion that it is based heavily on subjective perception. In other words, part of the patients’ level of stress entails the psychological impact of their perceptions of themselves, their life events, and their future—the “cognitive triad” (A. T. Beck, 1976). Therapists can then emphasize to the patients that if they learn the skills of assessing and modifying their ongoing subjective interpretations (of these three important life areas), they gain efficacy in managing their bipolar illness in a host of ways, such as by

1. using cognitive skills to weigh against emotional waves and behavioral impulses,
2. improving hopefulness to reduce the risk of suicide,
3. weighing the pros and cons of important life decisions more methodically and with greater objectivity,
4. modifying perceptions of marital and family interactions, and
5. reducing the harmful sense of stigma and shame that is often associated with bipolar illness.

Teaching these skills is a significant boon to the overall treatment of bipolar patients and goes a long way toward improving the quality of their lives. That is precisely our intention in bringing an efficacious technology (cf. Dobson, 1989) and the human touch of cognitive therapy to the treatment of those with bipolar disorder.

Generally, the initial therapy sessions involve a mutual education process between patients and therapists, in which the patients (as part of their initial, diagnostic assessment) provide information about their personal history and the course of their illness. The therapists in turn offer information about bipolar disorder and the purpose and application of cognitive therapy for bipolar disorder, including what patients can reasonably expect. This can take the form of a verbal outline that includes the five points mentioned above or a formal, written handout (for excellent examples of patient education pamphlets, see Kahn, Ross, Printz, & Sachs, 2000; Lam et al., 1999). Identifying the hallmarks of cognitive therapy, including structure, collaboration, time effectiveness, and the use of homework, can be done in the first session, with repetitions for emphasis as therapy progresses. These areas are outlined below.

Collaboration, Structure, and Time Effectiveness

Patients in cognitive therapy quickly learn that their treatment is not a passive process. That cognitive therapy is a form of “talk therapy” does not mean it involves idle chitchat or stream-of-consciousness verbalization. Instead, cognitive therapy is an active collaboration between patient and therapist. Both parties should take great care to discuss high-priority issues, with an eye toward doing something about them, not just rehashing them.

Creating structure in therapy sessions is quite useful for bipolar patients, especially for those who have problems of low concentration and distractibility. Therapists might set up flexible routines in session, such as making an agenda, assessing the patient’s moods during the week, reviewing assignments, discussing topics in order of importance, using open-ended questions to facilitate alternative ways of thinking about situations, asking for feedback, and assigning new homework. Aside from the benefits that structure brings to therapy sessions per se, such organizational methods serve as excellent models for patients to use during the week, as they try to manage their lives and stay focused on priorities.

Therapists should make it clear (through verbal instruction and by example) that therapy works best when both parties are equal participants. Bipolar disorder is a formidable foe and cannot be easily dealt with “one
on one.” It requires “double-” and “triple-teaming,” with “defenders” including the practitioner, perhaps family members, and the patient. Two additional analogies might be used to describe the benefits of collaboration between therapist and patient. First, dealing with bipolar disorder is akin to moving a piano. One person probably cannot do it alone, but two or more people who are trained and coordinated can do the job. Similarly, therapy can be explained as being comparable to the “matching funds” concept in philanthropy, in which a single large contributor to a cause pledges to match the donations given by individual contributors. The more one side gives, the more the other pitches in, too. This is similar to therapy; the more the therapist works to help the patient, the more the patient must do to follow through. The more the patients do to help themselves, the more likely that the therapist is freed up to do more advanced cognitive therapy (rather than spend time in crisis management).

Time is a precious commodity in therapy, as in life, and therefore must be used well. Cognitive therapy is geared to manage time efficiently, by incorporating an agenda to shape each session, identifying a set of skills to be learned and practiced, and focusing on methods to enhance memory (e.g., taking notes, making summary statements, recording tapes of sessions for later review). With these techniques, patients accumulate knowledge and develop plans to use what they learn between sessions, through homework.

**Therapy Homework**

Therapy works best when it goes beyond social support and isolated revelations to include the learning of psychological skills that can be used at any time—in session and out of session, during the course of therapy and long after formal therapy has ended (Newman & Haaga, 1995). Although it is conceivable that these skills can be learned within the confines of the therapist’s office in 1 or 2 hours a week, there is a high risk that maintenance of such skills is minimal. This is analogous to a person who takes violin lessons but only touches the instrument during lessons. It is possible that the student learns some rudimentary skills, but he or she cannot go far without practicing. The inactive violin student cannot learn advanced techniques, gain exposure to an interesting repertoire, or gain a sense of efficacy in playing the instrument. Interest in the violin will fade. Similarly, students who take a college course without taking notes, writing term papers, or studying for the exams cannot become knowledgeable in the subject material. They may find the class to be an entertaining, enjoyable experience, but they do not learn much. Similarly, therapy should be more than just an enjoyable, validating experience (not that there is anything wrong with that!); it should also provide an enduring learning ex-
perience for patients. This requires homework, one of the essential ingredients of cognitive therapy (A. T. Beck et al., 1979).

Although it is not absolutely necessary for patients to do therapy homework to benefit from cognitive therapy, it is in their best interest to practice cognitive therapy skills between sessions. For example, there is evidence (e.g., Burns & Auerbach, 1992; Burns & Nolen-Hoeksema, 1991; Neimeyer & Feixas, 1990; Persons, Burns, & Perloff, 1988; Primakoff, Epstein, & Covi, 1989) that unipolar depressed patients who do homework have quicker response to treatment and better maintenance of therapeutic gains than do patients who avoid it.

