

Generalized Anxiety Disorder: Bringing Cognitive Behavioral Therapy into the Valued Present

T. D. Borkovec and Brian Sharpless

Understanding GAD and developing interventions for its amelioration could contribute significantly to the understanding and treatment of all adult emotional disorders. GAD has a fairly high prevalence rate, is often associated with multiple additional Axis I diagnoses, and is a frequent comorbid condition for other anxiety and mood disorders. Moreover, worry is pervasive across all of anxiety and depression problems. Most importantly, GAD is arguably a "basic" anxiety disorder (Brown, Barlow, & Liebowitz, 1994), out of which often emerge other anxiety and mood disorders. Compatible with such a view, psychological treatment of GAD results in dramatic declines in comorbid Axis I conditions (Borkovec, Abel, & Newman, 1995). Learning about the nature, functions, and origins of this disorder and its cardinal feature of worry could increase our understanding of human psychopathology and of human beings in general.

Worry primarily involves thinking or talking to oneself (Borkovec & Inz, 1990). Such abstract, internal, verbal behavior represents one of the most evolved systems characterizing human beings, allowing us to experiment with ideas, consider alternative choices, and evaluate the motives and consequences of each choice before implementing one of them and without fearing that the environment will punish us for considering them. Thought is also perhaps the most important psychological experience which composes both our moment-to-moment sense of self and our sense of being voluntary creatures. Thus, learning about worry could teach us a considerable amount about human ways of being.

We have been attempting to acquire basic knowledge about GAD and worry and to develop effective forms of psychological intervention for over two decades. Our directions are grounded in basic empirical knowledge from our own work and other psychological investigators, and from logical deductions drawn from prior research and theory within both the anxiety area and the broader psychological literature. In doing so, we are fulfilling our responsibility as behavior therapists to the commitment made by the field at its organized dawning in the 1960's to develop new therapies through the application of empirical knowledge and known principles of behavior. Where relevant, we also gain

concurrent validity for this work by citing parallels within the western philosophical tradition at large. Our work is relevant to the topic of this book, because we have added several key components to traditional CBT approaches over the years, including teaching clients to focus on the present moment, to value tasks based on their intrinsic value rather than solely their eventual outcomes, and to deepen interpersonal and emotional contact with events. Before describing some of our specific interventions, we begin with general comments about the nature of human anxiety which provide a context relevant to our development of GAD interventions.

The Nature of Human Anxiety

Anxious Sequences

Linear views of anxiety involve the specification of two sequential events. An immediate evaluative response occurs upon detection of internal or external stimuli that have threatening meaning. Strategic control of this response is not possible; its occurrence is based on past associative learning (e.g., classical aversive conditioning) and is automatic. In response to this response, the individual engages in a sequence of secondary defensive responses whose goal is to eliminate the threat and whose occurrences maintain anxious meanings. The defensive responses (e.g., avoidance) are initially strategic, but become increasingly habitual over repeated experiences and preclude functional exposure to the feared stimulus. This way of viewing anxiety and subsequent coping was originally explicated by Mowrer's (1947) two-stage theory of fear, an empirically based theoretical account of the neurotic paradox based on animal conditioning research. From such a view emerged the varieties of exposure therapies that exist today. Its implication is that reduction in anxious meanings (the immediate evaluative response) would best come about by repeated exposures to feared stimuli while defensive responses (negatively reinforced by the removal of aversive stimuli) are prevented. At a more general level, its implication is that meaning is action: What a stimulus means partly depends on how we have behaved toward it previously; James-Lange theory is alive and well (Fehr & Stern, 1970). While our automatic reactions may be problematic, the problem and its solution really reside in our reactions to our reactions. The latter thus serve as the best focus for interventions. Worry is an example of a defensive secondary reaction, a negatively reinforced

cognitive avoidance response (Borkovec, Alcaine, & Behar, in press). The treatment implication is that change in anxious meanings will best occur if we strategically change our habitual secondary reactions, including worry, to our immediate evaluative reactions.

Anxiety is Anticipatory

Anxiety is always anticipatory; it has to do with the possibility of future bad things happening. The verbal content of worry especially refers to threatening futures that are quite often very distant in time (Borkovec, Robinson, Pruzinsky, & DePree, 1983). An important implication is that GAD clients (or other people when they are worrying) are phenomenologically spending their time in an illusory world of future-oriented thoughts that contain negative emotional material. They are living many lives, with their bodies and minds reacting to mentally constructed realities as if those realities were actually happening. The consequence is a life of nearly constant anxiety, little joy, and little contact with present moment information. So interventions would usefully aim at increasing the person's contact with present reality and the accurate processing of adaptive information that present reality contains. Present moment experiencing, ability to shut off thought, and the generation of positive affect would be specific goals of such interventions.

Reality, Unreality, and the Primary Motivational Goal of GAD

Given current thinking in epistemology and the philosophy of science, it would be difficult to posit the existence of neutral facts or an absolutely true and accessible reality independent of conceptual frameworks. Perception of the world is largely an act of creation that brings order and meaning to the "blooming buzzing confusion" of sensory data. While this view is foundational in cognitive therapy (CT, Clark & Steer, 1996), this claim goes back at least to Kant (1781). We do not ever receive the world as it is "in itself" (Kant's noumenal realm); all is filtered through our "hard-wired" perceptual capacities. Taking this further, Kierkegaard (1843) prefigured perceptual psychologists such as Helmholtz and Irvin Rock, writing that, "All observation is not just a receiving, a discovering, but also a bringing forth, and insofar as it is that, how the observer himself is constituted is indeed decisive (pg. 59)." As applied to modern western science, Kuhn's (1962) conception of a paradigm indicates that what we believe in our

theories affects both what we are able to perceive and how we process information. These preconceptions can blind us to new information when they become fixed, stuck, or outside of awareness (Bernstein, 1983, Gadamer, 1975). GAD clients are in a similar situation to a paradigmatic scientist in their dominant and rigid perspective on life (i.e., "The world is a potentially dangerous place, I might not be able to cope with whatever comes down the road, therefore I need to anticipate all possible dangers in order to avoid catastrophes").

Basic research demonstrates the power of preconceptions, even at basic perceptual and attentional levels (e.g., Bruner & Postman, 1949; Palmer, 1999; Mikulas, 2000). Such interpretive elements are essential but can be nonadaptive if their content lacks congruence with what is going on in the present-moment environment (Bargh & Chartrand, 1999). Importantly, such interpretations are heavily influenced by how they relate to current goals (Bargh & Chartrand, 1999) that may be activated by the environment without awareness as much as 95% of the time (Baumeister, Bratlavsky, Muraven, & Tice, 1998; Baumeister & Sommer, 1997). Analogously, social psychological research documents the importance of self-fulfilling prophecies, wherein individuals remember and interpret information in other people's personal histories in ways that support the individual's current beliefs and assumptions (Snyder, 1984). In a self-maintaining process, people often overestimate the amount of feedback that confirms their self-conceptions, attend to and remember social feedback that is confirmatory more than disconfirmatory and, when receiving feedback that disconfirms their self-conceptions, interpret this information to minimize the impact of disconfirming evidence (Swann & Read, 1981).

The above does not necessarily entail a strict relativism in which no criteria exist with which to evaluate different ways of living. Perspectives vary along a dimension of appropriateness and adaptiveness, and GAD clients have been shown to have particularly inaccurate views that cause them considerable misery. So, increasing their awareness of, and flexibility in observing, the present moment and providing more adaptive perspectives (especially those that encourage approach to life rather than avoidance) are central goals of our therapy.

