

1

The Evolution of Cognitive Behavior Therapy

The Rise of Psychological Acceptance and Mindfulness

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So it is too that in the eyes of the world it is dangerous to venture. And why? Because one may lose. But not to venture is shrewd. And yet, by not venturing, it is so dreadfully easy to lose that which it would be difficult to lose in even the most venturesome venture, and in any case never so easily, so completely as if it were nothing . . . one's self.

—Kierkegaard, *The Sickness Unto Death* (1849)

Cognitive behavior therapy (CBT) has now become the dominant force in psychotherapy in much of the world, including North America, the United Kingdom, much of Europe, and increasingly throughout Asia and Latin America. The rise of CBT is due to the confluence of several factors, primary among which is the increased focus on evidence-based practice and associated calls for accountability in the delivery of behavioral health services (Baker, McFall, & Shoham, 2009). Throughout its history, CBT has been committed to a scientific perspective to the study of psychopathology and its treatment. Hundreds of studies have evaluated various cognitive behavioral theories of psychopathology, and hundreds more have assessed the efficacy of CBT interventions. This scientific literature has placed CBT in a unique position to dominate the field of psychotherapy.

This extraordinary growth immediately raises the question: What exactly is CBT? Does the term refer to a specific model of psychopathology or psychotherapy? Or perhaps to a domain of treatment, either in terms of targeted processes or pathologies? In fact, the term CBT has become so broad as to defy clear definition. The Web site of the Association for Advancement of Behavioral and Cognitive Therapies, the premier multidisciplinary, international organization devoted to CBT, avoids a specific definition of the term, instead describing the organization's mission as "the advancement of a scientific approach to the understanding and amelioration of problems of the human condition." Various theories, principles, models, and techniques fall under the general rubric of CBT, and these approaches have been applied to the full range of human experience, from the assessment and treatment of severe psychopathology and profound developmental delays to primary prevention efforts to enhancing peak performance among athletes. CBT has become

largely synonymous with empirically supported, evidence-based psychological theories and technologies aimed at improving the human condition (Wittchen & Gloster, 2009).

Despite this broad plurality, some features are common to the various CBT approaches. For example, CBT therapists tend to focus primarily on the present rather than the past, to emphasize parsimony in theoretical explanations, to use learning principles (including principles related to how we interpret the world and/or how we relate to our own experience), and to espouse epistemological empiricism. In fact, the term is perhaps most useful as a way of contrasting what CBT *is not* rather than what *it is*. For example, CBT does not encompass psychotherapies that focus primarily on the supposed curative properties of insight into intrapsychic conflicts rooted in historical developmental events, nor those that posit that a supportive therapeutic relationship alone is sufficient for fundamental change of difficult problems. Although this broad perspective on the discipline can be frustrating to scholars who seek clear categories to demarcate schools of psychotherapy, it has the advantage of fostering a dynamic exchange of perspectives within a broad marketplace of ideas.

Like all scientifically-based disciplines, CBT is not static, but continuously evolving. Established theories and technologies continuously and inevitably give rise to new developments. There is a general recognition that current technologies are imperfect, awaiting refinement or even radical new developments, and that even our best current theories are incomplete or even “wrong,” although we do not yet know precisely how. This progressive, natural evolution is evident today in the dramatic rise of theories and associated assessment, treatment, and prevention technologies that highlight psychological acceptance and mindfulness. The past decade has witnessed a veritable explosion in interest in these concepts by CBT scholars and practitioners alike, and theoretical formulations and intervention techniques targeting mindfulness and acceptance figure prominently in several novel models of CBT. While building on the foundation of traditional approaches to CBT, these developments have taken the field in new, exciting, and sometimes surprising directions.

ACCEPTANCE AND MINDFULNESS IN CONTEXT

These developments have not been without controversy, however. The most contentious issues center on the degree to which they are truly novel, and whether or not they add incremental value to more traditional CBT models. Although acknowledging their roots in earlier models, some proponents of acceptance-based approaches view them as paradigmatically distinct from earlier, established forms of CBT.

Hayes (2004) proposes that the history of CBT can be divided into three overlapping but distinct generations. The first generation, commencing with the groundbreaking work of Skinner (1953), Wolpe (1958), and Eysenck (1952), spanned the 1950s and into the 1960s, and developed largely in reaction to the perceived weaknesses of psychoanalytic theory and therapy. The approach was based on carefully delineated learning principles, many of which were developed and refined through experimental work with animals, and there were close connections between basic scientific developments derived

from the laboratory and applied technologies. The focus was on behavior modification using techniques derived from classical and operant conditioning principles.