We acknowledge that these are predominantly correlational data. It may not be the case that homework causes positive outcome. Indeed, it may be that a third variable, such as motivation to change, causes both adherence to homework and overall responsivity to treatment. Nevertheless, the link between homework and good outcome has intuitive appeal and may be even more important with bipolar patients than with unipolar depressive patients. Clinical problems such as mania, involving emotional lability and behavioral impulsivity, may require that patients overlearn new cognitive–behavioral skills, so they can apply them automatically even under emotional duress and in the face of the urge to act without inhibition. Clearly, overlearning something requires a great deal of repetitive practice, which cannot easily be accomplished without between-session assignments.

Self-Monitoring

Perhaps the most common, straightforward, multipurpose, effective homework assignment is self-monitoring. One of the goals of cognitive therapy is to help patients become more objective observers of their own functioning, and self-monitoring is an indispensable technique to use between therapy appointments. Patients are taught to keep a written log, such as a journal of automatic thoughts along with corresponding emotions and behaviors in key situations (often in the form of Daily Thought Records; A. T. Beck et al., 1979), as well as a list of their daily activities (Daily Activity Schedule; J. S. Beck, 1995).

More germane to bipolar disorder per se are any one of a number of self-monitoring forms that have been developed specifically to increase bipolar patients’ awareness of their symptoms, general functioning, and progress. For example, patients who use Mood Charting (Sachs, 1996) track depressive and manic mood shifts, hours slept, use of medications, and daily stressors. Over time, patients can view patterns in their functioning, noting their relation to such factors as seasonality, life events, and menstrual cycles. Similarly, Chronorecords (Whybrow & Bauer, 1991) involve daily (or twice daily) self-assessment of moods, sleep patterns, med-
ications, and environmental triggers for mood problems. Along the same lines, patients can keep track of their prodromal symptoms. Adapted from the work of Smith and Tarrier (1992), the Early Warning Signs card-sorting task (Palmer & Williams, 1997) allows patients to identify their individual “relapse signatures.” At the same time, the task provides an intellectually engaging way to learn about the norms for various symptoms, as experienced by those who are manic, depressed, and euthymic.

Advance Problem-Solving

Another important topic for homework assignments includes planning, preventing problems, and solving problems. For example, patients can be asked, as a homework assignment, to anticipate upcoming life events that will test their coping skills. To lower the risk of triggering a symptomatic episode, patients can (a) imagine the problem situation, (b) cognitively rehearse how they would have to talk to themselves to keep their emotional reactions within normal limits, (c) brainstorm and weigh the pros and cons of various courses of action they could take, (d) choose one or two of the best options, and (e) behaviorally rehearse their responses, perhaps through role-playing. Naturally, therapists help train and coach their patients to understand, develop, practice, and enact these kinds of advanced coping skills, and they do so with energy, enthusiasm, emotional support, and sometimes a bit of humor.

Maximizing Homework Adherence

Strategies to optimize homework assignments include the following:

1. Ask patients to rate their degree of confidence in following through with the assignment. If they say 0%, address their hopelessness. If they say 100%, ask them to consider the factors that might dampen their enthusiasm when they leave the office and how they would contend with them. If they answer with any figure between 0% and 100%, ask them to articulate the parts of their thinking that are confident and the parts that are not.

2. Suggest a few possible homework assignments and present the patients with a choice. Make the selection of homework a collaborative experience, and ask for the patients’ input in tailoring the assignment to fit their needs.

3. For those patients who have negative associations with schoolwork, call the between-session task something other than “homework.” If the patient has been involved in organized sports, call it practice; if the person is a musician or actor,
call it rehearsal; if the person is a scientist, call it a personal experiment. Aim for nonloaded terms.

4. Talk about the pros and cons of doing assignments between sessions and the pros and cons of not doing assignments (See Exhibit 2.1 for one of Trent's examples). Not only does this produce an interesting cost–benefit analysis of therapy homework, it also raises additional, clinically relevant issues such as low self-confidence, fear of facing issues, competition with the therapist, hopelessness, and other topics that are first-rate material for a therapy session.

5. Make sure that the instructions are clear. If helpful, suggest a specific day, time, and place where the patient may be most likely to follow through with the assignment.

6. Be willing to make a short telephone call to the patient during the week, as a prompt to do the assignment (if the patient does not think this is too intrusive or patronizing).

7. Engage in cognitive rehearsal in session, planning how the patients can follow through and discussing the steps they can take. In a role-play, the therapist can play the devil's advocate, telling the patients why they cannot or should not do

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**EXHIBIT 2.1**
Trent's Analysis of the Pros and Cons of Doing and Not Doing Therapy Homework

<table>
<thead>
<tr>
<th>Pro</th>
<th>Con</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doing Homework</strong></td>
<td></td>
</tr>
<tr>
<td>1. My therapist will stop reminding me.</td>
<td>1. It is drudgery; it is boring to do.</td>
</tr>
<tr>
<td>2. I'll get more therapy.</td>
<td>2. I'll feel inept.</td>
</tr>
<tr>
<td>3. I'll get better quicker.</td>
<td>3. It will be embarrassing showing it to my therapist.</td>
</tr>
<tr>
<td>4. I'll remember the important things from therapy.</td>
<td>4. It is time-consuming.</td>
</tr>
<tr>
<td>5. I'll have a sense of accomplishment.</td>
<td>5. I'll have to think about things that upset me.</td>
</tr>
<tr>
<td><strong>Not Doing Homework</strong></td>
<td></td>
</tr>
<tr>
<td>1. I can pretend I know more than my therapist knows.</td>
<td>1. I'll be limiting what I can get out of therapy.</td>
</tr>
<tr>
<td>2. I can procrastinate, which is my area of greatest expertise.</td>
<td>2. Once again, my laziness will mess things up in my life.</td>
</tr>
<tr>
<td>3. I can relax instead.</td>
<td>3. I'll have nobody to blame but myself if I don't understand the self-help skills.</td>
</tr>
<tr>
<td></td>
<td>4. My therapist will lose faith in me.</td>
</tr>
</tbody>
</table>
the therapy homework, and the patients can play the role of rational responder in favor of the assignment.

