Chapter 2
Cognitive Theories and Their Clinical Implications

This chapter describes cognitive theories that underpin evidence-based protocols for treating mood, anxiety, and related disorders and spells out clinical implications of those theories. I focus in detail on the cognitive theory developed by Aaron T. Beck because it underpins a large number of ESTs. The therapist will want to understand Beck's theory thoroughly in order to be able to use it flexibly to guide case conceptualization, treatment planning, intervention, and other clinical decision-making. The chapter also provides brief accounts of other cognitive theories and therapies. At the end, the chapter provides an overview of the use of cognitive theories, especially Beck's theory, to guide formulation and intervention.

BECK'S COGNITIVE THEORY AND THERAPY

Beck's cognitive theory (A. T. Beck, 1976) proposes that we all have deep cognitive structures called schemas that enable us to process incoming information and interpret our experiences in a meaningful way (A. T. Beck, Rush, Shaw, & Emery, 1979). Symptoms of psychopathology (*emotions*, *cognitions*, and *behaviors*) result when pathological *schemas* are activated by *stressful events* (see Figure 2.1).

[insert figure 2.1 about here]

Beck (1976; Beck, Rush, Shaw, & Emery, 1979) first proposed his cognitive theory as an account of depression and he and others have since adapted it to account for a wide variety of disorders and problems, including anxiety (A. T. Beck, Emery, & Greenberg, 1985), schizophrenia (Kingdon & Turkington, 2005), bipolar disorder (Basco & Rush, 1996; Newman, Leahy, Beck, Reilly-Harrington, & Gyulai, 2002), chronic pain (Morley, Eccleston, & Williams, 1999), irritable bowel syndrome (Greene & Blanchard, 1994), somatoform disorder (Looper & Kirmayer, 2002), personality disorders (A. T. Beck, Freeman, Davis, & Associates, 2004), bulimia nervosa (Whittal, Agras, & Gould, 1999), anger (R. Beck & Fernandez, 1998), suicide (Brown et al., 2005), marital distress (Dunn & Schwebel, 1995), and substance abuse (A. T. Beck, Wright, Newman, & Liese, 1993).

Flowing directly from his theory, Beck developed a therapy that treats psychopathology by intervening to change the automatic thoughts, behaviors, and schemas that cause unpleasant emotions and to change the relationships among them. Some interventions also target the events and situations that trigger schemas to cause symptoms. Because automatic thoughts, behaviors, and emotion are reciprocally causal, changes in automatic thoughts or behaviors are expected to lead to changes in emotion. Changes in schemas are expected to reduce the number, likelihood, and intensity of future episodes of illness.

EMPIRICAL SUPPORT FOR BECK'S THEORY AND THERAPY

An exhaustive review of the evidence base underpinning Beck's theory and therapy is not possible here. Instead, I provide a brief overview of the literature and I highlight some important and illustrative studies.

Studies conducted to test Beck's theory have produced results that are by and large supportive of the theory (D. F. Haaga, Dyck, & Ernst, 1991; R.E. Ingram, Rand, Garratt, & Sawalani, in press; Whisman, 1993). However, most tests of the theory provide only correlational data (e.g., demonstrating that negative emotions and distorted thinking occur together). Relatively few studies have been conducted to test the causal hypotheses of the theory largely because these studies are so difficult to conduct. One such hypothesis is that schemas, when activated by life events, lead to the development of symptoms (Gotlib & Krasnoperova, 1998). Support is strongest for depression (Scher, Ingram, & Segal, 2005) and anxiety, which have been more extensively researched than other problems.

Efficacy data from randomized controlled trials (RCTs) for many of the disorders and problems listed above generally show that Beck's cognitive therapy (CT) is superior to wait list and equal but not superior to pharmacotherapy and other active treatments (see recent reviews by (A. C. Butler, Chapman, Forman, & Beck, 2006); (Hollon & Beck, 2004). Emerging evidence shows that for depression and some anxiety disorders, CT provides better protection from relapse than pharmacotherapy (A. C. Butler et al., 2006; Hollon et al., 2005). For several disorders, cognitive therapy has best outcomes when it is paired with pharmacotherapy (e.g., schizophrenia, bipolar disorder, and perhaps severe major depressive disorder (DeRubeis et al., 2005; Friedman et al., 2004). Effectiveness data show that with some exceptions (Organista, Munoz, & Gonzalez, 1994), cognitive therapy, at least for depression and anxiety, and for the treatment of adults, can be successfully transported from research settings to clinical practice (D. A. F. Haaga, DeRubeis, Stewart, & Beck, 1991; Merrill, Tolbert, & Wade, 2003; Persons, Bostrom, & Bertagnolli, 1999; Persons, Burns, & Perloff, 1988; Persons, Roberts, Zalecki, & Brechwald, 2006). At the time of this writing, Beck's cognitive therapy has more empirical support from randomized controlled trials and other controlled studies than any other psychosocial therapy.

Disappointingly little is known about the mechanisms of action of cognitive therapy (R.E. Ingram et al., in press; Whisman, 1993). Studies that support the model's predictions that the therapy is effective because it produces cognitive change include the demonstration by (DeRubeis & Feeley, 1990) that cognitive change is more predictive of symptom change in patients receiving CT than in patients not receiving CT; the report by (Z. V. Segal, Gemar, & Williams, 1999) that cognitive therapy produces schema change but pharmacotherapy does not; and the demonstration (Z. V. Segal et al., 2006) that recovered depressed patients who received cognitive therapy are less reactive to a sad mood provocation than patients who received antidepressant medication, and that reactivity to a sad mood provocation predicted relapse. These findings provide impressive support for the notion that cognitive therapy produces a cognitive change that protects patients from relapse. Other supportive studies include the demonstration that self-reported mood change during a session of cognitive therapy was a function of cognitive change during the session and the quality of the therapeutic relationship (Persons & Burns, 1985); that depressed patients

who were more skillful at completing the Thought Record were less depressed six months after group cognitive-behavior therapy than patients who were less skillful (Neimeyer & Feixas, 1990); and that treatment response in social phobics who receive CBT is mediated by changes in the estimated negative consequences of certain negative social events (Hofmann, Moscovitch, Kim, & Taylor, 2004). Support for the proposed mechanism of action of CT is also provided by studies showing that patients who receive CT show cognitive changes (Imber et al., 1990; Simons, Garfield, & Murphy, 1984). However, this last finding provides only weak support for the theory because, as (Hollon, DeRubeis, & Evans, 1987) pointed out, the demonstration that cognitive change *covaries* with symptom change is not sufficient to prove that cognitive change *causes* symptom change.

Moreover, several studies have produced findings that run contrary to the cognitive theory. (Shaw et al., 1999) found that competence in implementing the specific interventions of CT was not related to outcome of cognitive therapy (CT) for depression in the Treatment of Depression Collaborative Research Program. However, they did find that competence in implementing the skills relating to agenda-setting and other structuring of the therapy *was* related to outcome of CT. And several studies have shown that non-cognitive therapies, including pharmacotherapy, produce cognitive change (Imber et al., 1990; Jacobson et al., 1996). These studies suggest that cognitive change may be a consequence of therapeutic improvement that occurs via other mechanisms, not the direct cause of improvement. Although cognitive change occurs in CT, it also occurs in other therapies. One account of the weak evidence supporting the mediating role of cognitive change in cognitive therapy is that common factors like the therapeutic relationship produce much of the change in all psychotherapies (Wampold, 2001). Another is the hypothesis, discussed in some detail below, that the various aspects of symptoms (cognitive, behavioral, the subjective experience of emotion), including biology (Baxter et al., 1992), are tightly linked to one another, and changes in one lead to changes in all of the others.

Finally, remember that the studies reviewed here present *nomothetic* findings (i.e., general findings that apply to groups). As discussed later (see Chapter 9), therapists will want to collect *idiographic* data for their individual patients to evaluate both the process and the outcome of the therapy they are conducting. For example, the therapist can work with his patient to collect data to test the hypothesis that spending time in the therapy session and in homework assignments on cognitive restructuring exercises appears to lead to changes in the patient's thinking and improvement in his emotions and functioning.