Interacting Response Systems and Stuck Habits

The idea that humans are interacting systems is not new and can be found in Hippocrates' theory of temperaments/humours, Plato's *Republic*, and Stoic thought. In our theory and therapy, it has been useful to conceptualize human beings as having evolved several layers of processing systems which constantly interact moment to moment as they are recruited together in a nonlinear dynamical process in response to a constantly changing environment. Humans do not ordinarily go immediately from one state to another (e.g., from tranquility to panic), but rather the systems interact upon detection of significant stimuli in a spiraling process designed to accomplish the prime directive for living organisms to approach what is good for them and avoid what is bad. Thus, when we speak of maintaining secondary reactions (reactions to our reactions), we are speaking of a complex series of interacting sequences over time. Psychological research has long documented the existence of such interactions. What we think affects how we feel, what we feel affects how we think, what we think and feel affect how we behave, how we behave affects how we think and feel, and so on. Each time a spiraling sequence occurs, the sequence is stored in memory in strengthened form, making it more likely that the same or similar sequence will occur upon presentation of the same or similar event. In GAD (and indeed in all forms of psychopathology and perhaps in much of the daily behavior and experience of normal human beings), such spiraling sequences become stuck, rigid habits. As Foucault (1987) states, "Illness suppresses complex, unstable, voluntary functions by emphasizing simple, stable, and compulsive functions."

This rigidity or stuckness has negative consequences. Kovac (2001) found rigidity to be negatively correlated with creativity, divergent thinking, and flexibility. Rigidity is also a characteristic of adult clients in general (Macleod, 1991; Kalska et al., 1999) and unipolar endogenous depression (Heerlein, Richter, Gonzalez, & Sanitander, 1998). On the other hand, other research has documented the benefits of increased flexibility. Flexible coping strategies predict better mental and physical health (Lazarus & Folkman, 1984; Perlin & Schooler, 1978). Mental flexibility is also associated with resiliency in children and correlates with playfulness (Snow, 1992), optimism and humor (Gelkopf & Kreitler, 1996), and lessened impact of trauma (Quota, El-Sarraj, & Punamaki, 2001). Because of these and other

reasons discussed later, emphasis in our GAD treatment is placed on increasing flexibility in our clients' reactions to their reactions.

Our view of psychopathology as involving multiple interacting systems and habitual, inflexible response patterns provides an interesting perspective on other schools of psychotherapy. Each school of therapy tends to place particular emphasis on a particular response system, considers that system to be rigid, and focuses intervention on that system. For CT, this involves nonadaptive cognition; for experiential therapy, it is denied or suppressed emotion; in psychoanalysis, "fixation" plays a key role; faulty interpersonal relations are central to interpersonal psychotherapy; environmental contingencies supporting nonadaptive overt behavior are critical to some behavioral views. In each case, it is assumed that changing the crucial response system will result in interactions throughout the remaining systems. For example, cognitive therapists believe that if you change how clients are thinking, this will change how they feel and behave. Because psychological research has demonstrated that each system interacts with all others, each of these perspectives contains an element of relative truth; no theory or paradigm is preemptive (Feyerabend, 1993).

Our latest outcome study serves as a useful cognitive behavioral therapy (CBT) example of change in the various interacting systems (Borkovec, Newman, Pincus, & Lytle, 2002). We contrasted CT alone, applied relaxation and self-control desensitization alone, and our CBT containing all of these elements. Considerable change occurred for all three groups, but no significant between-group effects were observed, largely because the component conditions were particularly effective. Because more therapy time had been devoted to each component in our study than in previous GAD investigations, we compared total amount of therapy time in those prior studies showing a superiority of CBT to its components versus those investigations wherein no difference occurred. Components were equivalent to CBT when lengthy treatment was provided (13.50 hours), and they were inferior to CBT with briefer therapy (9.25 hours). So if sufficient time is devoted in therapy to the modification of one response system, then it appears that changes in that system will eventually affect the other interacting systems.

Given the above, a route to increasing the effectiveness of a therapy, irrespective of what response system it is targeting, is to develop its techniques to maximize their impact on that one response system. Certainly, we would encourage such developments. However, the additional approach is to provide a client with interventions targeting many or all relevant response systems while developing ways to maximize the effectiveness of each. We have taken the latter approach in our current pursuit of more efficacious treatments for GAD and hope that targeting multiple areas will create greater positive changes within the entire system.

The Development of Specific Interventions for GAD

Our development of techniques tailored to GAD evolved from initial applications of traditional CBT methods for teaching adaptive coping skills, to adding an emphasis on teaching our clients how to live in the present moment in flexible ways, to eventually emphasizing whole-organism approach behavior in daily living through the cultivation of intrinsic values and motivations applied to each present moment. When an individual is living in perspectives such as the ones typical of our GAD clients, attending to the present is not given high priority and would require considerable effort even if the client desired to do so. Constant threat perception yields hypervigilance for further threat cues and requires immediate actions to cope with the threat. Consequently, traditional CBT and its provision of coping skills to lessen anxiety may be an important first step for later work devoted to eventually increasing client focus on the present. Through a variety of techniques, we aim to replace automatic, anxiety-maintaining spirals (reactions to reactions) with more adaptive, flexible responses within each response system, using strategic choices repeatedly rehearsed until the alternative responses have sufficient habit strength to provide greater choice and lessened determinism. Thus, therapy involves loosening up rigid habitual behavior and ultimately the creation of new meanings, not only with regard to the critical stress-producing aspects of life but also to life in general. The brief descriptions of some of our techniques below are organized in terms of the stuck habits among the various response systems involved in the maintenance of anxious meanings typical of our GAD clients.

Stuck Awareness and Self-Monitoring

Self-monitoring has long been a foundational skill in behavior therapy for many adult psychological problems. Clients are asked to observe the environmental situations associated with their problems, the behaviors they emit, and the consequences, if any, that occur. With the later incorporation of CT techniques and recognition that internal events are involved in problematic functional relationships, self-monitoring was also directed to thoughts, images, feelings, and physiological reactions.

In our own treatment, self-monitoring is extremely important for three reasons. As in traditional CBT, we encourage our clients to pay attention to their inner and outer environments and to observe the moment-to-moment interactions among their various response systems and between those and their constantly changing external worlds. We are particularly interested in having our clients see causative relationships among these various elements and recognize that the characteristic ways in which they think, imagine, feel, and act have objective consequences for their internal and external worlds. This lays the groundwork for clients to achieve a more agentic position with regard to their characteristic response patterns. They become aware that anxiety is less an impingement from without and more a product of themselves that arises from within. They begin to see the possibility of real choice, as real choice is only won through the hard labor of gaining awareness of relevant personal processes over time.

However, in addition to providing functional analytic information to both the therapist and the client, self-monitoring provides opportunities for a special emphasis on learning to detect incipient changes in state as they happen. The goal is to catch anxiety spirals as early as possible, because the earlier the client catches a shift in an anxious or worrisome direction, the more effective will be the strategic choice and implementation of new coping strategies for moving his/her state away from that spiral. Practicing such monitoring occurs in session, both by having the therapist alert the client to any observed changes in state and by actively generating anxiety or worry via traditional evocative methods (e.g., imagery recall of past events). Upon detection of incipient anxiety by either method, the therapist asks clients to identify what reactions they notice which indicate that they are becoming anxious, and then asks them to identify what happened just before those noticed cues. Repeating the generation of anxious sequences through imagery recall allows a focus on the process and an awareness of internal events that

emerge just before a clear recognition of incipient anxiety. Such repetition allows the client to make observations earlier and earlier in the sequence of anxious responding among the response systems.

Because so much of anxious process is habitual and outside of awareness, responsibility for noticing incipient anxiety spirals during a session initially falls to the therapist. Once clients are experiencing sufficient success, this control is gradually shifted over to them. The resulting increase in autonomy and responsibility likely engenders a more internal locus of control, which in turn engenders more novel actions. Self-monitoring and early cue detection are also practiced during daily living, and the therapist asks the client at the beginning of each session what new early cues were identified during the past week.