8. As with any intervention in cognitive therapy, ask the patient for feedback.

It is important that therapists not become discouraged when patients repeatedly choose to bypass homework. Many therapists are tempted to abandon the practice of giving homework to unreceptive patients. This is understandable but not therapeutically optimal. Therapists must not let their patients' nonresponsivity to homework extinguish their appropriate assignment-giving behaviors (Newman, 1994). Instead, therapists can show just how important the between-session assignments are by continuing to give them, even in the face of patients' noncompliance. Therapists can continue to address the issues of avoidance, hopelessness, lack of confidence, and so on. Furthermore, therapists can say, "I believe in the homework, so I am going to keep giving it. When you decide you want to give it a try, it will be there waiting for you."

Thus far, this discussion represents the basics of cognitive therapy, much of which can be used for a wide range of clinical populations. We provide more comprehensive reviews of intervention strategies for hypomania and mania in chapter 3 and depression and suicidality in the context of bipolar disorder in chapter 4. Now we turn our attention to some of the research and theory related to our treatment approach.

EMPIRICAL TESTS OF THE TREATMENT MODEL

Several studies that use treatment models closely related to the one presented in this text have provided support for the efficacy of cognitive therapy for bipolar disorder, both in group and individual modalities. For example, in a small, open pilot study in the United Kingdom, Palmer et al. (1995) used a repeated-measures design to study the benefits of an adjunctive 17-session group cognitive therapy for six bipolar patients. The four patients who successfully completed the treatment were assessed for changes in manic and depressive symptoms, as well as overall social adjustment. Although the pattern of change was not uniform for all patients, there was a significant general therapeutic change in the variables. A more recent group intervention was evaluated through a randomized, controlled trial at Massachusetts General Hospital (Hirshfeld et al., 1998). The group that underwent the adjunctive 11-session group cognitive—behavioral therapy had significantly longer periods of euthymia and significantly fewer new affective episodes than control patients treated with standard pharmacotherapy alone. This finding was maintained at follow-up as well.
In a randomized, controlled trial of individual cognitive therapy for bipolar disorder, Scott, Garland, and Moorhead (in press) studied the response of 29 treatment completers of the 6-month protocol (out of 33 who entered the program). The authors reported a number of encouraging findings. By and large, the patients had a highly favorable view of cognitive therapy; 26 patients indicated that they viewed cognitive therapy as a "highly acceptable" form of therapy and 23 patients agreed that they would recommend the treatment to others with bipolar disorder. Furthermore, over the course of the periodic self-assessments, medication non-adherence rates fell from 48% to 21%. Compared with patients receiving treatment as usual, those who received the additional cognitive therapy demonstrated improvements in global adaptational functioning as well as in several of their reported symptoms—especially the depressive symptoms. Scott and colleagues also noted that additional work is needed to improve the treatment, so that patients attend a greater proportion of their sessions, demonstrate improvements in manic symptoms that rival their improvements on depressive symptoms, and better maintain their gains at long-term follow-up. Given the cyclical nature of bipolar disorder, this latter criterion is especially important.

Perry, Tarrier, Morriss, McCarthy, and Limb (1999) used a brief cognitive therapy intervention (up to 12 sessions) with a large sample of bipolar patients, focused mainly on helping them to spot early-warning signs of relapse and to implement a self-help action plan. Perry and colleagues' trial succeeded in lengthening patients' interepisode intervals and in shortening hospital stays for manic episodes. Lam et al. (2000) ran a similar study using a somewhat longer period of treatment (up to 20 sessions over 6 months). The target group comprised bipolar patients who were experiencing relapses even though they were on mood stabilizers. Whereas the patients in the control group had treatment as usual, the experimental group received cognitive therapy, with great emphasis on relapse prevention. Lam and colleagues' data are extremely encouraging, in that the group receiving cognitive therapy was independently assessed to have fewer symptom episodes, better coping skills in response to early-warning signs of relapse, less hopelessness, and better medication adherence than the control group. Additionally, by the end of treatment the cognitive therapy group demonstrated significantly better general social functioning and a decreased need for neuroleptic medication than the control group.

CURRENT DIRECTIONS IN CONSTRUCTING A COGNITIVE MODEL OF BIPOLAR DISORDER

Developing a cognitive model for bipolar disorder involves reconciling a number of complications. For example, researchers have found that
similar cognitive biases underlie both unipolar depression and bipolar disorder (e.g., internal attributions for causality, all-or-none thinking, sensitivity to signs of personal failure and interpersonal rejection; cf. Alloy et al., 1999; Hollon et al., 1986; Lam et al., 2000; Reilly-Harrington et al., 1999; Scott, in press). In contrast to patients with unipolar depression, however, bipolar patients are capable of showing extreme valence shifts in the content of their thinking. For example, a bipolar individual may believe that he is a complete failure when depressed and that he is the world’s greatest genius when he is manic (Leahy, 1999). Thus, a cognitive model needs to account for the observation that bipolar patients demonstrate thought processes that look both like traits (i.e., long-standing predispositions) and states (responses to environmental triggers and biological activation). The cognitive model must also explain why some bipolar patients respond to stress by developing depressive symptoms whereas others become manic. Likewise, the model needs to explain why only certain kinds of positive events—namely, those involving goal-directed pursuits—have been found to predict mania, whereas general positive events have not (Johnson, Sandrow, et al., 1999).