PROPOSITIONS OF BECK'S COGNITIVE THERAPY AND THEIR CLINICAL IMPLICATIONS

In the following discussion I highlight aspects of Beck's cognitive theory that I find to be particularly clinically useful. In the service of clinical utility, I extrapolate and extend the theory in several ways. Specifically, I propose that Beck's theory can be used not only to formulate a particular symptom or disorder but can also be extended to account for all of a patient's symptoms, disorders, and problems. In other words, I suggest using the theory as the template for a

formulation of a case. Of course, whether others find these extensions to be useful and whether they contribute to good treatment outcomes are important empirical questions. The propositions discussed here are:

- Symptoms are made up of problematic emotions, behaviors, and automatic thoughts that are interconnected and mutually causal;
- Schema activation triggers symptoms (emotions, automatic thoughts, and behaviors), and changes in those symptom elements cause schema change;
- Schema activation can account for a specific symptom, a set of symptoms (a disorder), and an entire case (all of a patient's symptoms, problems, and disorders);
- Pathological schemas about the self, others, world, and future underpin symptoms of psychopathology;
- Schemas are triggered by events that "match" or support the schema;
- Schemas distort many aspects of thinking and behavior, and can do so outside of awareness;
- Schema-driven behavior can produce evidence that confirms the schemas;
- Symptom topography reflects schema content;
- Schema are learned through childhood experiences;
- Schema do not easily change in response to disconfirming information;
- Schema change requires schema activation.

Symptoms are made up of problematic emotions, behaviors, and automatic thoughts that are interconnected and mutually causal

Symptoms in Beck's model are conceptualized as made up of behaviors, automatic thoughts, and emotions. Behaviors include both physiological responses (e.g., increased heart rate) and overt motor behaviors (leaving the room). "Automatic thoughts" are described by (A. T. Beck, 1976) as thoughts that occur automatically—that is, without effort and attention--and that we are often unaware of until we are asked to focus on them. Automatic thoughts can include images (J. S. Beck, 1995; Hackmann, 1998). Beck uses the word "emotion" to refer to subjective experience.

The double arrows linking behaviors, automatic thoughts, and emotion in Figure 2.1 reflect the theory's statement that all these elements are linked in reciprocal causal relationships. That is, change in any one of the elements is expected to produce changes in the others. Cognitive therapy strives to change emotions by changing behaviors and cognitions, often using the Activity Schedule (Figure 2.2) and the Thought Record (Figure 2.3).

[Insert Figures 2.2 and 2.3 about here]

The theory's proposition that changes in *either* automatic thoughts *or* behaviors can produce symptom change provides the therapist with quite a bit of flexibility. It suggests that at any particular moment, the therapist can focus on either cognitions or behaviors (or go back and forth between the two) to promote change. Thus, if the patient is so behaviorally immobilized that he is unable to make much use of cognitive interventions, or if the patient denies the presence of thoughts or doesn't "get" the concept of standing back to examine his thoughts,

the therapist can focus on behaviors. If the patient is aware of and wanting to change his thoughts, the therapist can focus there, even if the patient's behaviors are quite dysfunctional. Thus, rather than simply moving in to target the patient's behaviors or cognitions, the therapist can assess each patient to determine which element (behaviors or thoughts) is most likely to facilitate change for that patient at that moment.

The key role of behavior change

The cognitive element of Beck's model tends to receive the most attention. In fact, an early version of the Daily Record of Dysfunctional Thoughts (A. T. Beck et al., 1979) does not include a column for behaviors! However, behaviors play a key role in the change process, as demonstrated by (Jacobson et al., 1996), who found that depressed patients who received treatment targeting their dysfunctional behaviors had outcomes equal to those who received interventions targeting behaviors and automatic thoughts or interventions targeting behaviors, automatic thoughts, and schemas. In addition, because of their transparency, behaviors are a useful marker of change. It is easy to directly observe that the woman with agoraphobia reached her treatment goal of driving across the Bay Bridge. In contrast, it is not so easy to observe whether her schema changed.

Schema activation triggers symptoms (emotions, automatic thoughts, and behaviors), and changes in those symptom elements cause schema change

Beck's theory proposes that when schemas are triggered, they cause symptoms, as indicated by the arrow in Figure 2.1 leading from schemas to symptoms. Figure 2.1 also includes an arrow indicating that changes in automatic thoughts and behaviors and emotions (symptoms) lead to schema change. The proposal that changes in automatic thoughts and behaviors leads to schema change is not directly stated by Beck's theory. Nevertheless, I propose it here because it is consistent with quite a lot of clinical phenomena and some evidence, and it is clinically extremely useful.

The notion that change in automatic thoughts can lead to schema change is consistent with the fact that it is frequently difficult to distinguish automatic thoughts from schemas (e.g., "I'm worthless"). Furthermore, many of the interventions of CT that are designed to treat schemas target the maladaptive behaviors and automatic thoughts that are tied to those schemas (Padesky, 1994; Tompkins, Persons, & Davidson, 2000).

Clinical Implications

The proposal that changes in behaviors and automatic thoughts leads to schema change has several important clinical implications. A key one is that the therapist can strengthen the power of her interventions by using schema hypotheses about the case to guide clinical decisions of all sorts. A common clinical dilemma for the therapist is whether to encourage the patient to ask for more help from the therapist or to be more self-sufficient. If the clinician has conceptualized the case as one in which the patient's schemas include a view of others as uncaring, unavailable, and unwilling to help, the therapist might elect to encourage the patient to telephone the therapist when she needs help. In contrast, if the case conceptualization is that the patient views herself as weak and helpless, the therapist might elect to encourage the patient to be more self-

sufficient. Schema hypotheses can also guide agenda-setting decisions. The therapist can get "more bang for the buck" of therapy by choosing agenda items that are tightly tied to the patient's problematic schemas.

Another important clinical implication is that the interventions the therapist carries out to change overt behaviors and automatic thoughts produce not just symptom change, but also deeper change, at the schema level. This proposal is consistent with the fact that CT has not been shown to lead to symptom substitution and in fact has been shown to produce long-term benefits (Hollon et al., 2005). A final clinical implication is that the therapist need not wait until later in the treatment to identify and target the schemas. In fact, the experimental work by (Miranda & Persons, 1988; Miranda, Persons, & Byers, 1990) showing that schemas in vulnerable individuals must be primed (in their studies by a mood activation) in some way in order for the individuals to be able to report them points to the advantages of assessing and intervening to treat the schemas early in treatment when emotional distress makes easier for patients to access and report information about them (Persons & Miranda, 1991).

Schema activation can account for a specific symptom, a set of symptoms (a disorder), and an entire case (all of a patient's symptoms, problems, and disorders)

Beck's theory (Figure 2.1) states that schema activation causes disorders, which are made up of symptoms, which are themselves made up of cognitions, automatic thoughts, and behaviors. Beck's theory as depicted in Figure 2.1 was originally developed to account for a *disorder*. However, it is clinically useful to extrapolate the theory "downward" to account for a *single symptom*, and "upward" to account for *all of a patient's symptoms and disorders and problems*.

To use Beck's theory to account for a *disorder*, use Figure 2.1 to identify the automatic thoughts, behaviors, and unpleasant emotions that make up the symptoms of the disorder and the schemas and triggering life events that cause the symptoms. For example, Marla has major depressive disorder (MDD).Her symptoms include behaviors of withdrawal and passivity, automatic thoughts of "I am alone," "No one cares about me," "I don't want to see people when I feel like this," and emotions of loneliness, worthlessness, inadequacy, and sadness. These symptoms resulted when schemas of "I'm worthless and unloveable" and "No one cares about me" were triggered by her husband's threatening to leave the relationship.

To use Beck's theory to account for a symptom, use Figure 2.1 to identify the automatic thoughts, behaviors, and emotions of the symptom and the schemas and triggering life events that cause the symptom. For example, Marla engaged in suicidal behaviors (internet research to find a fail-safe method of killing herself), and had suicidal thoughts ("I hate myself," "I should be dead," "No one would care if I were dead") and emotions (self-hate and self-loathing) that were triggered by her husband's threat to leave, which activated her schemas, as described above.