Self-monitoring also lays the foundation for one of the most critical goals in our treatment: a focus on the present. With so much time spent in thought and worry, GAD clients have few attentional resources to devote to observing what is happening in their actual worlds. Asking clients to observe themselves and their environments objectively provides the opportunity to introduce the idea of living in the present moment and of paying attention to what actually exists, instead of the illusory world created in their thoughts and images.

While monitoring and observation in early sessions involve attending to external and internal events that directly relate to anxious experience, two further, sequential stages are later initiated. First, clients are asked to identify positive information and experiences during the day. Because of excessive negative filtering and confirmatory biases, it is important to direct their attention to, and encourage their processing of, positive features in their environment to create balance in their processing of information. Clients are asked to cultivate accuracy in all observations and judgments (rather than a Pollyannaish naïveté) and to open their awareness to all information available in each present moment in order to facilitate choice and to foster emancipation from automatic responses. Empirical research supports the use of self-monitoring in this manner. Lord, Lepper, and Preston (1984) found that confirmatory biases in hypothesis testing can be overcome simply by instructing individuals to actively consider the possibility that the opposite could be correct. Neuhberg (1989) found that merely giving subjects instructions to make

accurate judgments motivated them to overrule expectations by gathering information in a more complete and rigorous manner. Tetlock (1985; Tetlock & Kim, 1987) found that making subjects feel accountable for their impressions or judgments (as they would feel when they give weekly descriptions of their past week's behavior during each therapy session) results in more effortful decision-making and greater attention to situational constraints.

Stuck Physiological Functioning and Relaxation

Unlike other anxiety disorders, GAD clients do not typically show sympathetic activation when they are worrying or are confronted with challenges or threats. Instead, they display a reduction in cardiovascular variability and deficient parasympathetic tone (Hoehn-Saric, McLeod, & Zimmerli, 1989; Thayer, Friedman, & Borkovec, 1996). Such physiological rigidity makes sense, given the psychological circumstance that they create. With frequent detection of threat but no place to run and no one to fight, sympathetic activation is not adaptive, and so it is suppressed. Demonstrative of the interacting response systems, reduced vagal tone in children has been linked both to nonadaptive attentional deployment (providing a possible basis for threat-biased attention and interpretive biases consistently found in GAD; Mathews & MacLeod, 2002) and to later poor interpersonal behavior (Beauchaine, 2001). Moreover, both worry and its lack of autonomic variability are associated with significant health risks (Brosschot & Thayer, in press; Thayer & Lane, in press), and medical health care utilization is particularly high among people diagnosed with GAD (Roy-Byrne, 1996).

Given the above, relaxation is a very useful strategy for GAD clients. Initially, we used only progressive muscle relaxation (Bernstein & Borkovec, 1973), and it has remained in our therapy because excessive muscle tension is one of the few physiological systems tonically elevated and particularly reactive in GAD (Hoehn-Saric et al., 1989). We later incorporated two significant additions: training in multiple relaxation techniques, and emphasis on applied relaxation training. For the former, we teach slowed, paced, diaphragmatic breathing in the first session. This relaxation method is easy to demonstrate, and the majority of clients notice nearly immediate benefits from even brief deployment. In the second session, full progressive muscle relaxation training is initiated and is completed over the course of the

protocol sessions. Also in early sessions, we introduce them to, and practice, pleasant relaxing imagery and meditational methods. Clients are encouraged to play and experiment with the various methods in order to discover which work best under which internal and external environmental circumstances and to shift to an alternate technique if the first selected one is not effective in a particular situation. They practice their relaxation techniques twice a day to strengthen their ability to elicit rapid and deep relaxation responses. Training in multiple techniques reflects our emphasis on learning flexible coping responses and on creating increased choice. Moreover, research indicates that if relaxation-induced anxiety (common among diffusely anxious individuals) occurs with one technique, it is unlikely to occur with another (Heide & Borkovec, 1983).

Truly effective use of these methods comes, however, from applied relaxation training (Öst, 1987). Clients use their relaxation coping strategies to interrupt incipient anxiety or worry spirals during the session and in daily life upon self-monitoring detection of early cues throughout the day. In addition they elicit calm and tranquil states frequently throughout the day in order to cultivate a relaxed life-style in general. As they come to sessions reporting successes in both coping applications and the cultivation of relaxed life-styles, therapy sessions start with elicitation of relaxation and a request that they maintain an awareness of this background tranquility throughout the session (and, from now on, in daily living). The very earliest cue for intervention will now be an absence of this tranquility. Finally, and described in greater detail later, we encourage them increasingly to open up to, and positively approach, the present-moment environment after each relaxation re-induction and to attend to the information that this reality contains. As Pink Floyd sings, we ask our clients to "Tear down the wall."

Just as self-monitoring was an introduction to attending to the present moment, so relaxation training is an introduction to creating and attending to a *pleasant* present-moment. After relaxation inductions, we point out to our clients that they in fact produced that state, that they are capable of producing it any time (although frequent practice is required to develop the habit of doing so), and that a goal of this procedure is learning to attend to things that are positive and pleasurable, with their relaxed states being an early example.

At the technical level, progressive relaxation involves tensing muscle groups and then letting go of the tension while concentrating on the resulting sensations. As training progresses, we discuss the general metaphor of "letting go" beyond this physical example. We discuss the importance of learning to notice and then to let go of reactions to reactions involving negative thoughts, images, feelings, and any considerations of the future itself as soon as these events are detected. "Letting go" is described as mere observation of these internal reactions and of non-reaction to them, of detachment rather than attachment. In this sense, "letting go" overlaps with the variety of "acceptance" methods described elsewhere in this volume.

Beneficial effects of relaxation are well-documented (Bernstein, Borkovec, & Hazlett-Stevens, 200; Lichstein, 1988; Lehrer & Woolfolk, 1993) and have a particular relevance for GAD clients. Relaxation facilitates behavioral change by diminishing the response priority of well-learned behaviors and increasing the response priority of weaker behaviors (Nakamura & Broen, 1965). Thus, it can potentially loosen up rigid response patterns. It also facilitates imagery (Anderson & Borkovec, 1980) and so increases the effectiveness of imagery rehearsals (to be described in a later section). Relaxation directs the client's attention away from excessive focus on abstract conceptual activity. It also has been found to facilitate the emotional processing of phobic images (Borkovec & Sides, 1979). Finally, relaxation increases awareness. By definition, the act of achieving relaxation requires present-focused awareness to the feelings of muscular tension and relaxation; the relaxation response is rewarding only if awareness is sufficiently maintained to accurately assess the status of one's body.

Stuck Affect and Emotional Processing

Daily GAD life is filled with negative emotional experience, true even when persons with GAD relax in a laboratory (Borkovec & Inz, 1990). Although anxiety predominates, depression is a frequent accompaniment. Clients often have comorbid or past mood disorders (Brown & Barlow, 1992). Interestingly, the induction of worry in the laboratory will elicit about 60% anxious mood and 40% depressed mood, even in unselected normal individuals (Andrews & Borkovec, 1988).

GAD clients are also high in alexithymia, i.e., difficulty in identifying and describing emotional experience. Spending so much time worrying, they may simply have fewer attentional resources for noticing their emotions and their daily emotional variations. It is also possible that the muting effect of worry on somatic fear responses (Borkovec & Hu, 1990), and thus on the emotional processing of fear-related material, may generalize to other emotional experiences as well. Finally, GAD clients may find emotions in general to be aversive (Turk, Heimberg, Luterek, Mennin, & Fresco, in press), similar to Hayes' (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) notion of experiential avoidance and further elaborated in Roemer and Orsillo's (2002) article on the potential integration of cognitive behavioral and mindfulness/acceptance-based therapies.