A cognitive model also must take into account the biological processes that are inherent in extreme changes in mood and behavior seen in bipolar sufferers. One question is whether these patients’ extremes of thought, faulty judgment, and difficulties in decision-making are merely the result of autonomous biobehavioral processes, are a part of a causal feedback loop, or perhaps are fundamentally tied together as different perspectives of the same mind–body process. The implications of this question are most important. We hypothesize that cognitive factors are not simply secondary peripheral signs of bipolar disorder but rather constitute their own diatheses for the development of symptoms (see Alloy et al., 1999) and are an integral part of the causal cycle of factors (see Basco, 2000). If this conceptualization is true—as we have posited for other psychological problems such as personality disorders (see A. T. Beck, Freeman, & Associates, 1990; Layden et al., 1993)—then it should be possible to design powerful cognitive interventions that can have a therapeutic effect on the biobehavioral course of the illness.

Yet another important topic that a cognitive model has to address is the role of life events and environmental stressors, whose links to unipolar depression and bipolar disorder (along with other diathesis–stress disorders) have been well documented (e.g., Ellicott et al., 1990; Hammen et al., 1992; Hammen, Ellicott, Gittlin, & Jamison, 1989; Johnson & Miller, 1997; Johnson & Roberts, 1995; Reilly-Harrington et al., 1999). In summary, a good, working cognitive model of bipolar disorder needs to provide a conceptual bridge among biology, beliefs, and behaviors; between environmental triggers and the patients’ unique interpretations of these events,
and between cognitive "traits" and cognitive "states." This poses an exciting challenge. We hope to give a foreshadowing of the construction of this model in the review below.

Cognitive Traits: Beliefs, Schemas, and Modes

Our model of bipolar disorder proposes that patients' belief systems, or schemas, interact with their spontaneous perceptions of current, activating events (e.g., significant life events or other situations). The result is a powerful subjective experience that interacts with the patients' biological state to determine their affect and behavior. When activated, long-standing schemas (cognitive traits) influence information processing by directing the individual toward information consistent with the schema and by overvaluing this information. Thus, a negatively valenced schema is activated during the depressed phase, directing memory retrieval toward events of loss or rejection and focusing current attention on the possibility of failure. In the manic phase, a positively valenced schema is activated, and it is likely to lead to problematic decision-making by selectively ignoring the need for appropriate caution and inhibition. The irritability so commonly seen in manic patients may indicate their simultaneous struggle with the implications of the opposite, negatively valenced pole of the schema. This irritability and awareness of both positively and negatively valenced schemas may be especially pronounced in mixed states.

When we understand the diagnostic issues pertinent to a given patient, we can draw important, general assumptions about the course of treatment that is required. A diagnosis alone, however, may not tell us much of what we need to know to provide individualized treatment to a given bipolar patient. This is where a cognitive case conceptualization comes to the fore. A solid grasp of the cognitive assumptions and schemas that comprise patients' perceptions of themselves, their worlds, and their futures—the cognitive triad—helps therapists to demonstrate accurate empathy for the patients' experiences. Additionally, knowledge about individuals' cognitive triad helps therapists to hone in on the assumptions and schemas that are causing the most distress and dysfunction. Furthermore, such knowledge can serve as a mental road map to predict how patients might change—for better or worse—if they modified their schemas in various ways. In summary, the best case conceptualizations allow therapists to understand

1Frequently used terms such as beliefs, core beliefs, assumptions, schemas, early maladaptive schemas, and so on have been used in varying fashion in the cognitive therapy literature, thus causing some confusion. All of these terms reflect cognitive processing and cognitive content that are "below" the level of spontaneous, surface, automatic thoughts. Our view is that the term schema is useful in describing fundamental, core, negative beliefs that implicitly guide patients' cognitive processing (and therefore their affective, physiological, and behavioral reactions). We also use the terms beliefs and assumptions interchangeably to reflect general points of view that patients maintain across situations.
patients’ phenomenology (e.g., how they view the world through the lenses of their schemas), to empathize accurately, to identify problems to be solved (e.g., the unintended, negative consequences wrought by their schemas), and to make predictions about the patients’ future functioning given therapeutic changes.

**Etiologic and Descriptive Characteristics of Schem**

Early in life, people begin to make sense of their world by drawing certain conclusions about themselves and others and their relationship to the world (e.g., Rosen, 1988). This forms the first two parts of the cognitive triad; children’s concepts of the future (the third part of the triad) arguably come later, as they begin to make abstractions about things they cannot grasp or see directly. These conclusions, such as “I am cared for and loved” and “I can do some things for myself,” develop into general assumptions that developing children maintain as part of their ongoing, general cognitive processing. Such understandings are so basic and fundamental that they are not noticed by those who hold them—they are simply the underlying “truths” on which other conclusions about further life experiences are formed.

The above examples are positive assumptions, presumably based on a safe environment with secure attachments. These form the basis of a self-view and a worldview that may insulate children from undue anxiety and dysphoria as they develop and mature. Unfortunately, the early experiences of many children are not safe and secure. A host of life events, both acute and chronic, can lead children to draw much less favorable conclusions about themselves, their caregivers, and the world. When children face such problematic events, they become at risk for developing what J. E. Young (1994) has dubbed “early maladaptive schemas,” which we refer to simply as schemas. The experiences that shape the formation of schemas are many and varied. The following are but a few examples (hypothesized schemas are in italics): (a) early loss of one or both parents, leading to a sense of abandonment; (b) emotional or physical neglect, leading to emotional deprivation; (c) early physical illness, leading to parental overindulgence, exaggerated dependency, and a sense of entitlement; (d) regular, harsh criticism received from unhappy, unempathic caregivers, leading to excessive self-criticism and a feeling of being incompetent or defective; (e) rejection by caregivers, such as when a child is shuffled between foster homes, with the child concluding that he or she is unlovable; (f) abuse by caregivers or others in whom the child placed his or her faith, leading to pronounced feelings of mistrust; (g) fear of a raging, chemically dependent parent, resulting in ongoing experiences of subjugation, mistrust, and fear of being abandoned; and (h) denial or invalidation of one’s experiences and coercion into adopting the family’s “party line” for the sake of public appearance,
leading to a *lack of individuation* schema. This latter schema is often seen
in the children of highly enmeshed families and may be prevalent in fam-
ilies that demonstrate high expressed emotion and negative affect.