To use Beck's theory to account for all of the symptoms, disorders, and problems of a patient, use Figure 2.4 to identify all of the patient's problems, the schema that are (directly or indirectly) causing many or all of them, and the life

events that are triggering the schemas (Persons, 1989; Persons, Davidson, & Tompkins, 2001). Thus, for example, Marla had multiple problems, including MDD, suicidality, a marital problem, and an unsatisfying and low-paying job, all of which could be explained as resulting from the activation of her worthlessness schema. It was easy to account for Marla's MDD and suicidality as resulting from schema activation when her husband threatened to leave. Her chronically-unsatisfying job situation resulted from multiple other schema-activating events, including critical remarks from her boss that led to feelings of inadequacy that impeded her from taking action to find a better job.

[insert Figure 2.4 about here}

Clinical Implications

The notion that Beck's theory accounts for disorders (Figure 2.1), symptoms (also Figure 2.1), and cases (Figure 2.4) has several clinical implications. The most significant one is that we treat symptoms, disorders, and cases by treating symptoms (Cohen, Gunthert, Butler, O'Neill, & Tolpin, 2005); (Gunthert, Cohen, Butler, & Beck, 2005). Most intervention happens at the level of the symptom. When the therapist is using Beck's model, the format of the Thought Record is used to assess and intervene to change the details of the automatic thoughts, behaviors, and emotions that occur or are activated in a particular situation. I use the term "format of the Thought Record" because I find that even when I am not using the Thought Record itself, I am using its format to guide my conceptualization and intervention using Beck's theory.

Another clinical implication is that when the patient seeks help with an emotional reaction in a particular situation, the therapist can begin the assessment process with the hypothesis that the schemas underpinning this instance of distress are likely some of the same schemas that underpin the patient's other symptoms, problems, and disorders. Thus, if the patient has an anxiety disorder, the patient likely holds schemas of "I am vulnerable" and "the world is dangerous" (A. T. Beck et al., 1985). When the patient comes into the office highly anxious about a recent upsetting event, the therapist can begin to conceptualize the patient's current upset with the hypotheses that the "I am vulnerable" and/or "the world is dangerous" schemas have been activated.

Beck's theory also allows the therapist to work in the other direction. That is, the conceptualization about the schemas underpinning a patient's emotional distress in a particular situation can feed into the conceptualization about the schemas underpinning the disorder. Thus, the therapist can build up a disorder-level formulation and even a case-level formulation, from emotional-event level formulations. (J. S. Beck, 1995) capitalizes very elegantly on this notion in her case formulation worksheet, which guides the therapist to build up a disorder- or case-level formulation from a series of emotional event level formulations. Thus, Sam came to a series of therapy sessions asking, in each one, for help witha different situation that had triggered anxiety: his car battery died when he was far from home; he was appointed to lead a fractious committee; his son was diagnosed with diabetes; his book was not going well. We addressed each situation by using a Thought Record to identify and help him change the thoughts that gave rise to anxiety in that situation. Every single Thought Record included

the thoughts, “I can’t handle this situation. A catastrophe will result.” It was easy, by reviewing these Thought Records, to develop the formulation hypotheses that Sam’s self-schema was, “I am weak and helpless,” and his world-schema was, “Catastrophes will happen.” These case-level formulation hypotheses arose from repeated symptom-level formulations. Furthermore, after developing the case-level formulation, every time Sam came in asking for help with another anxiety-provoking situation, my first hypothesis was that Sam’s helplessness self-schema and his catastrophic world schema had been activated by the current situation.

Another clinical implication is that a therapist can help a patient make headway on big-ticket problems by addressing smaller-scale situations that result from activation of the same schemas that cause the big-ticket issues. So, for example, Peter resolved repeatedly to break up with his girlfriend, Hagar, but simply could not carry it off. Peter and his therapist identified schemas of “I am selfish,” “I am fragile and I can’t handle emotional pain,” and “Others (including Hagar) are fragile” as impeding him from breaking off the relationship. The therapist addressed the break-up roadblock by helping Peter address these schemas in less threatening but nevertheless difficult situations, such as asking Hagar for her rent check and inviting her to go with him to a movie he wanted to see but she did not. He was able to accomplish these tasks, and in so doing he obtained evidence disconfirming his schemas that he was selfish and fragile. In addition, Hagar’s resentful and balky responses to his requests reminded him of why he wanted to break up with her! Armed with this information and experience, Peter was finally able to break off the relationship.

The use of Beck’s model to conceptualize an entire case helps the therapist see the relationships among the patient’s various symptoms and problems rather than viewing the patient as simply a list of Axis I, II, III, and IV disorders and problems. Of course, not all problems can be conceptualized as resulting from activation of schemas. Medical problems, which typically have important biological causes, are a good example. However, often the patient’s response to problems like medical problems *can* be understood as schema-driven behavior. An example is noncompliance with medical treatment, which can exacerbate medical problems. And because Beck’s model has been used to conceptualize and develop treatments for so many disorders and problems, the notion of extrapolating the theory to account for and guide treatment for the multiple problems of a multiple-problem patient has some empirical foundation.

Pathological schemas about the self, others, world, and future underpin symptoms of psychopathology

Beck proposed that underpinning the symptoms of psychopathology is the cognitive triad: the patient’s views of *self*, his *personal world* and his *future* (A. T. Beck et al., 1979). The notion of the triad is clinically quite useful. For example, the anxious person typically has a view of himself as weak and vulnerable and of the world as dangerous and threatening (A. T. Beck et al., 1985); the suicidal person has a view of the future as hopeless (A. T. Beck, Brown, Berchick, Stewart, & Steer, 1990). These are evidence-based proposals and can help clinicians focus their interventions to address these key issues.

In addition, it is clinically helpful to add a fourth element to the group so that instead of a cognitive trio there is a quartet. The fourth member is the patient's views of *others.* (Beck includes *others* in the *personal world* element of the triad.) Developing a distinct conceptualization of the patient's views of *others* is clinically useful for at least two reasons. One is that the patient can have very different views of the *world* and *others*. For example, a housewife and mother who had Generalized Anxiety Disorder had a view of the *world* as dangerous (that is, bad things could happen at any moment) and a view of *others* as fragile and helpless. As a result, she was quite overprotective of and took excessive responsibility for the well-being of everyone she was close to. Second, it is particularly important to have an understanding of the patient's views of *others* because the therapist is an *other.* As a result, the conceptualization of the patient's views of others can be extremely useful to the therapist in his efforts to understand and manage the therapeutic relationship.

Schemas are triggered by events that "match" or support the schema

Beck's theory states that symptoms arise when schema are triggered by external (e.g., being turned down for promotion) or internal (e.g., increased heart rate or a memory) events that "match" the schema. Thus, a personal rejection is expected to be unduly distressing to a person who holds the schema "I am worthless unless I am loved by everyone around me," whereas being turned down for promotion is expected to be particularly distressing to a person who holds the belief, "I am worthless unless I am successful at everything I do" (A. T. Beck, 1983). Increased heart rate is expected to be unduly distressing to the person who holds a view of himself as vulnerable to a medical catastrophe.

Clinical Implications

Several clinical implications flow from this part of the theory. One is that information about events that trigger symptoms yields clues about the nature of the patient's problematic schemas. For example, an attorney became quite anxious when her therapist praised her for completing a difficult therapy homework assignment. Investigation revealed that praise triggered the patient's beliefs that others would develop excessive expectations for her and abandon her when she did not meet them.

Another implication is that clinicians can help patients overcome their symptoms by helping them change the situations in which they place themselves. A change of scene can reduce the activation of problematic schemas and/or increase the activation of adaptive schemas. Many happy and successful individuals are happy and successful in part because they are skilled at seeking out environments in which they feel good and function well. Therapists can teach their patients to do this too. So, for example, the therapist can help the coed who has bipolar disorder and a seizure disorder perceive that the retail store where she works, a clothing store that has loud music and flashing lights, is likely to exacerbate her symptoms. Similarly, a husband contributes to his marital problem by repeatedly allowing himself to get pulled into unproductive discussions with his wife about her unhappiness. I worked in therapy to teach him that his marriage would improve if he participated in fewer of those interactions and instead engaged his wife in activities they both enjoyed.