Clearly, little joy exists in their phenomenological lives due to the anxiety and depression elicited by their illusory worlds of negative thought. This type of living in the future (and at times in the past) is in contrast with the emotional lives of most young children who experience (and readily show in their behavior) intense positive and negative emotions in response to immediate environmental events. Once the environment changes, they are synchronously moved in other behavioral and emotional directions appropriate to the environmental change. Adults often try to hold on to good events beyond their environmentally present reality and try to get rid of bad events. As a consequence, authentic emotion is often missing, and the intensity of real emotion is often lessened and/or inappropriate to changed environmental conditions. GAD individuals have the added burden of creating constant negative lives in their minds and of therefore missing aspects of present moment environments that contain emotionally significant experience and information: "When I was a child, I caught a fleeting glimpse, out of the corner of my eye. I turned to look, but it was gone. I cannot put my finger on it now. The child is grown, the dream is gone. I've become comfortably numb" (Pink Floyd - The Wall).

Our therapy approach contains three elements to address these affective features. As mentioned earlier, self-monitoring eventually includes paying attention to and experiencing all emotions (positive and negative) and their connections to present-moment events. Second, we now add interpersonal/emotional processing therapy (described later) to traditional CBT. The emotional processing

element uses experiential techniques to deepen authentic, in-the-moment, primary affect. From a behavioral perspective, this provides repeated exposures to emotion to hypothetically lessen fear and avoidance of affect. From an experiential perspective, emotional deepening accesses denied or suppressed affects to facilitate their identification and processing. Thirdly, as therapy progresses, increasing emphasis (described later) is placed on developing cognitive perspectives that cultivate approach to daily life and joy in its engagement.

Stuck Behavior

Unlike other anxiety disorders, behavioral avoidance of circumscribed environmental stimuli is not as salient for GAD clients. They do, however, show subtle behavioral avoidances to a large variety of situations (Butler, Cullington, Hibbert, Klimes, & Gelder, 1987). More importantly, they display rigid interpersonal behavior that fails to adjust to changing interpersonal circumstances (Pincus & Borkovec, 1994).

Because so many circumstances are associated with GAD worries and anxieties, we have always used a coping, rather than mastery, approach. Clients use their applied relaxation skills early in therapy in response to any incipient anxiety or worrying as well as before, during, and after stressful daily events. These responses are strengthened in session through self-control desensitization (see Goldfried, 1971), wherein imagery of stressful or worrisome situations elicits incipient anxiety cues, to which clients practice responding with their relaxation skills. Such repeated rehearsals help to build habit strength (i.e., to create greater choice) in the newly learned skills and to establish internal and external stimuli as daily reminders to deploy coping resources upon early detection of stress or worry. Finally, whenever opportunities for approach to feared situations do present themselves, we encourage exposures to those situations, combining their relaxation coping skills with whole-organism approach behaviors and the cultivation of intrinsic values (described later) during such approach.

As mentioned previously, our current package includes interpersonal/emotional processing techniques. Based partly on work by Safran and Segal (1990), Michelle Newman (see Newman, Castonguay, Borkovec, & Molnar, in press) expanded this integrative cognitive, interpersonal, and

experiential approach and adapted it to our GAD clients, based on what was known about their intrapersonal and interpersonal functioning. The interpersonal element is designed to identify the client's interpersonal needs and fears, to determine how the client is behaving to get those needs satisfied and the ways that these behaviors are not succeeding, and to teach new and more flexible interpersonal behaviors. Emotional deepening methods contribute to the interpersonal goals by facilitating the identification of authentic emotions related to interpersonal relationships and, based on those, the emergence of authentic behavioral expressions (e.g., assertive responses and other forms of adaptive communication and ways of relating). In the process of functional analyses of interpersonal behaviors, use is made not only of clients' descriptions of their interpersonal patterns and how people react to those behaviors but also of the interpersonal behaviors that emerge between the client and the therapist. For example, the therapist will let the client know what kind of emotional impact his/her behavior is having on the therapist in the moment and what behavioral tendencies those behaviors tend to pull from the therapist. Thus, the therapeutic relationship becomes a microcosm of the client's interpersonal realities, and feedback provides important information to the client for learning about actual, natural contingencies associated with the client's interpersonal actions and contains the possibility for corrective emotional experiences, similar to some of the features of the therapeutic relationship discussed by other others in this volume.

Stuck Cognition

Traditional CT involves (a) identifying what clients are thinking, how they are perceiving, interpreting, and predicting, and what core beliefs they hold; (b) assessing the accuracy of these cognitions through a search for evidence for their truth value; (c) creating more accurate ways of seeing things and believing; and (d) testing these new views in daily life. We utilize this traditional and well-known approach with our GAD clients, but given what we know about their idiosyncratic cognitive processes, we emphasize a number of additional features.

Rigidity in GAD is most pervasive in their cognitive activity. Their habitual engagement in worrisome thinking about the future precludes attending to other aspects of their immediate environments; they are thinking too much. GAD is also associated with persistent attentional biases to

threat cues, often outside of awareness (McLeod, in press). Moreover, GAD clients display rigid interpretive biases, interpreting ambiguous information in threatening ways and perceiving higher than normal subjective risk that bad things will happen (MacLeod, in press). Their streams of consciousness during worry show a lack of flexible thinking (Molina, Borkovec, Peasely, & Person, 1998), and they score highly on measures of nonadaptive beliefs (e.g., the Dysfunctional Attitude Scale; Behar & Borkovec, 2002), reflecting inaccurate and inflexible views of their worlds. Images in their mental life are often negatively valenced (Borkovec & Inz, 1990) and revolve around catastrophes that might happen. Because mental activities like worry can be performed any time, chronic worriers also associate worrisome activity with numerous environments, resulting in a spread of worry throughout the day and a lack of stimulus control. Indeed, GAD clients show classical acquisition of threat-detection responses to neutral stimuli (e.g., a colored square on a computer monitor) that have been paired with threatening words (e.g., "criticism") used as unconditional stimuli in evaluative conditioning procedures (Thayer, Friedman, Borkovec, Johnsen, & Molina, 2000).

From this evidence, our cognitive interventions would usefully focus on modifying these characteristic inflexible habits, targeting their negatively biased attention, interpretations, predictions, expectations, and images, and establishing more adaptive stimulus control of worrisome activity. Below we describe our various therapeutic methods for addressing these cognitive domains. Our initial goal in therapy is to loosen up cognitive activity and provide alternatives to inaccurate and nonadaptive ways of perceiving the world via relatively more accurate, flexible, and adaptive ways of perceiving and interpreting. This "loosening up" includes, but is not limited to, a belief that emancipation occurs through the recognition of the ways in which the client is determined or "stuck" in nonadaptive, inflexible, or automatic cognitions. To influence automatic cognitive processes, a client requires awareness of the existence of such processes, an intention to override them, and sufficient attentional resources to do so (Bargh, 1994). These facets of change are continually facilitated during our treatment sessions. Once threat perceptions that would otherwise sabotage attempts to focus on the present moment are

significantly lessened through cognitive change interventions, the goals of being able to stop thought altogether, get out of the head, and live increasingly in the present become more realistically achievable.