The above examples, which may appear cut-and-dried or simplistic,
are offered for illustrative purposes. The development of schemas is seldom
tied so neatly to specific life events. Some children experience traumas
but have sufficient resources and support to avert the development of problem-
atic schemas. Others experience stressors no different from the normal
tumult of childhood and adolescence, yet they develop multiple maladap-
tive schemas. Some patients with bipolar disorder develop a number of
maladaptive schemas; others develop fewer. Our point is to illustrate rea-
sonable etiological factors that therapists and clients can discuss as part of
their attempt to make sense of the patients' cognitive (and thus emotional)
vulnerabilities.

That bipolar disorder runs in families increases the odds that children
who are genetically at risk for bipolar disorder grow up in a household with
parents or siblings who suffer from affective disorders, perhaps with serious
comorbid disorders. This may increase the chances that at-risk children
suffer the kinds of experiences that may make them more vulnerable to
bipolar episodes later in life. We view the development of schemas and
modes, or clusters of schemas, as being a particularly important vulnera-
bility factor for emotional disorders.

As children develop into adolescents and young adults, their schemas
may not only cause undue emotional distress that is not commensurate
with the situation but also may create their own vicious cycles that are
self-sustaining. In other words, schemas are hypothesized to contribute to
people using faulty coping strategies (sometimes called *compensatory stra-
tegies*; J. S. Beck, 1995) that reinforce and perpetuate the very problems
that support the formation of the schemas in the first place. This is known
colloquially as the "self-fulfilling prophecy" and is a common clinical phe-
nomenon observed in patients with serious affective disorders, anxiety dis-
orders, personality disorders, and other psychiatric problems.

Although it appears clinically that maladaptive schemas that develop
early in childhood have the most devastating consequences in adulthood,
higher order belief systems that develop in adolescence or adulthood can
also be damaging to the self-esteem and hopefulness of bipolar patients
who have watched their psychological functioning decline or become err-
atic. For example, patients may have been self-confident and interperso-
ally successful prior to their first manic episode, only to have their self-
image badly shaken by the consequences of reckless behavior. They may
now believe that "My best days are behind me" and "I will be an emotional

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1However, as we note, there is ample evidence that the activation of schemas and related
modes of functioning is often related to specific life events.
invalid the rest of my life.” Such beliefs that develop later in life may not be as “core” or pervasive as a “defectiveness” schema that emerges from childhood. Nevertheless, these beliefs may have deleterious effects on the patients’ willingness to invest in the difficult work of therapy and to tolerate the side effects of medications. If cognitive therapists can help them to modify such self-condemning, hopeless beliefs, then they increase the chance that the patients are more active in pursuing a well-conceived course of treatment.

**Modes**

When bipolar patients are in the throes of a serious, symptomatic episode, their patterns of functioning seem to be all-encompassing and thus beg for a description of the phenomenon that goes beyond schemas alone. The concept of modes (A. T. Beck, 1996) is an important conceptual development in the cognitive conceptualization of psychiatric disorders. Modes are defined as integrated cognitive–affective–behavioral networks (e.g., powerful combinations of schemas; overlearned behavioral habits; and intense, difficult to modulate emotions) that produce synchronous responses to life demands and provide a mechanism for implementing internally driven goals. When schemas—and, at a more macro level, modes—are activated by life events, chronobiological disruptions, or other factors, the bipolar patients’ predispositional “traits” become expressed as a “state,” as evinced by extremities in emotional and behavioral functioning.

Although these states (whether they are depressive, manic, or mixed) are time-limited and thus may change, the underlying traits remain fixed unless met with powerful interventions. For example, psychopharmacological interventions can activate or inhibit modes and thus influence patients’ states (A. T. Beck, 1996). Both cognitive therapy and pharmacological treatment can lead to improvements in patients’ functioning, but we do not view them as equivalent in action. Our view is that medication can discharge or inhibit a dysfunctional mode, thus leading to an improved state of mind, but it cannot produce durable changes in the meaning structures that patients ascribe to themselves, their worlds, and their future. Thus, even with medication, a patient with bipolar disorder retains cognitive traits, which remain as vulnerability factors for future activation of symptomatic episodes (cf. Scott, Stanton, Garland, & Ferrier, 2000). Altering these traits is an important goal of cognitive intervention. By doing so, we hypothesize that we can therapeutically alter the more all-encompassing modes of functioning in an enduring fashion.

**Intensity of the Charge**

The activation of schemas and modes does not occur with uniform intensity for all patients or for a given patient in all situations. The inten-
sity of the “charge” determines the power of the activation (A. T. Beck, 1996). A very intense negatively or positively charged activation may result when schemas were developed at an earlier age and when the patient encounters a life situation that provides a particularly apropos “match” with the schema. This intense activation likely is worsened by biological factors, which are themselves exacerbated if the patient experiences early onset of symptoms without prompt or adequate treatment. Alternatively stated, a schema’s or mode’s charge is a combined function of the patient’s historical experiences regarding the etiology and maintenance of cognitive traits, the salience of the situational stressors at a given time, and the extremity of the patient’s biological dysregulation.