Of course, avoiding situations that do not activate one's schemas is sometimes good coping and sometimes maladaptive avoidance and it is not always easy to determine which is which. Reference to the patient's goals and the case formulation can help patient and therapist sort this out.

Interventions targeting external events are not included in Beck's (A. T. Beck et al., 1979) protocol because they do not directly modify the essential mechanisms in the person that give rise to symptoms. Nevertheless, as I have just argued, these types of interventions can be quite useful clinically. In addition, conceptually, beliefs and situation selection are often tightly intertwined. Often maladaptive beliefs prevent individuals from selecting healthy environments. Therapeutic work to help patients select healthier environments often requires work on the cognitions that impede them from doing this on their own. For example, one of my patients stayed in an abusive and stressful work setting because she believed "I should be able to cope with any workplace, no matter how stressful it is, and if I can't there is something wrong with me." Therapeutic work on this belief and her choice of workplace proceeded in tandem.

Schemas distort many aspects of thinking and behavior, and can do so outside of awareness

Schemas distort multiple aspects of thinking, including perception, imagery, memory, judgment, and decision-making (R. E. Ingram, 1984), and they drive behavior, including facial expression, somatic arousal, and motor behavior. Pete, whom I was treating for Generalized Anxiety Disorder, viewed the world as full of dangers and threats. One day he very energetically alerted me to the danger posed by an area rug in the waiting room that he believed was likely to cause someone to trip and fall. This rug had been observed, without remark, by literally hundreds of other patients, students, and colleagues. However, Pete felt certain that it posed an imminent danger.

Sally, another chronic worrier, came to her session one day and reported her recent experience at an air show. She had attended the San Francisco 49er's football game and during halftime the Blue Angels had performed an air show. In the middle of the show, one of the planes seemed to encounter a technical difficulty, peeled away, and flew off. Sally described this event as one that supported her world view that catastrophic events happen frequently. Sally's point of view was so strong and her mode of communicating it so emotional that I found myself drawn into her interpretation of the event. It was not until 20 minutes later that it penetrated my brain that nothing bad had happened. In fact, the event at the air show was best seen as evidence *contradicting* Sally's world view!

Clinical Implications

This proposition of Beck's theory tells the therapist not to accept at face value the patient's interpretations of his or her experiences. Instead, it is essential to find out exactly what happened--in blow-by-blow detail. And even the blow-by-blow description can be biased by schema-driven perception or recall.

Another clinical implication is that the therapist cannot accept without question the patient's proposal about what occurrences during the past week belong on the agenda for the therapy session. Because the patient's perceptions

and judgments are driven by his schemas, he may minimize or fail to notice altogether events that merit discussion. For example, one of my patients, a high-level business executive, reported in passing that he had decided to resign from his job. He viewed this plan as a good one and not one that needed further discussion. In contrast, I saw this as a bad thing that merited a high priority on the therapy session agenda. My judgment of the importance of discussing this topic flowed out of my attention to the patient's problems, our schema hypotheses, and his treatment goals. The patient had a history of starting and stopping jobs and relationships repeatedly, had schemas of the world and others as "deficient, unreliable, never meeting my needs," and one of his therapy goals was to improve his ability to maintain long-term work and personal relationships. Nevertheless, the schemas driving his urge to resign his position were so powerful that he had no awareness that his behavior was problematic in any way until I suggested that his decision to quit his job merited some attention.

Schema-driven behavior can produce evidence that confirms the schemas

When we or our patients (it happens to us all) experience a *situation* that activates our *schemas* to produce *irrational thinking* and *negative emotions*, we often have urges to *behave maladaptively*. When we give in to those urges, the result often provides evidence to confirm our irrational thinking. Thus, for example (thanks to Pamela Balls Organista for this example), a teacher who held the schema, "I'm not very smart" and "Others will reject me for being stupid" attempted to mitigate his fears by using long words in an attempt to convey that he was erudite and well-educated. The result of his strategy was that he sounded pompous and intellectually unsophisticated. In fact, his compensatory strategy led to exactly the events he most feared: others lost respect for his intelligence and rejected him.

David Clark (Bates & Clark, 1998; Clark & Wells, 1995) shows very compellingly how this notion plays out for many social phobics. The social phobic's compensatory behaviors, which Clark calls safety behaviors (e.g., poor eye contact, trying to hide), are typically the main causes of the rejection these people fear so much (see also (Salkovskis, 1991). (Seligman & Johnston, 1973) offer a model of avoidance behavior (described in more detail in Chapter 3) that includes the proposal that behavior that produces results consistent with a belief strengthens the belief. Thus, the person with agoraphobia who avoids driving on the Bay Bridge because he believes, "If I drive on the bridge, I'll panic, lose control, and cause an accident," actually produces a piece of evidence to support this belief every time he avoids driving on the Bay Bridge. His avoidance behavior thus strengthens the belief that triggers his anxiety and urge to avoid.

A fascinating illustration of this idea appears in Jane Brody's (Brody, 2000) article titled "How Germ Phobia Can Lead to Illness." Brody compellingly described how germ phobia leads to the use of antibacterial agents, which itself can cause illness in several ways, such as by only killing the most susceptible bacteria so that some bacteria that might not otherwise have survived now do (competing bacteria that might have killed them were destroyed by the antibacterial) and multiply.

Analogously, therapy can produce an upward (adaptive) spiral if the patient, instead of being driven by his belief, pushes against it. Thus, if the young man pushes against his fear that "If I ask her out she'll turn me down and I won't be able to handle that" and actually asks out the woman of his dreams, he will, with a bit of luck, get a date. If he does not, he will learn that he does not fall apart. Thus, Beck's theory suggests that if the patient can change his behavior to test his irrational beliefs and disconfirm them, he will not only solve the problem at hand but will experience a positive shift in the downstream situations and events he encounters.

Symptom topography reflects schema content

Beck's theory is a *structural* theory, that is, a theory in which the topography (that is, the descriptive details) of the overt symptoms is expected to reflect the content of the underlying mechanisms (Nelson & Hayes, 1986). This concept is conveyed by the New Yorker cartoon of the tourists who, visiting a massive pyramid, conclude, "It was built when the Mayans were feeling good about themselves."

Clinical Implications

This topographical aspect of Beck's theory has multiple clinical implications. One is that the content of the patient's automatic thoughts, behaviors, and emotions provides information about the content of his schemas. This proposal is quite useful because of course the schemas are not directly observable. Thus, for example, the poor eye contact of the social phobic can be seen as reflecting her view of herself as defective and inadequate and her view of others as attacking and critical. The self-hate, suicidal, and self-harming behaviors of the patient with borderline personality disorder or bipolar disorder can be seen as reflecting her sense of herself as loathsome, deserving of punishment, and unworthy of compassion and nurturing.

Another implication is that the content of one element of a symptom (e.g., the emotional experience of anger) yields information about the likely content of other elements (e.g., "should" statements and attacking behaviors). This concept is endlessly helpful clinically, as it allows patient and therapist to more easily capture, identify, and intervene to address the automatic thoughts and behaviors that are tied to a particular emotional experience. In support of this aspect of Beck's theory, several studies have shown that specific cognitive profiles are characteristic of particular symptoms and disorders (see review by (A. T. Beck, 2005). (A. T. Beck et al., 2001) showed that personality disorders (defined of course by symptoms) are characterized by particular beliefs that are characteristic of the various disorders.

Schemas are learned through childhood experiences

Beck's theory states that schema are learned from early experiences, especially early experiences with significant others. This proposition is illustrated in a New Yorker cartoon of two butterflies; one says to the other, "You're a butterfly now, but you still think like a caterpillar," So, for example, the child who is regularly physically abused by his mentally ill parents may develop schema of others as likely to harm or mistreat him. In support of this proposal, (Barlow & Chorpita, 1998) reviewed evidence showing that individuals who later develop

anxiety disorders frequently have childhood experiences that lead them to develop schema of the self as helpless and of the world as uncontrollable.