Open and Multiple Perspectives. Despite the value of the typical CT for generating more accurate views of the world, we do not want our clients to become rigid in their new-found beliefs. Replacing an habitual perspective with a more adaptive one would not be ideal if that new view also become inflexible and unresponsive to new information. As in traditional CT, we emphasize that any perspective must remain open to empirical testing, that no perspective is absolutely true, and that a particular perspective's accuracy, relevance, or usefulness may vary over changing times and changing environments. Most importantly, we emphasize the generation of multiple perspectives. This usually begins with discussions of neutral situations, wherein the client's habitual, defensive ways of thinking are not as likely to occur. The question, "How many ways are there to see this," is applied to things like the forms that can be perceived in clouds, events in situation comedies from the points of view of different characters, simple objects in the therapy office, and Gestalt figures that contain more than one perceptual possibility. Once the client becomes familiar with the notion of multiple perspectives with these innocuous examples, the therapist moves to anxiety-producing or worry-relevant material. As in typical problem-solving approaches, the initial phase is a brainstorming period whose goal is to identify several views of the same situation without evaluating their accuracy or usefulness.

Of particular note is our emphasis on the use of humorous views and play to facilitate multiple perspective-taking. Humor not only adds an element of pleasantness and lightness to the process but also entails relatively large shifts away from habitual meanings toward novel interpretations and responses (Kreitler, Dreshsler, & Kreitler, 1988). Thus, shifting and often incongruous perspectives involved in a humorous engagement facilitate the breaking of fixed and concretized habits and the facilitation of novel approaches (Kreitler, Drechsler, & Kreitler, 1986). Humor comprehension and appreciation are also positively associated with mental flexibility and the use of problem-solving strategies (Gelkopf & Kreitler, 1996). Moreover, Gelkopf and Kreitler (1996) regard the use of humor in session as akin to Beck's concept of "distancing", or the process of regarding thoughts objectively (Beck, 1976, pg. 243).

Use of humor for shifting perspectives also facilitates cognitive reframing in which the conceptual and/or emotional context of a problem is changed to reconstruct its meaning in a more adaptive way (Walrond-Skinner, 1986).

In addition, the creation of multiple perspectives also involves an element of play. Play appears to be a central component of effective education (etymologically in Greek, *Paidai* denotes "the harmless play of children," and *Paideia* means "education"), and it is significant that the period in which mammals engage in the most play is also the time during which they are most likely to learn (Kolb, 2000). Moreover, Lowenfeld (1935) delineated four ultimate purposes of play, all of which are desirable from a GAD therapeutic standpoint. Play (a) makes a connection with the immediate environment, (b) creates a bridge between conscious and emotional experience, (c) facilitates the experiencing of inner emotions, and (d) brings joy, relaxation, and amusement to one's life. Empirically determined benefits include increases in general flexibility and novelty of responses (Dansky & Silverman, 1973; Singer & Singer, 1990), concentration and positive affect (Shmukler & Naveh, 1984-1985), creativity, divergent thinking, and originality (Smilansky, 1986; Feitelson, 1972), and cardiovascular flexibility (Hutt, 1981).

Once several perspectives are identified for a given situation, customary CT methods for assessing accuracy, advantages and disadvantages, and impact on anxiety and depression are applied, resulting in a set of multiple perspectives of varying degrees of estimated accuracy. Several of these will be seen as nearly equal in accuracy and so will provide flexible alternatives for the targeted situation. As with multiple relaxation techniques, our clients try out their multiple perspectives within situations during daily living, remaining playful and experimental with their cognitions and loose and flexible in their approach to their lives. As Kuhn implies (1962), it may be the case that, like gestalt figures, we cannot view the world simultaneously through different paradigms/perspectives. However, this does not preclude the possibility that one can alternate between various perspectives from an evaluative position. Such alterations increase the probability of matching perspectives to existing circumstances in an appropriate and adaptive manner.

Rehearsal of Perspectives. Examples of dramatic insights leading to wide-spread changes occur in CT (e.g., Borkovec, Hazlett-Stevens & Diaz, 1999), but it is more common that new perspectives have weak habit strength, old ones have been habitual for a long time, and rehearsal of new views is very important for increasing choice in ways of seeing. Thus, clients are asked to shift perspectives to newly developed views as soon as they detect anxiety or worry during their daily living, in addition to applying their relaxation and "letting go" skills. As cognitive products are identified in CT, these are incorporated into the self-control desensitization procedure: In the anxiety-generating scenes and at incipient anxiety detection, clients not only relax (and imagining themselves relaxing in the imagined situation), but they also imagine changing their perspectives. Repeated rehearsals of coping responses provide opportunities for creating increased habit strength and establishing environmental cues as reminders to shift perspectives.

Worry Outcome Diary. GAD clients do not process all of the information available in their moment-to-moment experience, and they especially do not process information that contradicts their habitual views. Although examining past evidence is useful in evaluating the accuracy of perspectives, it is important to have clients cultivate the skill of paying attention to reality in the present moment and of processing events that comment accurately on the way things are. A useful device involves the Worry Outcome Diary. Clients write down each worry identified during the day and what outcome they fear will happen. Each evening, they review entries from past days to see whether actual outcomes have occurred. If so, they rate on a 5-point scale whether the outcome turned out better than expected, as bad as expected, or worse than expected. For things that turn out bad, they similarly rate how well they coped with the outcome. They are then asked to process any favorable-outcome information by reliving in imagery the actual outcome as it related to the expectation and to draw conclusions from this real-life information relevant to their way of making predictions or having expectations. Diaries are reviewed with the therapist who reinforces the new information and points out that the client is creating his/her first objective history of evidence of the way things actually are. Empirical data from our own lab demonstrates that the worried-about outcomes rarely happen, and even if they do, clients handle the situation much better than

they predict that they will (Borkovec, Hazlett-Stevens, & Diaz, 1999). Clients in turn gain an alternative perspective on the world and take steps towards creating new narratives for themselves. This may be similar to Teasdale's (1996) admonition that therapists should target holistic meanings rather than attempting to modify individual sentences of meaning. While our worry outcome diaries do focus on individual and concrete present worries, the dialectic of generating hypotheses, collecting data, and comparing the actual results to expectations provides a holistic meaning which goes beyond the modification of individual worry sentences.

Imagery as Reality and Imagination of Most Likely Outcomes. Imagery is reality in certain important senses. First, imagery is incipient action (efferent command into physiology, behavior, and affect; Lang, 1985). When we imagine something, we engage in internal behavior toward that something. If action is meaning, then imagery is a source of meaning. Second, the behavior of imagination is sufficiently powerful that imaginal rehearsal of skilled behaviors (as in a sporting activity) can increase the quality of performance, just as actual practice does, although possibly not to the same extent (Murphy, 1994). Third, emotional images elicit the same pattern of physiological response that actual events do (Lang, Levin, Miller, & Kozak, 1983). Finally, if you ask us to imagine a set of events happening and later ask whether or not such events did indeed happen, we will believe that those events happened to a greater degree than if we had not been asked to imagine those events (e.g., Garry, Manning, Loftus, & Sherman, 1996).

The above points have several implications for our GAD clients who are experiencing catastrophic images frequently. These images strengthen threatening meanings, and negative emotional reactions are experienced as if these catastrophes are actually happening. A further implication to the recall findings is that if one imagines bad events during worry, then these images are stored in memory with an ambiguous flag as to whether they happened in reality or not. So GAD clients are constantly acquiring functional evidence that such bad things do indeed occur, even though they have not. This phenomenon is the likely basis for comments by clients that, although logical analysis and evidence indicate the inaccuracy of a nonadaptive perspective, it still *feels* true. Logic and intellectual recognition of evidence (as part of the

abstract system) do not connect as strongly with efferent command as does imagery. Thus, inaccurate expectations contained in worry feel true because our clients have experienced such events numerous times in their imaginal life; they have the evidence for the truth value of these events at an affective level.