According to Hayes, the second generation, beginning in the late 1960s and continuing through the 1990s, highlighted the importance of language and cognition in the development and treatment of psychopathology. The emphasis shifted toward exploration of the ways in which one's interpretations of the world, and especially the interpretation of emotionally relevant situations, shapes experience. Groundbreaking developments included Ellis' (1962) rational emotive behavior therapy, and Beck and colleagues' cognitive therapy (CT; Beck, Rush, Shaw, & Emery, 1979). Although still committed to a scientific perspective, the focus of research shifted from the development and applied translation of basic psychological principles to clinical trials evaluating the efficacy of multicomponent treatment programs. Although the concept of psychological acceptance occasionally figured in cognitive models, especially with respect to anxiety disorders, it played a relatively minor and secondary role with respect to direct cognitive restructuring (Dozois & Beck, this volume).

According to Hayes' analysis, the third generation of CBT began in the 1990s and reflects the emphasis of psychological acceptance and mindfulness principles in CBT. Like second-generation perspectives, third-generation approaches acknowledge the importance of cognitive and verbal processes in theories of psychopathology and its treatment. Rather than striving to change one's distressing thoughts and feelings, however, third-generation approaches focus instead on cultivating an attitude of nonjudgmental acceptance of the full range of experience to enhance psychological well-being. In addition, while not abandoning clinical trials, the third generation of CBT has seen a renewed interest in the field's traditional emphasis on links between basic theoretical principles and applied technologies.

Many CBT scholars, especially those interested in mindfulness and acceptance-based approaches, find Hayes' historical description to be a useful heuristic (e.g., Eifert & Forsyth, 2005). Others, however, believe that this analysis overstates the distinctiveness of these new developments relative to established theories and technologies (Arch & Craske, 2008; Hofmann & Asmundson, in press, 2008; Leahy, 2008). While acknowledging the increased interest in, and possible clinical utility of, acceptance and mindfulness techniques, these critics believe that they are not fundamentally distinct from existing approaches, especially at the theoretical level. Some of these scholars prefer the metaphor of a branching tree, with new developments deriving from older ones (Hofmann, 2010), or a stream, growing ever stronger and picking up stones as it flows downhill (Martell, 2008), rather than the metaphor of evolving generations. Another metaphor, that of three "waves," has generated especially heated rhetoric, with manuscripts espousing a revolutionary "third wave" (Hayes, 2004) and others ridiculing the term and suggesting the newer approaches are "old hat" (Hofmann & Asmundson, 2008). Such debates may be useful to the extent that they highlight specific issues that merit clarification. However, they are unlikely to be resolved anytime soon.

It is important to keep in mind that Hayes' analysis is not intended to represent "truth," but rather is a historical narrative aimed at illuminating broad trends in the field. The ultimate fate of this analysis cannot be determined immediately, and must await the judgment of historians. It is unwise to place too much stock in demarcations of historical periods that include contemporary events. A certain temporal distance from the developments in question often affords a less biased perspective that is more likely to stand the test of time. Thus, heated arguments over the validity of a particular narrative that includes current developments are premature.

Despite differing perspectives on this issue, there are two general points of agreement. First, it is undeniable that the past decade has witnessed a rapid increase in interest, among scientists, scholars, and clinicians alike, in acceptance and mindfulness-based theories and clinical approaches. For example, although the first major publication on acceptance and commitment therapy (ACT) only occurred in 1999 (Hayes, Strosahl, & Wilson, 1999), by the beginning of 2010 the electronic psychological index *PsycInfo* listed over 363 scholarly papers with the keywords "acceptance and commitment therapy." Similarly, mindfulness-based cognitive therapy's first *PsycInfo* listing is in 2000, and a recent search produced 150 references. Similar growth in the professional literature has occurred with other acceptance-based models, such as dialectical behavior therapy (DBT) and mindfulness-based stress reduction (MBSR). Second, as noted above, the term CBT does not represent a specific theoretical or therapeutic model, but rather a broad family of theories and interventions that includes both traditional as well as acceptance-based models alike (Forman & Herbert, 2009). Although some scholars use the term CBT interchangeably with CT (e.g., Hofmann & Asmundson, 2008), most recognize that CBT encompasses a wide range of approaches. Thus, contrasting "CBT" with a specific therapeutic model such as CT, ACT, or DBT (Linehan, 1993) represents a category error, analogous to comparing "trees" with "oaks." Instead, meaningful comparisons require juxtaposing specific models within the broad CBT family.