Clinical Implications

One clinical implication of this proposal is that obtaining a good family and social history (discussed further in Chapter 6) is essential to the process of developing schema hypotheses. However, careful consideration of the information obtained is needed, because the way in which early experiences lead to schemas is not always obvious. A young Hispanic woman grew up in a family in which her mother sacrificed everything so her kids would have a better life than she had had. Unfortunately, the mother's sacrifice had the unanticipated consequence that her daughter learned (from her mother's model) that "My needs don't count; to be worthwhile, I must sacrifice for others."

Another clinical implication is that people can begin to make revisions in their schemas by reviewing early childhood events in detail, examining the event and their conclusions or inferences from the event, and evaluating the accuracy and reasonableness of those conclusions in the light of later perspectives and experience (Young, 1999).

Schemas do not easily change in response to disconfirming information

Schemas do not change easily, for many reasons. One is that the schemas themselves bias retrieval of information from memory, interpretation of ambiguous events (as in the air show and carpet in the waiting room examples above), and other cognitive processes (R. E. Ingram, 1984; Teasdale, 1988), thus making it difficult for individuals to acquire information that disconfirms distorted schemas. In fact, (Giesler, Josephs, & Swann, 1996) showed that depressed individuals seek out information that confirms their negative self-schemas.

The resistance of schemas to change has multiple implications for the clinician. (Bennett-Levy et al., 2004) note that the therapist cannot assume that the patient who tests a key belief in a behavioral experiment will collect and process the data obtained in an unbiased way. Instead, before the experiment the therapist must carefully think through with the patient what pieces of data would most emphatically disconfirm the belief and after the experiment the therapist must review with the patient the results of the experiment and the conclusions that are best drawn from them. (Padesky, 1993) proposes that schemas are like prejudices—strong beliefs that we tend to hold to even in the face of disconfirming evidence. It is useful to teach this idea to patients and use it to help them override the tendency to ignore evidence that disconfirms their schemas. Probably every therapist has had the experience of treating with extra caring a patient who views others as untrustworthy and hurtful in an effort to provide the patient with evidence disconfirming those schemas only to find, after months or even years, that the patient persists in her view of others—including the therapist!--as untrustworthy and hurtful. To address this issue, (McCullough, 2000) suggests that it is important not only for therapists to behave in a way that disconfirms the patient's schemas but also to discuss this behavior with the patient to help him learn from it.

Schema change requires schema activation

Beck proposes that effective therapy sessions involve activation of emotion (and thus presumably the schemas underpinning it) (cf. Chapter 2 of (A. T. Beck et al., 1979). However, the notion that schema activation is needed to produce change is described most explicitly by the emotional processing model of (Foa, Huppert, & Cahill, 2006; Foa & Kozak, 1986), which proposed that activation of the fear network and the presentation of information that disconfirms key elements of the network is the active ingredient of behavioral treatment of pathological fears (I discuss the emotional processing model further in Chapter 4).

Clinical Implications

One way Beck's cognitive therapy addresses the need for schema activation is via the Situation column of the Thought Record (Figure 2.3). As (Burns, 1989), points out, if the therapist collects negative automatic thoughts from the patient without focusing on a concrete, specific situation, the thoughts tend to be vague, there is no emotional charge present in the room, and the therapy session tends to devolve into a sterile intellectual debate. In contrast, when the therapeutic work is focused on a concrete situation, emotional charges are evoked and the work is much more productive. Other explicit strategies can be used to activate schemas in order to work on them, including in vivo and imaginal exposure, empty chair and other gestalt interventions (Samoilov & Goldfried, 2000), and methods to carefully recreate early events in which patients learned key schemas in an effort to re-work the event and its meaning to the patient (Padesky, 1994; Young, 1999).

Because schema activation is so important in promoting change, the therapist will want to pay close attention to schema activation when it occurs and capitalize on it to promote change. For example, Jeannie was working in therapy to overcome her obsessive fears that she was homosexual. She reported that a few days earlier she had become "freaked out" because she had discovered that she had made a major mistake at work. She had flown into a panic, concluded she was completely incompetent, and nearly resigned. With help from her husband, boss, and co-workers, she had been able to regroup and get down to problem-solving to determine how the mistake had been made and take action to correct her error. As I listened to her report of this event, which was no longer troubling her, I suggested we put it on the agenda to review what had happened and what she had learned. Three factors cued me to suggest this agenda item: (1) if Jeannie had been so distressed, key schemas must have been activated and I wanted to learn more about them; (2) the fact that the topography of her response to this work situation (urge to quit) was similar to the topography of her anxiety about being homosexual (urge to leave her marriage) suggested that the same schemas may underpin both concerns; and (3) we might be able to learn something from the work situation (which she had successfully mastered) about how to handle the homosexuality fear (with which she continued to struggle).

Of course, schema activation does not necessarily produce intense emotional expression. It can also lead to a shut-down, dissociated emotional state or to avoidance or minimization (as in the business executive described above who planned to resign from his job).

Similarly, taking advantage of schema activation to promote change does not always mean making the schema activation the focus of the therapy session. For example, Amy had schemas of herself as helpless and of others as not meeting her needs. She frequently found these were activated in the therapy session when I did not agree with her or did not immediately give her the empathy she wanted at that moment. In several sessions our agenda was completely derailed by attention to Amy's emotional distress in these situations. We then conceptualized these moments as opportunities for Amy to practice her skills for managing emotional distress without diverting from the therapy session agenda. These skills stood her in good stead outside the therapy session as well, where frequent derailments due to emotional dysregulation impeded her from accomplishing important goals.

Summary of formulation and treatment based on Beck's theory

Beck's theory proposes that schemas are learned from early experiences, activated by "matching" events, and lead to symptoms that reflect the content of the schemas. Symptoms are made up of cognitions, behaviors, and emotions that are linked, so that a change in any element produces changes in the others. An elegant and comprehensive case formulation based on Beck's theory links together all these elements: early upbringing, schema content, precipitating events, and symptom content. Treatment based on Beck's theory entails interventions designed to modify schemas, automatic thoughts, problem behaviors, and activating events and situations.

OTHER COGNITIVE THEORIES AND THERAPIES

Numerous scientists and clinicians have developed alternative cognitive theories and therapies, in some cases borrowing or adapting from Beck's model and in other cases working independently. I describe several here very briefly. They can be used instead of or in addition to Beck's model to guide conceptualization and intervention.

The Oxford group

Investigators in the UK, especially an amazing group that had its origins at Oxford and has now in part moved to the Institute of Psychiatry in London, have made significant contributions to developing and elaborating CB and especially cognitive models, especially of various anxiety and mood disorders, including low self esteem (Fennell, 2006), panic disorder (Clark, 1986), social phobia (Clark, 2001), PTSD (Duffy, Gillespie, & Clark, 2007; Ehlers & Clark, 2000), hypochondriasis (Salkovskis, 1989), and generalized anxiety disorder (G. Butler, Fennell, & Hackmann, in press; Wells, 2005). Attention to the details of these models will provide invaluable guides to conceptualization using cognitive models.

For example, (Ehlers & Clark, 2000) propose that PTSD symptoms result when the traumatized individual processes information in such a way that the trauma appears to constitute an immediate, serious danger rather than something that happened in the past. The perception of immediate danger arises from the individual's distorted appraisals of the trauma event and/or its sequelae, including the PTSD symptoms themselves (e.g., "The fact that I can't concentrate means I am going crazy."), from a disruption of autobiographical memory (that is,

the inability to correctly "file" the memory, placing it the context of the individual's past and future), and from use of maladaptive cognitive and behavioral coping strategies (especially avoidance and attempts to push away reminders of the trauma). Interventions flowing out of this conceptualization help the individual integrate memories of the event into the context of the individual's biographical memory, block maladaptive responses, and adopt adaptive coping strategies.