Strong empirical evidence thus exists for the useful role of imagery in treatment, and we have incorporated it in our self-control desensitization method as a vehicle for rehearsing and strengthening adaptive reactions to incipient anxiety cues. Moreover, the imagery-recall research has prompted a further tactic: Desensitization segments end with repeated rehearsals of images of the most likely outcomes for a worrisome situation, based on probability and evidence derived from CT segments of the session. Furthermore, the client is encouraged to substitute (and vividly imagine) the "most likely outcome" or several likely outcomes upon early detection of worry. The goal is to reduce the frequency and duration of catastrophic images and to increase images that relate to what will actually happen. "Most likely" images facilitate moving the anxiety spiral in adaptive emotional directions, become more well established as an availability heuristic, and reinforce the feeling of the truth of cognitive products intellectually derived from preceding CT.

Stimulus Control and Worry-Free Zones. Because we can worry anywhere, many environmental cues become associated with it and so come to set the occasion for its occurrence. Two decades ago, we developed a stimulus control procedure for reducing worry. The technique antedated our eventual CBT approach but anticipated our emphasis on early cue detection and living in the present. Derived from Bootzin's (Bootzin & Epstein, 2000) stimulus control treatment for insomnia, our application involves five instructed steps for reducing worry: (a) Establish a half-hour worry period at the same time each day and in the same, distinctive place. (b) Monitor the worrying and learn to detect its initiation as soon as possible. (c) Postpone any detected worrying to the worry period. (d) Focus attention back to the present moment. (e) Use the worry period to worry about the concerns or to problem-solve about those concerns. Although telling worriers to stop worrying is not effective, they find it much easier to postpone worries if time for them exists later. Found effective with chronic worriers (Borkovec, Wilkinson, Folsensbee, & Lerman, 1983), the method was incorporated with changes into our eventual CBT. Although clients can

worry during their worry period, emphasis is placed on problem solving and the application of the CT methods to generate cognitive coping responses for use when they notice a worry. For problem solving, they distinguish between worries and feared outcomes over which they have some control (e.g., savings plan for children's college education) and worries over which they have little or no control (e.g., global warming). In the worry period, they work on behavioral strategies for increasing the likelihood of positive outcomes, but they implement actions based on those strategies as soon as possible, at which time that particular worry shifts to worries over which they have no further control. The latter are addressed by applying their usual CT methods in order to generate useful perspective shifts whenever that worry emerges.

One of our therapists, Mary Boutselis, created a related, often easier and more useful, approach. Clients create a brief "worry-free" zone in their daily lives, e.g., whenever driving, when awakening and until after breakfast, or whenever in their living room. When they detect incipient worry in this zone, they let go of the worry and postpone it to any time outside of that zone. When they report success within this first zone, additional zones are added, so that over time an increasing number of times and situations become free of worry.

Expectancy-Free Living. Once clients are reporting success with perspective shifts and are making more accurate predictions, we encourage one more step that is logically deducible from empirical literature on the pervasiveness of confirmatory biases. Because our pre-existing perspectives influence what and how we see, present moment reality is not easy to access. The therapeutic implication is that the greatest degree of adaptation, of new learning, and of access to reality would occur if we are able to let go of pre-existing beliefs, predictions, and expectations and simply pay attention to the reality that is in front of us. The ideal would involve movement for our clients from their habitual negative expectations to relatively more accurate expectations to eventually no expectations at all. The ultimate goal of CT, like the ultimate goal of self-monitoring and relaxation therapy, is thus living in the present moment.

Being completely free of pre-existing perspectives is likely impossible, but we encourage our clients to practice letting go of these as much and as often as they can and to merely pay attention to the

actual events transpiring before their eyes. Early in therapy, this has to do with anxious and worrisome cognitions, but increasingly we ask them to adopt the same approach to their experience of the entire day. As evidence from their Worry Outcome Diary confirms that most things turn out well and that they cope quite well with whatever happens, they learn that they can trust themselves and the world more than they have previously done and that openness to present-moment reality can generate a lighter and freer life, where greater potential for joy and adaptive learning about themselves and their worlds exists. In the words of Zorba, the Greek, "I fear nothing, I hope for nothing, I believe in nothing...I am free."

Additional Components

In addition to the interventions targeting specific “stuck” systems, our work contains integrative components that cut across several domains and build on these more specific elements.

CT in a Relaxed State. We often have clients generate a deeply relaxed state just prior to conducting CT, especially that portion of therapy involving the generation of alternative perspectives. Increased parasympathetic tone provides for more flexible attentional deployment, and reduction of anxious states via relaxation facilitates more flexible and more accurate thinking in general. Pilot data study supports this: After choosing their two most pressing worries, half of the participants relaxed via slowed diaphragmatic breathing, whereas the other half worried about one of their topics. They then wrote down as many possible outcomes to the second worry that they could think of. People who worried first generated mostly negative outcomes, whereas people who relaxed first listed mostly positive outcomes.

Focus on the Task at Hand, Whole—Organism Approach, and Intrinsic Values. Once in the present, there is the question of what to do in that moment. Simply paying attention to what actually exists is foundational to this approach. We emphasize (and practice in sessions) paying attention to sensations in all five modalities and the simplest level of perception as a method of getting out of the head and of decreasing reactions to these reactions by not judging or categorizing or engaging in other associations and by merely observing the way things are. Second, if the present has a task, we encourage our clients to focus attention solely on that task, with minimal thought about future outcomes once

engagement in the task has been begun. Most importantly, we work to create intrinsic meanings and motivations for any present moment, whether that present contains a task or not. The purpose of cultivating intrinsic behaviors relates to what we previously meant by "whole-organism approach."

Whole-organism approach can be explained by an example. Consider the specific case of phobias. Traditional methods use exposure to feared stimuli while motoric avoidance is prevented. The problem is that clients often engage in other defensive reactions during exposures even though they may be in the physical presence of the phobic situation and are in some limited sense behaviorally "approaching" it. We can close our eyes during exposures, engage in distraction, or shift to freezing responses as the evolutionarily significant backup response when escape or avoidance is prevented. Any of these reactions to reactions maintain the anxious meaning of the situation, despite exposure to it. Indeed, Grayson, Foa, and Steketee (1982) demonstrated the deleterious effect of distraction during exposure with obsessive-compulsive disorder, while Borkovec (1974) showed the maintaining effects of imagined avoidance to imaginal phobic presentations. So whenever approach to feared situations becomes part of treatment, we work with our clients to develop ways in which they can engage in approach that involves all of their interacting systems, including cognitive and affective systems. A simple example that the first author uses involves phobias of bees. When asked to allow the bee to fly around without engaging in avoidance, people will usually freeze, with their eyes anxiously watching for the bee. Instead, they are asked to hold their hand out to the bee, as if inviting it to land on their hand, and to feel this action as a positive approach response, knowing cognitively that little chance exists that the bee would actually land, much less sting. Other perspectives based on the client's values and associated with positive affect (e.g., bees as makers of honey, as complex social animals, as one of nature's creatures) are encouraged to maximize positive approach feelings and cognitions during exposure.

Recent work supports the idea that values, sense of self, and intrinsic motivation may be critical in modifying long-held beliefs such as those typical of GAD clients. Sherman and Cohen (2002) explain resistance to disconfirmatory evidence and biased interpretations of ambiguous stimuli as arising from a fundamental motivation to protect the integrity of the self. If self-worth and self-value are only affirmed

by one view (e.g., any particular, dominant GAD perspective), people tend to be defensive and resistant to novel, disconfirmatory evidence. So individuals need an alternative source of self identity. Such alternatives are not always easy to locate when one is absorbed in worry and anxiety. A focus on values and intrinsic motivation are therefore very useful; making such values manifest leads to alternative self-affirmations. Moreover, any daily activity or experience can be enhanced by bringing intrinsic values to that present moment as a way of creating whole-organism approach. Goals and values markedly affect what information is attended to and how information is processed (Bargh & Chartrand, 1999). Although being Zorba the Greek might be idyllic, eliminating all preconceptions from one's processing of and engagement with present-moment reality is difficult, as mentioned before. While it is useful to cultivate increasingly objective and mere observation, it is also additionally helpful to increase one's flexibility in the conceptions that are brought to the moment by enriching existing perspectives and by creating multiple perspectives that reflect one's most important or cherished values.