HISTORICAL ROOTS OF PSYCHOLOGICAL ACCEPTANCE AND MINDFULNESS

Although the concepts of psychological acceptance and mindfulness have increasingly captured the attention of psychologists in recent years, they have deep historical roots, both in psychology itself and more broadly in both Eastern and Western cultural traditions (Williams & Lynn, in press). Current conceptualizations of mindfulness tend to trace their origins to Buddhist traditions, which are themselves rooted in earlier Hindu beliefs and practices. A central tenant of Buddhism is that human suffering is the result of desiring "that which is not," that is, an attachment to specific material objects and states of mind that cannot be always be present. As all things are transient, such attachment results in suffering. Contemplative meditative practices are undertaken to reduce this suffering and to achieve spiritual enlightenment. The impact of language in shaping perceptions is recognized, as is the tendency to confuse conceptual understanding with

direct experience. Buddhist epistemology tends toward pragmatism, with the focus on spiritual enlightenment. Ethical concerns are also central to Buddhist traditions. Virtuous behavior, or *Sīla*, is determined by the intentions behind actions rather than their outward appearances. These intentions drive one's *Karma*, or the force that determines happiness, spiritual enlightenment, and the process of reincarnation. Buddhism stresses the "Middle Way," or the importance of moderation between extremes of self-indulgence and self-deprivation. As discussed below, many of these Buddhist ideas are reflected to varying degrees in modern acceptance-based models of CBT (Kumar, 2002).

Although the concepts of psychological acceptance and mindfulness are typically traced to ancient Asian philosophies, it should be acknowledged that such concepts have also featured prominently in Western culture. Various Hellenic philosophies, such as Stoicism, stressed the virtue of fostering acceptance of distressing experiences (Williams & Lynn, in press). Later, monastic Christian practices renounced earthly attachments and stressed the acceptance of human suffering as a necessary condition of its amelioration.

Despite the increased interest in the concepts of psychological acceptance and mindfulness among psychologists over the past two decades, these notions have in fact figured in the psychological literature for over a century. Williams and Lynn (in press) trace the concept of acceptance across 20th-century psychology, beginning with the writings of Freud (1910/1965), who noted that clinging to past painful experiences precludes attention to real and immediate concerns. Subsequent psychoanalysts viewed acceptance of the self as a primary goal of psychoanalysis, setting the stage for self-acceptance to become a central theme in psychotherapy in subsequent decades. The 1940s saw the groundbreaking work of Carl Rogers (1940), who viewed self-acceptance as closely associated with mental health and as the primary target of psychotherapy. For Rogers, self-acceptance went beyond simple cultivation of self-esteem to include acceptance of the totality of one's experience. The decades of the 1950s and 1960s witnessed the beginning of the empirical study of psychological acceptance. Several studies documented the relationship between positive self-acceptance and acceptance of others, as well as negative correlations between self-acceptance and psychopathology (e.g., Berger, 1955). During the 1970s, relationships between self-acceptance and other concepts were explored, including locus of control (e.g., Chandler, 1976). In addition, scholars began discussing notions of acceptance beyond the domains of "self" and "other." The 1980s saw continued exploration of the association of various concepts with self-acceptance, as well as early developments of interventions targeting psychological acceptance, such as Morita therapy (Ishiyama, 1987).

The 1990s was a pivotal decade for research and theoretical developments related to psychological acceptance. Most noteworthy was the gradual shift in focus from self-acceptance to the acceptance of one's ongoing subjective experience, and especially distressing experience, often referred to as psychological or "experiential" acceptance. This shift reflected in part growing recognition of the problematic conceptual overlap of self-acceptance with self-esteem. Unlike self-esteem, and echoing Rogers' (1940) earlier work, experiential acceptance refers to accepting the totality of one's experience regardless

of its emotional valence. In addition, a number of psychotherapy models based in the CBT tradition and that highlighted experiential acceptance as a key tool were initially developed during this period.