Attributional theories

The reformulated learned helplessness theory (Abramson et al., 1978) and hopelessness theory (Abramson et al., 1989) offer alternative diathesis-stress models of depression. Both theories conceptualize vulnerability to depression in terms of a depressogenic or pessimistic explanatory style (the tendency to view negative events as arising from stable, global, and internal causes). Although these theories did not lead directly to therapies, they provide some of the empirical underpinning to Beck's theory. A fascinating clinical example of the use of attribution theory is the proposal by (Kingdon & Turkington, 2005) that auditory hallucinations can be conceptualized as cognitions that are falsely attributed as having an external source.

Mindfulness-based CT and other acceptance-focused therapies

Mindfulness-based cognitive therapy (Z. V Segal, Williams, & Teasdale, 2002) proposes that individuals who have a history of depression are vulnerable to getting pulled, without their awareness, into negative thinking that can trigger symptoms and fuel a relapse. Therefore, (Z. V Segal et al., 2002) proposed helping these individuals prevent relapse by helping them identify and disengage from their negative thoughts, that is, giving them " . . . a cognitive set in which negative thoughts/feelings are experienced as mental events, rather than as the self." (p. 275).

Mindfulness-based CT strives to accomplish its effects by changing people's *relationships with* their thoughts, whereas Beck's CT strives to change the *content of* people's thoughts. Nevertheless, these two notions are at times indistinguishable. For example, a person might use Beck's cognitive therapy to respond to the automatic thought, "I am worthless" with a mindfulness-type of coping response, such as, "Just because I have that thought doesn't mean it's true.' In fact, it is possible that some or all of the change in Beck's CT is due to patients' changed relationships with their thoughts.

The notion that CT may operate in part by changing patients' relationship to their thoughts suggests the possibility that MBCT, which was designed to prevent relapse, might also be helpful in treating depressive and other symptoms themselves. This notion opens up for the cognitive therapist a myriad of new interventions, including many of those described in Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999), dialectical behavior therapy (Linehan, 1993), and mindfulness-based treatment for generalized anxiety disorder (Borkovec, 2002); (Roemer & Orsillo, 2002). More generally, mindfulness-based approaches point to a new approachto maladaptive and distressing thoughts and feelings, that is, the stance of working to accept them rather than to change them.

The role of metacognition

Adrian Wells (Wells, 2000) proposed that metacognition, that is cognition about cognition, plays an important role in producing emotional disorders. Thus, for example, patients with generalized anxiety disorder have dysfunctional beliefs about worry (e.g., “worry is harmful to my health,” and “worry helps me solve problems”) that cause and maintain their symptoms. Wells proposes that targeting those beliefs will alleviate the symptoms. Data are beginning to accumulate to support these ideas (Wells & Carter, 2001).

Rational Emotive Behavior Therapy

Albert Ellis (Ellis, 1962) developed Rational Emotive Therapy (RET), later modified to Rational Emotive Behavior Therapy (REBT). Ellis’s theory preceded Beck’s theory and proposed that faulty or irrational thinking causes emotional problems and disorders and therefore changing thinking ought to lead to emotional relief.

Ellis’s therapy places less emphasis on Socratic questioning as a way to guide a person to a new perception. Instead, it is more directive. Linehan (Linehan, 1993) uses RET techniques in DBT and (Becker & Zayfert, 2001) suggest that RET may be particularly well-suited to patients, including many with borderline personality disorder, who can experience Socratic questioning as invalidating. Direct instructions to shift thinking or behavior are especially helpful when emotional arousal is high. Imagine that you have fallen off a boat in high waves, fear you are drowning, and don’t know how to get back onto the boat. Which would be more helpful to you: Socratic questioning to help you figure out how to solve the problem or emphatic statements telling you what to do in order to get back on the boat?

A retrieval competition account

Chris Brewin (Brewin, 2006) proposes that individuals have multiple cognitive representations that compete for retrieval and that the goal of cognitive therapy is to help individuals construct and strengthen their positive and adaptive representations so that those representations, rather than the negative and dysfunctional ones, guide perceptions and behavior. This notion has multiple theoretical and clinical implications, including that cognitive therapy is essentially a construction enterprise rather than a modification one.

The role of imagery

Ann Hackmann (G. Butler et al., in press; Hackmann, 1998; Wheatley & Hackmann, 2007) and colleagues and others (Arntz & Wertman, 1999; Holmes & Mathews, 2005) have elaborated on the role of imagery in psychopathology and its treatment. Imagery, of course, can be seen as a type of cognition or mental representation. There is some evidence that images are more tightly linked to emotion than verbal representations (see (Holmes & Mathews, 2005)) and therefore some suggestions that interventions to manipulate images can be particularly effective in ameliorating psychopathology (Hackmann, 1998). This work is in early stages and only case reports and uncontrolled trial data are available as yet (Rusch, Grunert, Mendelsohn, & Smucker, 2000; Smucker & Niederee, 1995; Wheatley & Hackmann, 2007).

Note that for the most part the alternate cognitive theories and interventions described in this section do not contradict Beck's theory but in fact compliment and elaborate on it.

ASSESSMENT AND INTERVENTION GUIDED BY COGNITIVE THEORIES

In this section I describe strategies the clinician can use to guide conceptualization and intervention using cognitive theories. I focus primarily on Beck's theory and therapy, offering some suggestions about using other cognitive models.

Assessment: Collecting information about the key elements of the formulation based on cognitive theories

Beck's theory proposes that symptoms (which consist of reciprocally causal emotions, automatic thoughts, and maladaptive behaviors) result when schemas learned in childhood are activated by stressful events. An elegant and comprehensive case formulation based on Beck's theory links together all these elements: early upbringing, schema content, precipitating events, and symptom content. I describe below strategies the therapist can use to assess automatic thoughts, maladaptive behaviors, and schemas. Assessment of the precipitants of the symptoms and the origins of the schemas (these are part of the case-level formulation based on Beck's model) is described in Chapter 6.

Assessing automatic thoughts and maladaptive behaviors

One of the most useful strategies to get the information needed to conceptualize a case using Beck's model is to use a Thought Record (Figure 2.3). The form is used to help the patient identify the automatic thoughts, problem behaviors, and emotions that arose in a recent upsetting situation. The assumption is that if the person is distressed, then one or more pathological schemas are activated and the person's automatic thoughts, emotions, and behaviors are products of those schemas.

Often patients can report automatic thoughts and describe problem behaviors (or urges) in an upsetting situation in response to the therapist's direct request for this information. If the patient has difficulty reporting this, it is often useful to ask her to imagine that the situation is happening again, and then describe the details of who was there, when and where it occurred, and exactly what happened. Evoking the details of the situation usually facilitates the patient's retrieval of information about thoughts, emotions, and behaviors in the situation. Another strategy for helping patients who have difficulty reporting their thoughts and feelings is to offer some options. For example, the therapist can ask, "Were you thinking, 'I can't handle this situation?'" The therapist can also ask patients to "take a wild guess" or "make up" what thoughts they might have been having in the situation. It can also be useful to invite the patient to report visual and other sensory images, not just verbal representations. Wells' metacognitive model alerts us to the fact that cognitions about cognitions can also be clinically-important, as can attributions. Brewin's retrieval competition account alerts us to the fact that multiple automatic thoughts are likely present in any particular situation.

The Thought Record is useful in identifying problem behaviors because it links the behaviors to the emotions and automatic thoughts that accompany

them. To identify avoidance behaviors, it is often useful to focus on a situation like, “having the thought that it is time to do my therapy homework” or “thinking about calling my mother.”

Another useful tool for assessing maladaptive behavior is the Activity Schedule (Figure 2.2). In fact, (A. T. Beck et al., 1979) assign the Activity Schedule to all depressed patients after the first session, as it provides detailed information about how the patient is spending his time.

Assessing schemas

A variety of strategies can be used to assess schemas. As (Brewin, 2006) points out, it is useful to assess multiple schemas, both maladaptive and adaptive ones.