Bidirectionality in the Expression of the Schemas

It is important to assess patients’ schemas regardless of their presenting symptoms. The patient who presents with manic grandiosity may have the same maladaptive schemas of “unlovability” or “incompetence” as a depressed patient but presented in inverse fashion. Bipolar patients seem to maintain consistent, maladaptive schemas that simply shift polarity (i.e., into a new state) along with their moods. Therefore, when individuals who have an unlovability schema (cf. Layden et al., 1993; J. E. Young, 1999) are in the throes of deep despair, they may think that they are hated by all humanity, but when they become manic, they may switch to believing that they are worshipped universally. Later, as a result of successful cognitive therapy that modulates the unlovability schema, we would expect a reduction in the breadth of this cognitive and emotional swing, because both poles would be somewhat moderated.

It is the cognitive therapist’s responsibility to assess and conceptualize patients’ unique patterns of schemas (and the historical events linked to them). This enables both therapists and patients to begin to predict when patients are at greatest risk for significant shifts in modes of functioning. After the schemas are identified, they can be modified, and as the amplitude of the dysfunctional swings in bipolar patients’ functioning is reduced, therapeutic progress is made.

Assessing Schemas: Targeting Long-Standing Cognitive Vulnerabilities

Maladaptive schemas are associated with strong, negative affect across a wide range of situations, as well as difficulties in therapeutic change. There is evidence, at least with unipolar depressive patients, that changes in the deeper, negative beliefs can reduce the likelihood of symptomatic relapses in the future (Evans, Hollon, et al., 1992; Hollon, DeRubeis, & Seligman, 1992). With bipolar patients, we hypothesize that modification of schemas helps delay the onset of new episodes and reduces the duration and severity.
An inventory designed to measure beliefs—some maladaptive, some not—is the Dysfunctional Attitudes Scale (Weissman & Beck, 1978). This 40-item self-report inventory is designed to detect dysfunctional belief systems that are believed to increase patients' vulnerability to affective disorders. Participants are asked to agree or disagree with each belief on a 7-point Likert scale. Clinicians can peruse the maladaptive beliefs that patients endorse and the adaptive beliefs with which they strongly disagree and can look for patterns that may suggest the existence of problematic schemas. Examples include, "If I fail partly, it is as bad as being a complete failure," "I am nothing if a person I love doesn't love me," and "If I am to be a worthwhile person, I must be truly outstanding in at least one major respect." When patients agree with a belief or two (in the extreme) in isolation, this is not necessarily a compelling indicator of schemas. Likewise, when patients agree with clusters of beliefs but in moderation, this, too, is a weak sign of schemas. However, when patients agree with clusters of dysfunctional beliefs, this is a red flag for the existence of maladaptive schemas.

Within the past decade, questionnaires have been designed to assess schemas commonly associated with personality disorders. Two of these are the Schema Questionnaire (J. E. Young, 1994) and the Personal Beliefs Questionnaire (A. T. Beck, Butler, Brown, Dahlsgaard, Newman, & J. S. Beck, in press). The former examines how patients weight certain categories of predefined schemas, such as unlovability, mistrust, abandonment, and incompetence, whereas the latter looks for patterns in beliefs that are hypothesized to map onto the various personality disorders. Taken together, these self-report inventories can make therapists aware of the long-standing patterns of patients' fundamental understanding of themselves and their world. Thus, therapists can spot areas of vulnerability and can devise treatment plans to modify these problematic beliefs.

Regardless of the psychometric instrument or interviewing technique used, cognitive therapists assess the extremity and strength of endorsement of their patients' belief systems. One of the central strategies of cognitive therapy is to moderate patients' beliefs, so that the patients take a broader perspective, reduce the magnitude of affect (e.g., dysphoria, anger), and improve their ability to deal constructively with stressors. As bipolar patients accomplish these general goals, their level of perceived stress is diminished. As patients practice the psychological skills they learn over time, through therapy homework, they become less vulnerable to affective episodes in the future, even when significant stressors occur.

Life Events and Their Interactions With Cognitive Factors

What are the psychosocial factors that contribute to the activation of bipolar symptoms, including strikingly polarized thinking? There are
compelling data that significant life events, such as those bringing hardship or major life changes, are linked to an increased onset of affective episodes in bipolar disorder (Ellicott et al., 1990; Hammen & Gitlin, 1997; Johnson & Miller, 1997; Johnson & Roberts, 1995). However, it appears that patients' cognitive styles play an important interactional role (Alloy et al., 1999; Reilly-Harrington et al., 1999). For example, in combination with negative life events, people with maladaptive thinking styles are more apt to develop affective symptoms, including both depressive and manic episodes.

The finding that negative life events can trigger mania—not just depressive episodes—is most intriguing (Johnson & Roberts, 1995; Reilly-Harrington et al., 1999). Manic-depressive people may be particularly vulnerable to stressful life events, especially if they maintain problematic schemas that serve to magnify the negative implications of these triggers. They may respond to these negative life events by drawing excessively harsh conclusions about themselves and hopeless interpretations for their future. The resultant stress could then lead to a combination of deleterious biological reactions, along with behaviors that may tax their physical well-being even further (e.g., loss of sleep, giving up, allowing problems to accumulate). The outcome of this process may well be expressed in the sort of biological dysregulation that results in manic symptoms, even though the environmental triggers were negative. One hypothesized mechanism is that troublesome life events that trigger sleep disruption are more apt to lead to mania than those that do not (Malkoff-Schwartz et al., 1998). It is vitally important for cognitive therapists to teach their bipolar patients to identify and respond adaptively to stressors and to identify early warning signs of symptoms. With prompt intervention, it is possible that manic responses can be circumvented or at least attenuated.