CONTEMPORARY CONCEPTUALIZATIONS OF ACCEPTANCE, MINDFULNESS, AND RELATED CONSTRUCTS

The growth in interest in acceptance and mindfulness has been accompanied by a proliferation of interrelated concepts and terms, and consensus has yet to emerge as to their precise definitions and their relationships with one another. These terms include mindfulness, psychological (or experiential) acceptance (and its antonym experiential avoidance), metacognitive awareness, distancing, decentering, re-perceiving, defusion, willingness, nonattachment, nonjudgment, and distress tolerance. Some of these concepts (e.g., mindfulness, acceptance) are used within a number of distinct theories and therapy models, whereas others (e.g., defusion, metacognitive awareness) are limited to a specific theory. For more widely used terms such as mindfulness, there are theory-specific nuances in meaning that can only be fully appreciated by a thorough understanding of the respective models. Nevertheless, a general understanding of these terms and their overlapping meanings is possible even without delving into the subtleties of the various theories.

Mindfulness

By far the most frequently cited definition of mindfulness was offered by Kabat-Zinn (1994), as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (p. 4). This definition highlights the original Buddhist focus on “bare attention,” or the nondiscursive attention to the ongoing stream of consciousness without evaluation or judgment. In an effort to achieve greater clarity and consensus on the concept, Bishop and colleagues held a series of meetings among experts in the field, and concluded on an operational definition that stressed sustained attention to present experience, and an attitude of openness and curiosity, along with nonjudgmental acceptance toward that experience. Indeed, most definitions of the concept include these two factors of heightened awareness of one’s subjective experience and nonjudgmental acceptance of that experience. This led Herbert and Cardaciotto (2005) to suggest that mindfulness be conceptualized as comprised of two distinct factors: “(a) enhanced awareness of the full range of present experience, and (b) an attitude of nonjudgmental acceptance of that experience” (p. 198). Cardaciotto, Herbert, Forman, Moitra, and Farrow (2008) subsequently developed the Philadelphia Mindfulness Scale (PHLMS) to assess these two dimensions. They presented psychometric data supporting the distinctiveness of the two aspects of mindfulness. Other common mindfulness scales include additional factors. For example, the Kentucky Inventory of Mindfulness Skills (Baer, Smith, & Allen, 2004), the Five-Factor Mindfulness Scale (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), and the Cognitive and Affective Mindfulness Scale-Revised (Feldman,

Hayes, Kumar, Greeson, & Laurenceau, 2007) each include four or five components, further deconstructing the concepts of awareness and acceptance.

There are two key unresolved issues in relation to mindfulness. The first concerns how many constituents or dimensions are necessary to best capture the construct, and how these dimensions relate to one another. One perspective is that mindfulness is best considered a unitary construct. Brown and Ryan (2003, 2004) argue that there is no need to distinguish the acceptance and awareness components of mindfulness, because the latter necessarily subsumes the former. There are both conceptual and empirical grounds to question this claim, however. First, one can easily imagine situations of heightened awareness that occur in the absence of a nonjudgmental, accepting attitude. Panic disorder, for example, appears involve a heightened awareness of physiological cues but without concurrent acceptance of one's experience (e.g., Ehlers & Breuer, 1992, 1996).

Even if one concedes that awareness and acceptance are best thought of as distinct constructs, consensus has yet to emerge on how they are related to one another. A popular view is that awareness is a prerequisite to acceptance (Linehan, 1994). This position is consistent with approaches that emphasize mindfulness meditation as a clinical tool (e.g., MBSR, MBCT [mindfulness-based cognitive therapy]). Even in ACT, moment-to-moment awareness is a key intervention target. However, it is not clear that enhanced awareness is necessary for enhanced acceptance, or even if it is generally beneficial. One can imagine situations in which awareness is attenuated, but when distressing experiences do intrude on consciousness they are accepted nonjudgmentally and without struggle. For example, Csikszentmihalyi (1990) describes the state of "flow," in which one becomes so highly absorbed in a valued activity that awareness of other stimuli, both internal and external, is reduced. In the case of ACT, the emphasis on enhanced awareness derives from the goal of fostering sensitivity to prevailing environmental contingencies rather than dominance of behavior by verbal rules. However, conscious awareness is not necessary in order for behavior to be responsive to ongoing environmental contexts, and in fact it is possible that, at least in some contexts, attempts to increase awareness may paradoxically reduce such sensitivity. In addition, there are empirical grounds to question the value of awareness. As mentioned, Cardaciotto et al. (2008) found that the two subscales of the PHLMS (measuring awareness and acceptance, respectively) were not correlated with one another, and evidenced distinct associations with other measures; subsequent data have confirmed these findings (Herbert et al., 2010). In these studies, psychological acceptance has emerged as strongly associated with psychopathology and changes in acceptance have predicted therapeutic gains, but this has not been the case with awareness. Moreover, under certain conditions, increased awareness of subjective experience has been found to be associated with increased anger and hostility (Ayduk, Mischel, & Downey, 2002), increased pain intensity (Miron, Duncan, & Bushnell, 1989; Roelofs, Peters, Patijn, Schouten, & Vlaeyen, 2004) and increased pain-related disability (McCracken, 1997).