Use the downward arrow method. Burns (Burns, 1980) developed the *downward arrow method* to obtain hypotheses about patients’ maladaptive schemas. To use the downward arrow method, the therapist begins by using a Thought Record to identify an episode of emotional upset and the emotions and automatic thoughts triggered during it. It is ideal if the therapist can select a situation that is tied to a high priority problem on the Problem List, so as to facilitate identifying schemas that are tied to the patient’s main problems. When the automatic thoughts have been identified, the therapist asks the patient about each thought, “Imagine that were true. Why would that be upsetting? What would it mean about you if that were true?” The downward arrow method yielded the following string of automatic thoughts for a man who feared asking out a woman he was interested in: “She won’t be interested in me,” (if that were true why would that be upsetting?), “If I ask her out she’ll say no,” (if that were true why would that be upsetting?), “I’ll be humiliated and devastated,” (if that were true why would that be upsetting?), “I won’t be able to recover” (if that were true why would that be upsetting?), “I’ll be alone forever.” The patient’s responses indicate that his thinking seems to “bottom out” in automatic thoughts that reflect his view of himself as helpless, fragile, and unlovable.

Examine themes of automatic thoughts across situations. A pastor who had recently been diagnosed with cancer was depressed and anxious. Over a series of sessions, he reported Thought Records of a variety problem situations that included all these thoughts: “I won’t be able to cope with side effects of my medication,” ”The committee I’m chairing at church will split apart in conflict and I won’t be able to handle the situation,” “My wife, who is depressed, will become suicidal, will call on me for help and I’ll get overwhelmed and incapacitated by her problems,” “I’ll get overwhelmed and incapacitated by my symptoms,” “I’ll get overwhelmed and incapacitated by my anxiety and depression.” The theme of this man’s automatic thoughts across all theses situations suggested that he held a self-schema of “I’m helpless and can’t cope” and a future-schema of “Bad things will happen.” (J. S. Beck, 1995) uses this strategy to develop schema hypotheses in her method of case conceptualization.

Examine themes across problems. This strategy is similar to the one just described, but emphasizes seeking themes across the patient’s problems, rather than across situations that are tackled in therapy. Sara, a depressed and anxious marketing executive, had problems at work (she procrastinated on projects due

to her thoughts, “I’ll do a bad job and my boss will fire me”), and social problems (she avoided going to the lunchroom at work because to the thought, “No one will sit with me and I’ll be alone”). Examination of the behaviors and automatic thoughts that cut across all of Sara’s problems revealed a behavioral pattern of passivity and the automatic thought, “If I try, I’ll mess up, and then I’ll get rejected,” and this cognitive-behavioral pattern suggested that Sara had schemas of herself as inadequate, and schemas of others as critical and rejecting.

Attend to topography of symptoms. Beck’s theory proposes that the topography of symptoms reflects the schemas that are hypothesized to underpin the symptoms. Thus, behavioral passivity suggests a self-schema of helplessness, anger suggests a view of others or the world as unfair, depressed mood suggests a view of the self as worthless or unlovable, hopelessness and suicidal behavior suggests a view of the future as hopeless, self-harm suggests a view of the self as loathsome and deserving of punishment, and automatic thoughts of “I’m worthless” reflect a self-schema of worthlessness.

Use diagnosis as a starting point. Diagnosis can suggest schema hypotheses. For example, (Clark, 2001) reviews data showing that people with social phobia focus their attention on a negatively distorted mental image of themselves as inept, unattractive, or defective. (Foa & Rothbaum, 1998) suggest that the typical pathological memory structure of a person with PTSD includes views of the self as incompetent and of the world as dangerous. Numerous investigators have shown that depressed patients hold views of themselves as inadequate/incompetent/a failure and/or unlovable/unacceptable to others (see review by (R. E. Ingram, Miranda, & Segal, 1998).

Use a paper and pencil measure. Paper and pencil measures for assessing schemas include the *Dysfunctional Attitude Scale* (DAS; Weissman & Beck, 1978; see also (Burns, 1980) and the *Young Schema Questionnaire* (Young & Brown, 2001). Versions of these scales have been published in (Burns, 1999), which includes a 35-item adaptation of the Dysfunctional Attitude Scale, and (Young & Klosko, 1993), which publishes a 22-item “Lifetrap Questionnaire,” an early adaptation of Young’s Schema Questionnaire. These versions have not been formally psychometrically validated but can be useful in a collaborative search with the patient to identify potential schema vulnerabilities.

Observe the patient’s behavior toward the therapist. A patient who has the self-schema that she is worthless and the schema of others as abandoning flies into a panic and becomes suicidal when the therapist is delayed in returning her phone call. A patient who views others as likely to hurt and betray her leaves angry telephone messages for the therapist after she feels slighted or poorly treated during the therapy session. A patient who has the self-schema that she is inadequate and unacceptable to others and of others as rejecting becomes quite anxious when the therapist makes a homework assignment because she fears that if she does the homework incorrectly, the therapist will refuse to treat her. Thus, a detailed examination of the behaviors, emotional responses, and automatic thoughts of the patient during interactions with the therapist can yield schema hypotheses.

Use all available information. It is important to take advantage of all sources of information, including the patient's appearance and what the patient does not say. For example, a teacher was suffering a financial crisis and was working in therapy on his catastrophic cognitions that he would run out of money and be unable to pay his mortgage. The observation that he was driving a brand new mega-sized Mercedes lent support to my formulation hypothesis that this man was less afraid of running out of money than he was of feeling inadequate and losing the respect of others.

Whatever strategy the therapist uses to develop schema hypotheses, it is always a good idea to work collaboratively with the patient. When I proposed to a young woman who sought treatment for panic symptoms that she held the belief, "I can't handle these symptoms, I'm out of control," she responded: "Maybe. But my main belief is "*I shouldn't have to handle* these symptoms. *It's not fair!!!"* Her view was superior to mine—it accounted, as mine did not, for her resentment about having the symptoms and her unwillingness to learn coping tools to manage them.

Intervention guided by cognitive theories

Beck's theory proposes that symptoms (made up of automatic thoughts, behaviors, and emotions) arise when life events trigger schemas in a vulnerable individual. Flowing out of this theory, Beck's cognitive therapy strives to produce changes in the mechanisms that cause symptoms, so that when the individual encounters events that previously activated pathological schemas, the schemas do not get activated to cause negative automatic thoughts, maladaptive behaviors, and painful emotions. This is the *mechanism change goal* of Beck's cognitive therapy.

Intervention guided by Beck's cognitive theory also strives to teach the patient skills to prevent and manage symptoms that arise when mechanisms are activated. These can be skills to avoid or manage precipitating situations or skills to manage upsetting emotions that are caused by schema activation. These interventions teach *compensatory skills*. They do not change the mechanisms that the theory describes as causing the symptoms. (Barber & DeRubeis, 1989) proposed that the mechanism of action of cognitive therapy does not entail changing a patient's schema, automatic thoughts, or maladaptive behaviors but instead entails teaching patients compensatory skills they can use to manage symptoms when they arise.

When both mechanism change goals and compensatory strategies goals are considered, the *treatment targets* of Beck's cognitive therapy are the problematic schemas, negative automatic thoughts, maladaptive behaviors, and precipitating situations that typically trigger symptoms for the individual.

As described above, cognitive theories developed by other investigators and researchers have identified other useful mechanism change goals and treatment targets, including teaching the patient to identify and disengage from maladaptive thoughts that are tied to depressed emotions; increasing the relative strength of adaptive schemas, automatic thoughts, and behaviors; and modifying attributions, metacognitions, and images. Because these alternative cognitive

models do not conflict with Beck's model, the clinician can consider using more than one of these intervention tactics simultaneously.

* * * *

Beck's model and other cognitive theories and therapies offer powerful tools for conceptualizing and treating a wide range of psychopathology. However, they are not enough. Not all patients respond to them. The learning theories, described in the next chapter, offer another set of useful models and tools.