**Attributional Styles**

Research from attribution theory has found empirical support for a mediating link between life events, predispositional cognitive factors, and the activation of the bipolar symptoms (whether depressive or manic). This connection is particularly evident for bipolar patients who tend to make internal, global attributions for significant life events (Alloy et al., 1999; Leahy, 1999; Reilly-Harrington et al., 1999). This may lead people with manic depression to see themselves as being in greater control of (and more responsible for) their important life events than objective evaluation would warrant. A clinical implication of these findings is that it is potentially corrective to help patients understand that some life situations are outside of their direct control and not reflective of their characters. When balanced against an accurate appraisal of their problem-solving skills, such external, specific attributions may help patients take
situations “in stride” and keep more of an even keel. This militates against undue mood swings.

Interestingly, there is some evidence that negative thinking patterns in patients with unipolar and bipolar depression are quite similar to each other and are stable over time (Alloy et al., 1999; Reilly-Harrington et al., 1999). Therefore, when bipolar patients switch from their depressive to their manic phases, they still maintain the negative attributional styles they exhibited when they were in their depressed phase. Alloy and colleagues (1999) wrote, “These findings are compatible with traditional psychodynamic formulations suggesting that cyclothymics’ and bipolar individuals’ hypomanic or manic periods are a ‘defense’ or counterreaction to underlying depressive tendencies . . .” (p. 36). It also highlights the importance of teaching patients to be as objective as possible in appraising their life situations, so that their cognitive styles do not unduly magnify their levels of affect that are already so difficult to manage in the context of the bipolar illness.

Another interesting clinical and research question to ask is, “In the absence of obvious, normative life stressors, do patients’ maladaptive cognitive styles create the subjective equivalence of significant life changes?” In other words, is it possible that the onset of depressive or manic episodes may appear to be spontaneous—as in the case of relapses in the middle and latter course of the illness—yet be at least partially attributable to the self-induced stress of viewing everyday situations as hopeless, catastrophic, requiring “100%, driven effort,” or the like? If support is found for this hypothesis, it has potential implications for the kindling hypothesis of bipolar disorder, in that the seemingly physiological “autonomous” nature of later symptomatic relapses may be postponed, muted, or avoided altogether through the use of cognitive coping skills. If we help bipolar patients reduce their tendency to think in ways that create self-induced stress, we may be able to decrease the likelihood (and amplitude) of mood problems.

Sociotropy–Autonomy Dimensions

Another area of potential convergence of research on patients’ personality characteristics, schemas, and stressful life events is the study of the sociotropy–autonomy continuum, using the scale that bears its name (Sociotropy–Autonomy Scale; A. T. Beck, Epstein, Harrison, & Emery, 1983). Patients with high degrees of sociotropy are hypothesized to be vulnerable to affective disorders when they are confronted with interpersonal difficulties and losses, whereas those with a high degree of autonomy are thought to be more vulnerable when their sense of freedom and achievement is thwarted. Hammen and colleagues (1989) found support for this theoretical assumption in a sample of unipolar depressive patients, but found ambiguous results in a smaller sample of bipolar patients who
had become symptomatic during the course of the study. The authors argued that a clearer picture may develop only over a longer period of time, when more of the bipolar patients experience recurrences. Fingerhut (1999) followed up on this line of research and found that bipolar patients with a high degree of sociotropy required minimal interpersonal stress to influence their time to relapse. By contrast, patients with low sociotropy did not show this vulnerability. Instead, only high levels of interpersonal stress influenced the course of their illness. In general, when patients with low and high levels of sociotropy were combined, the median time to relapse for participants with interpersonal life events was more than 4 months shorter than it was for participants without interpersonal life events. Although these findings are not statistically significant, they represent a statistical trend in support of the general hypothesis that interpersonal life stressors can influence affective relapse. Lam and colleagues (2000) reported that bipolar patients demonstrated an interaction between their perfectionist beliefs about achievement and autonomy, and life events in which they found themselves having to work hard to compensate for previous failures. The result was overdriven behavior that risked spurring on new symptomatic episodes, including mania.

The constructs of sociotropy and autonomy are not orthogonal, and patients can load heavily on neither or both, as the bipolar patients in the Scott et al. (2000) study demonstrated (they were high in both the need for social approval and perfectionism). The tendency toward a high degree of sociotropy may be associated with the schemas of unlovability, abandonment, and dependence. Therefore, we would expect that patients with an unusually high need for interpersonal affiliation are especially vulnerable to rejection, so that they may experience situations involving interpersonal discord and loss as representing personal catastrophes. The result may be an elicitation of affective symptoms hypothesized to be associated with a sense of being unloved, alone, and helpless. Because this represents an area of particularly high subjective stress for markedly sociotropic individuals, we would expect that it would bring about relapse in this type of bipolar patient.

In like fashion, the tendency toward a high degree of autonomy may be associated with schemas of incompetence, defectiveness, and perhaps mistrust as well. For example, when a highly autonomous bipolar patient witnesses the business that she created while manic fail and go bankrupt, she may experience more than simply the stress that goes along with financial loss. She may be prone to feeling supremely incompetent, and her personal sense of failure may be a further trigger for significant affective symptoms, such as a deep depression. In addition, patients who believe that their relatives and therapists are needlessly discouraging them from pursuing their flight of ideas and goals may react with a schematic level of mistrust. In other words, they may not see others as showing concern in
their best interest; rather, they may interpret others' cautionary comments as stemming from jealousy and a deliberate attempt to sabotage their success. The resultant anger and frustration may become the emotional stressors that further hasten or exacerbate the manic symptoms, especially the characteristic irritability.