As mentioned, some theorists have deconstructed mindfulness into as many as five separate factors. Whereas some empirical support exists for four- and five-factor

structures, there is also evidence that these factors overlap problematically (Baer et al., 2006), calling into question their conceptual distinctiveness and clinical utility. Clearly, the relationship between the constituents of mindfulness awaits further theoretical and empirical work.

The second unresolved issue with respect to mindfulness is how best to incorporate attentional processes in the concept. Although attention and awareness may at first glance appear synonymous, there are, in fact, subtle but important distinctions between them. Attention implies an effortful focus on a restricted range of experience, increasing awareness to some stimuli while de-emphasizing or even avoiding others. In contrast, awareness, at least in the context of mindfulness, suggests a conscious perception of the totality of experience without attempts to focus exclusively on some stimuli at the expense of others. Many discussions of mindfulness conflate these two concepts, perhaps due to the association of mindfulness as a psychological construct with the practice of concentrative meditation, which aims to foster focused attention. Some authors suggest, however, that any effort to regulate attention is inconsistent with thoroughgoing acceptance of the full-range experience (Cardaciotto et al., 2008; Brown & Ryan, 2004). Moreover, repeated findings that the awareness dimension of mindfulness is less or even inversely related to health challenge our current conceptualization (e.g., Baer et al., 2006; Forman, Herbert, et al., 2007; Cardaciotto et al., 2008). Thus, there may be advantages in respecifying the awareness aspect of mindfulness, e.g., without reference to focused attention. Nevertheless, the relationship between acceptance, awareness, attention, and perhaps other possible constituents of the mindfulness concept await further consensus.

Decentering and Defusion

According to Beck, achieving a certain distance from one's cognitions is the first step in cognitive restructuring. Beck views such distancing as necessary but not sufficient for cognitive restructuring (Dozois & Beck, this volume). Several acceptance-based therapies, MBCT and ACT most prominently, have further developed the construct and place increased emphasis on it as a therapeutic strategy in its own right. These approaches use the terms decentering and defusion to refer to the process of experiencing subjective events, and thoughts in particular, from a certain psychological distance as mere mental events, rather than as reflections on the world or the self (Fresco et al., 2007; Hayes et al., 1999). The socially anxious person contemplating initiating a conversation with a stranger may have anticipatory thoughts such as "I'm going to make a fool of myself." A decentered or defused perspective would entail noticing the thought as a string of words (or sounds), without judging one way or another its truth value. For example, instead of becoming distressed at the thought, the individual might instead think, "that's interesting; I see that I'm having the thought that I'll make a fool of myself." Additionally, there is emphasis on the recognition that one can disentangle the process of having a thought from one's behavior. Thus, the socially anxious person

can approach and begin a conversation with a stranger while simultaneously having the thought “I shouldn’t talk to him; I’ll just end up humiliating myself.”

Although distancing and defusion often connote a degree of nonjudgmental acceptance of experience, the terms reflect more the noticing of one’s experience from a detached distance rather than acceptance of that experience. In CT, for example, one learns to see one’s thoughts from a distance not in order to accept them, but for the purpose of examining their truth value or functional significance as the first step of cognitive restructuring.

Metacognition

Closely associated with the concepts of mindfulness, distancing, and defusion is the notion of metacognition or metacognitive awareness. This term is used in modern CBT models derived from cognitive theories. At its most basic, metacognition refers to knowledge of one’s own cognitive processes (Flavell, 1976). As used in the CBT literature, the term refers a detached awareness of one’s cognitions, in which they are noticed but experienced merely as mental events rather than as reflections of reality. The concept of metacognition plays a central role in two contemporary models of CBT: Segal, Williams, and Teasdale’s (2001) mindfulness-based cognitive therapy, and Wells’ (2000, 2008) metacognitive therapy. Although these models differ in important ways, they share an emphasis on the cultivation of a detached awareness of one’s cognitive processes, and interventions aimed at changing beliefs about the role of cognition with respect to emotion and behavior rather than interventions targeting specific thoughts themselves.