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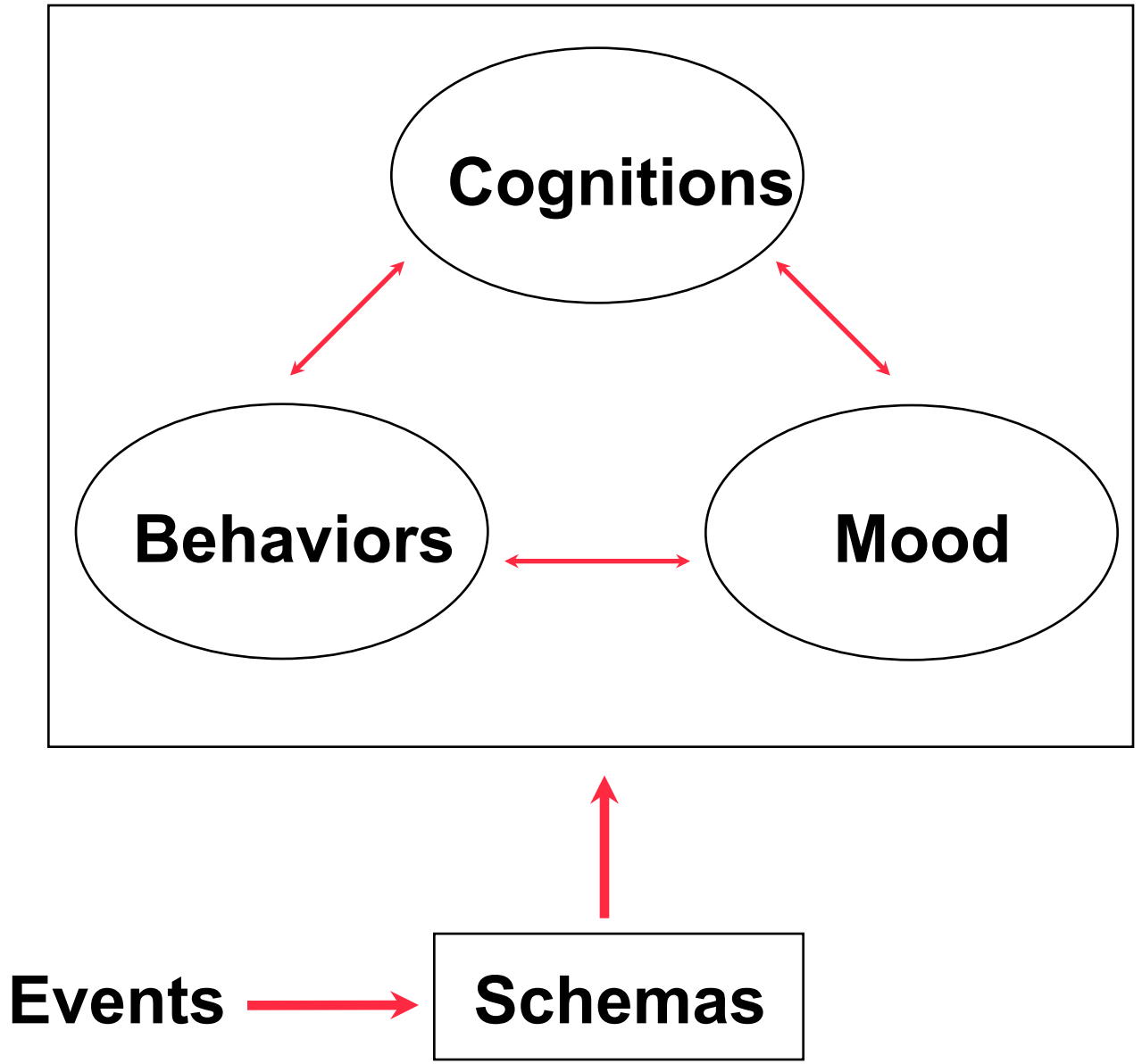
Figure 2.1 Beck's Cognitive Theory of Psychopathology



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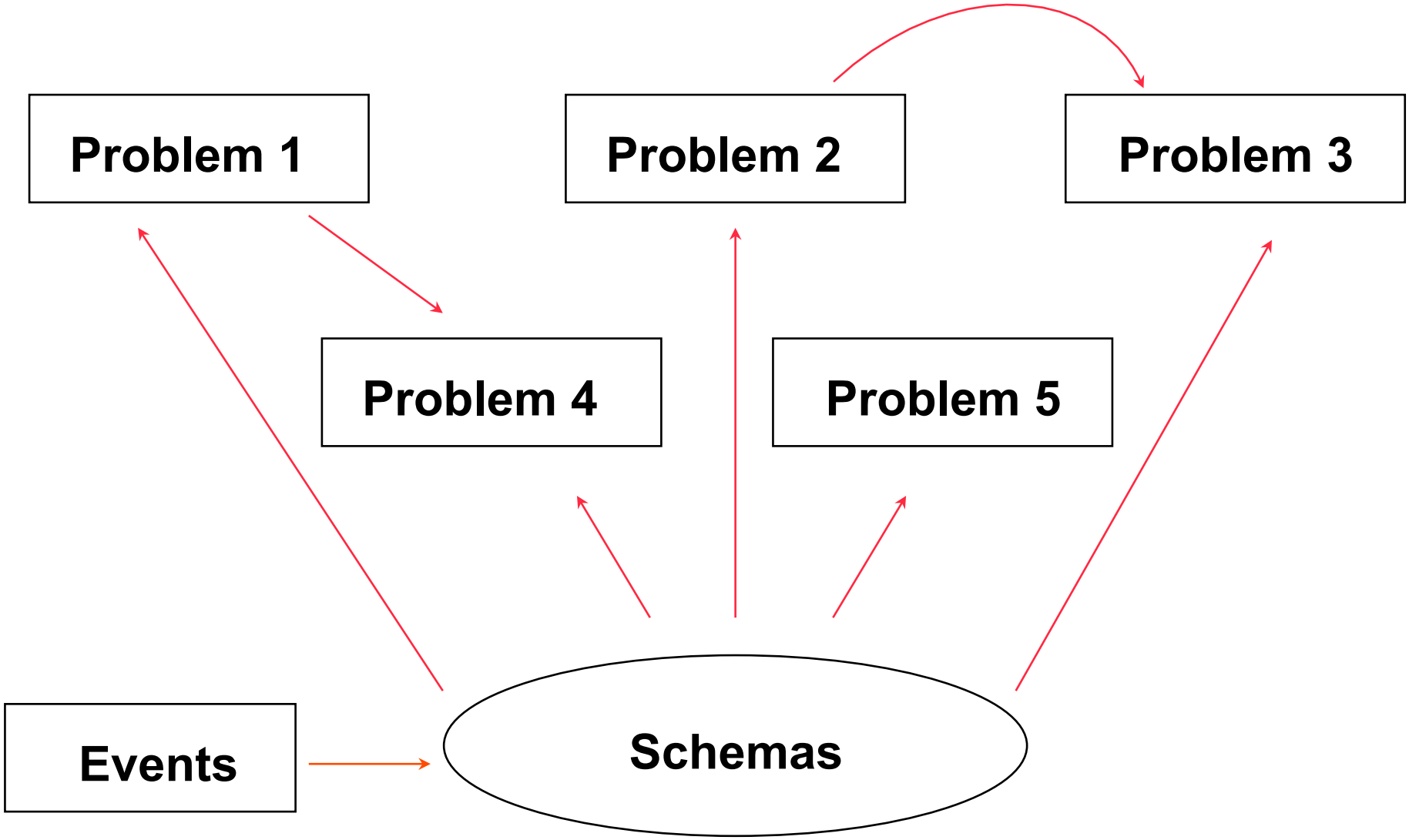
ACTIVITY SCHEDULE

	MONDAY DATE:	TUESDAY DATE:	WEDNESDAY DATE:	THURSDAY DATE:	FRIDAY DATE:	SATURDAY DATE:	SUNDAY DATE:
7-8							
8-9							
9-10							
10-11							
11-12							
12-1							
1-2							
2-3							
3-4							
4-5							
5-6							
6-7							
Evening							

Thought Record

DATE	SITUATION (Event, memory, attempt to do something, etc.)	BEHAVIOR(S)	EMOTIONS	THOUGHTS	COPING RESPONSES

Figure 2.4 Using Beck's Theory to Conceptualize a Case



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