Decision-Making and Goal-Directedness

One of the most obvious and salient ways in which bipolar patients demonstrate the contrasts between their negatively and positively biased modes of thought, affect, and behavior is in their decision-making. Leahy (1997, 1999, 2000) has explicated a risk management model to highlight these differences. Using a financial portfolio analogy (cf. Bodie, Kane, & Marcus, 1996), Leahy demonstrated how depressive thinking is characterized by an extreme aversion to risk, to the point where patients cut themselves off from opportunities to improve their lot, even if it means accepting an unfavorable situation. Patients who are deeply dysphoric may be loath to try to take action to improve their situation, fearing that they can only make things worse by changing course. These patients present as being helpless, see no point in putting themselves out to do therapy homework, and do not show up for sessions that they see as doing nothing more than stirring up trouble. At the other extreme we have manic individuals who crave excitement and thus minimize or deny the existence of risk in a frantic attempt to attain and use all possible opportunities for gain. These patients feel so in control of their lives as to make therapy seem superfluous, and they interpret their therapists' attempts to collaborate in problem-solving as being tedious, unimaginative exercises in conformity and mediocrity.

Of course, the situation would be difficult enough if the bipolar patients remained in just one of these extreme, biased states of decision-making. For example, unipolar depressive individuals may be "stuck" in old self-preservation modes that give them little joy but are predictable. Manic individuals may be wreaking havoc on their lives, but at least they experience the thrill of the moment and the hindsight bias of thinking that the fun made it all worthwhile despite the trouble. Unfortunately, the shifting from depressive decision-making mode to manic decision-making mode is even more problematic.

Anecdotally, we have heard bipolar patients complain that when they feel high, they feel pressured to make up for lost time—the time they had spent in depressive, inert states, letting their lives stagnate (cf. Lam et al., 2000, for similar findings). This just fuels the pump of emotions and stretches their extremes of risk-taking even more. Similarly, patients in the depressive state have lamented to us that they rue the days when they made their mania-driven choices, as they now try to hold onto what little
semblance of resources and order remain in their lives. In other words, manic-depressive individuals do not even get to have the “luxury” of holding on to their old, familiar dysfunctional ways of coping. Each mood swing brings with it its own set of maladaptive decision-making processes that go against the grain of the previous state of mind. They cannot “settle in.” One of our patients likened herself to Sisyphus, who was forever doomed to push the boulder up the hill, let it fall back, push it back up the hill, watch it fall down, on and on, for all time. Clearly, our cognitive interventions must target the extremes of decision-making that support this demoralizing process and must offer a technology of problem-solving that splits the difference between risk denying and risk aversion.

Bipolar disorder is sometimes characterized in terms of the dysregulation of the affective, or more precisely the hedonic, system, which plays a major role in the initiation, maintenance, and inhibition of behavior. Some intriguing and important research relating to the above pertains to the role of the “behavioral activation system” (Depue & Iacono, 1989; Gray, 1990; Johnson, Sandrow, et al., 1999; Meyer, Johnson, & Winters, 1999) in bipolar disorder. The behavioral activation system is a hypothesized neurobehavioral system that has been linked to dopaminergic pathways in the ventral tegmental area (Depue et al., 1996). Dysregulation of the behavioral activation system, specifically excessive activity, may be associated with a person’s becoming too focused on incentives and goal-related activities. Thus, patients in the throes of a manic state could scarcely turn down the opportunity to strive for achievement and pleasure, even at the expense of their health, financial standing, and social reputation. In fact, the manic patient would not perceive these risks as being significant, and therein lies a major part of the problem. Hence, the cognitive therapist’s role here is to assist hypomanic (and even manic) patients in making more normative appraisals of the costs and benefits in pursuing their identified, ambitious goals. The intent is to give patients cognitive “brakes” to slow down their over-responsive behavioral and hedonic systems, perhaps just enough to stave off further life consequences that could lead to more stress and exacerbated symptoms. Because cognitive processing is part of the hypothesized vicious cycle of factors that drives manic depression, cognitive therapists constantly look for ways to break this cycle through a wide range of standard and specialized interventions (see chapters 3 and 4).

CONCLUSION

Cognitive factors represent a significant part of the vicious cycle of interacting variables that comprise the syndrome of bipolar disorder; other factors include neurobiochemical dysregulation, behavioral extremes, and
psychosocial stressors (both causal and consequent). The cognitive variables have been described in a number of ways in the literature, from attributional styles to schemas to all-encompassing modes of functioning that become activated under certain conditions. Regardless of how cognitive factors are presented, their assessment and modification can serve as enduring, therapeutic brakes to attenuate the overall bipolar process, especially if patients learn to implement cognitive self-help skills at the early signs of symptom onset.

The cognitive therapy treatment model is most effective when patients are full partners in the process. This is accomplished best when therapists educate patients about the diathesis–stress nature of bipolar disorder, structure the sessions in a time-effective manner, socialize patients into the model of cognitive therapy, apprise them of the rationale for interventions, and collaboratively design homework assignments that increase their sense of skill and autonomy. A growing number of outcome studies are providing evidence of the efficacy of cognitive therapy in improving the condition of bipolar patients significantly above and beyond treatment as usual.

An assessment and understanding of beliefs and schemas (e.g., using inventories such as the Dysfunctional Attitudes Scale, Sociotropy–Autonomy Scale, Personal Beliefs Questionnaire, and Schema Questionnaire) can help advance therapists' individualized cognitive case conceptualization, thus assisting them in identifying the cognitive traits that comprise areas of personal vulnerability in bipolar patients.