Social anxiety provides a good example of both attention to the task and the use of perspectives based on values. If we are socially anxious, focusing on ourselves during a conversation increases our anxiety, whereas focusing on the task at hand (i.e., conversation content) lessens anxiety (Przeworski, 2002). In addition, focusing on the conversation increases the likelihood that we will learn new and important things from its content or about the other person, things that might be useful or even critical to our lives someday. We can trust ourselves to emit the most adaptive behaviors we have learned so far because we are paying attention to its content rather than anything else, and this attentional focus maximizes the probability that those emitted behaviors will be adaptive, where adequate stimuli elicit adequate responses. This does not mean that our behavior will always be successful; we do make mistakes with others. However, as long as we continue to pay attention, we can continue to learn from our mistakes and thus maximize our survival in the long run.

Having focused on the present, we can also bring intrinsic values into the process of this conversation. Many conversations have explicit or implicit extrinsic goals (e.g., making a good impression, getting a job offer, creating a friendship, convincing someone to fund our proposal, or

providing corrective feedback to change a student's behavior). Excessive focus on extrinsic goals during a task can result in anxiety over whether it will be achieved and depression over a prospect that it will not. Anxiety and depression decrease the quality of complex performances. Focus on the task precludes these emotions, thus maximizing the quality of performance. In turn, greater quality of performance increases the likelihood of achieving the goal. So we have to let go of the extrinsic outcome to maximize the chance of getting it, and focusing on the task at hand is one way to do this. Having additional intrinsic goals has the same effect, but also provides opportunities to cultivate joy in the task or in the moment of the task. Although we may be talking to the other person for the sake of an extrinsic outcome, we can also maintain an awareness of other intrinsic values that we wish to bring to this conversation. We are attempting not to use people as means but as ends in themselves. For example, we might consciously bear in mind that we wish to affirm other human beings whenever we are with them, to make them feel good about themselves, or to convey caring.

The anthropologist, Carlos Casteneda, provided an interesting example. His teacher, Don Juan, asked him to meet in a town square. When Carlos arrived, he found Don Juan sitting in the square wearing a suit instead of his customary jeans. He laughed at Don Juan for being a hypocrite for claiming in the past that one should never fear other's judgments, and here he was dressed up for the local people. Don Juan's reply described his distinction between internal and external consideration. Internal consideration involves dressing up for fear of others' opinions; external consideration involves dressing up out of respect. A striking implication of this particular example is that a socially anxious person could actually perform the very same behavior which in the past was designed to avoid disapproval and yet do it from an entirely different (nonanxiety-provoking) perspective. A significant feature to engaging in intrinsically valued behavior is that it is rewarding, pleasant, and potentially joyful in and of itself, has no direct reference to any extrinsic outcome, does not relate to the future, and forms an effective basis for enhancing how one feels about one's self.

Additional examples can be given. Doing the dishes while worrying about other things that need to be done or being angry at having to do this chore can be contrasted with paying attention to the task

(the warmth of the water, reflections in the soaped dish, movement of one's hands and arms through time and space) or to doing the task out of love for one's family. Writing a grant proposal to obtain funding and more publications can be contrasted with a focus on getting on top of one's literature, obtaining new knowledge, writing beautiful sentences rich in meaning, or creating elegant designs and methodologies in pursuit of empirical pieces of the theoretical puzzle which, when discovered and placed into the mosaic of knowledge, change the entire mosaic. The important point is that we need to know our clients well enough to become familiar with their philosophical, religious, spiritual, or just daily-life values that reflect what is truly important to them and is near and dear to their hearts. These qualities can provide the basis for creating affective and cognitive approach, in addition to behavioral approach, that can potentially bring happiness into each present moment. Moreover, unlike external goals, looseness and flexibility are inherent to values. Whereas goals possess fixed endpoints and the path to their attainment is specifiable in advance, values are more open, intrinsic, and flexible in their application and outcomes (Martin, Kleindorfer, & Brashers, 1987). Such an emphasis on value and autonomy is important for change: people generally gain more long-lasting changes if they attribute changes to themselves rather than external environments (Mikulas, 2000).

Therapist Modeling of Flexibility. It is important that our therapists display the same flexibility that our clients are to learn. They become models for changes that we are trying to facilitate by the above techniques. If we try to produce change in a client who is not willing or unable to change in a particular way or using a particular method, both clients and therapists become frustrated or fearful of failure in one another's (or supervisor's, or one's own) eyes. These states are not conducive to change, to the processing of new information, to being flexible in behavior, or to facilitating the critical therapeutic alliance (Constantino, Castonguay, & Schut, 2001). So our therapists make use of the large number of techniques available to them to move around in the session, addressing one system (e.g., via applied relaxation), then another (e.g., imagery rehearsals), then another (e.g., one further step in a CT sequence), and they make such shifts when the client does not seem to be understanding an application or is resistant to it or does not feel that it is beneficial in that moment. Our CT, for example, does not attempt to take the client

linearly from point A to point Z, whether clients wish to go there or can follow us there or not. Rather, the CT is designed to loosen up ways of seeing, create multiple perspectives, and give the client a sense of success along the way. Empirical support for one example of the importance of this approach comes from Castonguay, Goldfried, Wisner, Raue, and Hayes (1996) who demonstrated that when clients resist CT, the therapist's most common response is to increase adherence to the CT protocol which results in a rupture in the working alliance and predicts poor outcome. An effective flexible alternative is to stop the CT and address the rupture with experiential repair techniques before proceeding (Safran & Muran, 2000).

It is useful to conceive of the therapist modeling of flexibility as well as the variety of other states created for the client through the application of our various techniques in terms of altered states and their contribution to creating greater freedom within determinism. Internal and external environments in which we customarily live have developed functional properties as setting events and conditional stimuli that predispose habitual responding due to our learning histories. Many literatures in psychology have documented the potency of these environments in generating habitual ways of being (e.g., mood-dependent learning, state-dependent learning, drug-dependent learning, and decades of research in general learning theory and behavior therapy). The more novel the environment in which we find ourselves, the less strong the deterministic stimulus control of our behavior in that moment and the greater the degree of choice we have with regard to ways of responding at any of the levels of our information processing systems. Therapy itself is a novel environment; clients are presented with numerous unfamiliar conditions. Whether these conditions involve the provision of an unconditional acceptance, exposure to feared situations without avoidance, therapist confrontation about nonadaptive interpersonal behaviors outside of client awareness, the experiencing of avoided emotions, or the creation of a deeply relaxed state, the client is exposed to relatively novel internal and external conditions which thereby provide an opportunity for greater choice. Although old habits are primed to occur, therapists can facilitate the enactment of new choices in these moments of relatively greater freedom.

Empirical Support for Our Therapy

Similar to earlier reviews (Borkovec & Whisman, 1996; Chambless & Gillis, 1993), a recent review of the outcome literature has clearly indicated that CBT is effective for GAD (Borkovec & Ruscio, 2001). The latter review covered 13 controlled trials involving this therapy, 11 of which provided information allowing the calculation of effect sizes. CBT generated the largest within-group effect sizes at both post-therapy (2.48) and long-term follow-up (2.44) compared to nonspecific or alternate treatments (2.09 and 2.00, respectively), component control conditions (1.72 and 1.71, respectively), and waiting-list no-treatments (0.01 at post-therapy; no follow-up available). Moderate to large between-group effect sizes also favored CBT (0.71 and 0.31 for post-therapy and follow-up, compared to nonspecific or alternate treatments; 0.26 and 0.54, respectively, for component conditions; and 1.09 for post-therapy for no-treatment). Examination of each of the 13 studies determined that CBT generated significantly greater improvement than nonspecific or alternate treatments in 9 of 11 comparisons at post-therapy and 7 of 9 comparisons at follow-up, greater change than components in 2 of 10 post-therapy and 3 of 7 follow-up assessments (although findings of differences were due to duration of treatment, as described earlier in the Borkovec et al. (2002) report), and more favorable outcome than all no-treatment conditions at post-therapy. These studies included client samples who averaged 39 years of age, 7 years of chronicity, and 11 sessions of therapy. Among all of the conditions in these studies, CBT also had the lowest drop-out rate (8%), and the changes it produced at the end of therapy routinely maintained at follow-up. CBT is thus a well-established, empirically supported treatment for GAD (Chambless & Ollendick, 2001).

Two additional controlled investigations [besides Borkovec et al. (2002) reviewed earlier] have since been published. Öst and Breitholtz (2000) found CT and behavior therapy equivalent in outcome, with within-group effect sizes matching average effect sizes for prior component conditions. Secondly, Ladouceur et al. (2000) determined that a CBT package (teaching acceptance of uncertainty in life and adaptive problem-solving orientations, and using exposure to catastrophic images underlying worrisome concerns and correction of erroneous beliefs about worry) was superior to no-treatment. Absence of information precluded effect size calculations, absence of a nonspecific control condition limits conclusions about specific causal ingredients, and absence of component conditions prevents

identification of active ingredients contained in this multi-component package. However, it is the first controlled study to include an explicit type of acceptance therapy for GAD.

In addition to controlled trials, two open trials have been reported. Although further research employing control conditions is required before conclusions can be drawn, both studies employed interventions relevant to the theme of the conference upon which this volume is based. Kabat-Zinn and colleagues (Kabat-Zinn et al., 1992) found mindfulness meditation effective with a mixed group of panic disorder and GAD clients, and Crits-Christoff, Crits-Christoff, Wolf-Palacio, Fichter, and Rudick (1996) found supportive-expressive therapy focused on changing interpersonal relationships to generate significant pre-to-post-therapy improvements. Unfortunately, absence of effect size information in both investigations prevents a comparison of their outcomes to other GAD therapy studies.

It is also useful to examine our own series of five completed clinical trials to determine whether our evolving therapy is producing greater gains as our new directions have been incorporated. Our first investigations (Borkovec & Mathews, 1988; Borkovec et al., 1987) involved solely traditional CBT. The next study (Borkovec & Costello, 1993) incorporated our various ways of teaching clients to focus on the present moment. The fourth investigation (Borkovec et al., 2002) continued that emphasis and added the creation of intrinsic values. Our fifth study (Newman, Castonguay, & Borkovec, 2002) continued the emphasis on these elements and added interpersonal and emotional deepening techniques. Average within-group effect sizes over these investigations at post-therapy were: 1.84, 2.60, 2.69, 2.80, and 3.29. Our first study did not obtain systematic follow-up data, but the effect sizes for the other consecutive studies were: 2.64, 3.04, 2.45, and 3.19. We may simply be getting better at what we do in general, but the data are also consistent with the hypothesis that each new direction that we have taken has resulted in increments in clinical effectiveness. We are currently conducting a randomized clinical trial contrasting our CBT with versus without the interpersonal and experiential components. This additive design will provide a direct experimental test of whether the interpersonal and experiential elements are causatively linked to incremented improvements over and above what our CBT is able to produce.

Epilogue

The purpose of this book is to describe “new” developments within behavioral and cognitive therapy. The claim that something new is happening raises some interesting issues.

First, something new in therapeutic interventions is definitely needed. A recent meta-analysis demonstrated that, with the single exception of specific phobias, no significant increase in effect sizes has occurred over the decades of outcome research on each of the other anxiety disorders (Öst, 2002). Although the principles of operant and classical conditioning have been successfully applied to an increasing number of psychological problems (see Chambless & Ollendick’s 2001 review of “empirically supported treatments”), no further increments in effectiveness have occurred within most of the anxiety disorders since their original applications.

Second, “new” within the field of behavior therapy would, strictly speaking given the above, mean “the application of additional empirical knowledge and principles.” There have been no further applications since the early days of behavior therapy of any other psychological principles that have led to new interventions dramatically effective in a way similar to the applications of those original principles. In a sense, the commitment of early behavior therapy to use the best known principles of human behavior in the development of psychological interventions has not been fulfilled over the past four decades. Although we have described the evolution (and not revolution) of our own therapy approach for GAD in terms of its grounding in psychological knowledge, our specific techniques and those presented in other chapters vary in the degree to which each rests upon solid empirical foundations. Those techniques with grounding in psychological principles might be new in their content but would not represent anything new within the fundamental spirit of behavior therapy. Those techniques with little or no basis in empirically derived principles might be new in a second and more broad sense of the term, but they would not be a part of behavior therapy. Rather, they would more correctly be portrayed as integrations of behavior therapy methods with techniques based upon other non-empirical sources of presumed knowledge.

There are many sources of potential knowledge (e.g., philosophy, theology, natural sciences, social sciences, personal observation, clinical observation), each with its own advantages and

disadvantages and its own specific rules of evidence for the truth-value of its conclusions. We rightfully become particularly excited when two or more such sources agree in their conclusions about a particular phenomenon. This would represent a kind of inter-rater reliability about a piece of knowledge, encouraging its further pursuit because of the likelihood that something very important has been identified by two or more separate paths. There appear to be two levels of such inter-rater reliability present in the content of this book. First, it is striking how similar the perspectives are among the contributors to this volume, all with a professional history within behavior therapy but with each person largely operating independently and drawing from differing resources in eventually coming to the same place (e.g., the potential importance of the therapeutic relationship, of mindfulness, of life in the present moment, and of bringing values to bear on life in that moment). How and why this has occurred to this cohort of behavior therapists at this particular moment in time is unclear and would require historical analysis of the *Zeitgeist* to explain it fully. But such an analysis would likely touch upon the second level of reliability. Potential insights about human behavior from humanistic traditions within clinical psychology (e.g., Carl Rogers) and from outside of western psychology (e.g., Buddhism) became particularly popular with a generation growing up in the 1960's and 1970's, a time when alternatives to prevailing world views were being sought. Many of the authors in this volume are from that generation. We were thus exposed simultaneously to this cultural experience, on the one hand, and to the emergence of behavior therapy and its rigorous scientifically based approach to psychotherapy, on the other hand. When these traditions seem to be overlapping in what they tell us about the nature of human beings, there is additional incentive to pursue it further. We see such overlap frequently throughout this volume, and so there is good reason for some excitement.

But thirdly, there are two emotion-related issues. First, growing up in early behavior therapy has given us an enormous respect for the contributions of its founding parents. All sources of knowledge build upon the insights of earlier generations. Out of respect for those great thinkers, we should be very cautious in proclaiming a “new movement.” Indeed, until the new therapy methods described in this book are shown by research to significantly increment therapeutic change beyond that degree of change already

documented for basic behavioral therapy, such a movement contains only a hope anyway and not much reality. Second, “movements” have a tendency to have certain by-products that are not optimal for the continuing discovery of knowledge. They may inadvertently result in an overly enthusiastic zeal that contributes to beliefs that affect the things to which we selectively attend and how we interpret the things to which we attend, thus increasing the likelihood of confirmatory bias instead of seeing what is real.

Our hope is that we will continue to ground our methods and their development in empirical science, that we will experimentally evaluate the potential causal contributions of any technical additions that we make to our therapies, and that we will remain humble about the course upon which we have embarked.

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