In a series of studies, Teasdale and colleagues explored the relationship between metacognitive awareness and depression using a procedure known as the Measure of Awareness and Coping in Autobiographical Memory (MACAM). The MACAM is an interviewer-based measure designed to assess one’s reactions to mildly depressive situations, by coding the degree to which these are described from a more detached, mindful perspective. Teasdale et al. (2002) found that currently asymptomatic individuals with a history of depression had lower levels of metacognitive awareness relative to never-depressed controls, and that lower levels of metacognitive awareness predicted higher relapse in patients with major depressive disorder. Based on these findings, Segal, Williams, and Teasdale (2001) developed mindfulness-based cognitive therapy (MBCT) for depression to target metacognitive awareness. Several studies support the efficacy of MBCT for preventing depressive relapse (Bondolfi et al., in press; Kuyken et al., 2008; Ma & Teasdale, 2004; Teasdale et al., 2002, 2003), and an emerging literature supports the approach as a treatment for current depression (e.g., Barnhofer et al., 2009).

Another novel cognitive approach is metacognitive theory (Wells & Matthews, 1994), and its associated intervention model, metacognitive therapy (Wells, 2000, 2008). According to metacognitive theory, most negative thoughts and emotions are transient experiences that need not be problematic. In some individuals, however, even relatively minor negative thoughts or feelings trigger a pattern of rumination and

worry, which in turn interferes with the self-regulation of one's internal experience. Once triggered, this rumination leads to increased emotional arousal, which in turn heightens further rumination, in a vicious cycle. This process is thought to be driven by metacognitive factors, which refer to executive cognitive processes that monitor and control thinking. Metacognition is divided into positive metacognitive beliefs, which reflect the presumed benefits of sustained threat monitoring, worry, and thought suppression, and negative metacognitive beliefs, which reflect beliefs about the uncontrollability of experience and the danger of certain thoughts. Both positive and negative metacognitive beliefs are thought to contribute to the initiation and maintenance of rumination. Psychopathology is viewed as the result of biases in metacognitive beliefs, rather than as the result of specific negative thoughts. Metacognitive therapy was developed to correct these biased metacognitive beliefs in order to restore better control over cognitive processes. Importantly, metacognitive therapy holds that such change will not take place by directly questioning automatic thoughts, but rather requires modification of metacognitive beliefs that control cognition itself. This is accomplished by interventions such as postponing worry to a specific and limited time of day, behavioral experiments, attentional training, paradoxical rumination prescription, and promoting states of detached mindfulness (Wells et al., 2009).

Psychological Acceptance

Finally, there are a group of terms that suggest an open, nonjudgmental perspective on the totality of one's experience, and in particular the ongoing stream of present-moment experience. Such a perspective is reflected in the terms psychological acceptance and experiential acceptance. Butler and Ciarrochi (2007) define acceptance as "a willingness to experience psychological events (thoughts, feelings, memories) without having to avoid them or let them unduly influence behavior" (p. 608). Writing from a behavior analytic perspective, Cordova (2001) defines acceptance as "allowing, tolerating, embracing, experiencing, or making contact with a source of stimulation that previously provoked escape, avoidance, or aggression" (p. 215). Cordova also emphasizes that movement from avoidance to acceptance involves a change in the *function* of behavior, i.e., from escape to engagement. Kollman, Brown, and Barlow (2009) define acceptance as "a willingness to fully experience internal events, such as thoughts, feelings, memories, and physiological reactions." Williams and Lynn (in press) offer the definition: "the capacity to remain available to present experience, without attempting to terminate the painful or prolong the pleasant" (p. 7). These definitions all point to the open, nonjudgmental embracing of the totality of experience, as distinct from the acceptance of external situations that may provoke distress. For example, a person with a phobia can accept sensations of anxiety prompted by a phobic situation without accepting the situation itself, or the idea that he or she cannot approach it. In addition, the Williams and Lynn description highlights the critical—but often overlooked—point that psychological acceptance refers not only to the willingness to

experience distressing experiences, but also the willingness to abandon efforts to hold on too tightly to positive experiences.

Another key aspect of psychological acceptance within CBT is that it is viewed as a means to an end, rather than an end in and of itself. CBT models that emphasize the fostering of acceptance do so in the service of larger goals, typically involving concrete behavior change. The depressed woman who has thoughts of helplessness and hopelessness is encouraged to accept those thoughts as mere mental events while simultaneously engaging in goal-oriented behaviors such as getting out of bed and going to lunch with a friend. In this sense, modern psychological conceptualizations of acceptance differ from those situated within philosophical or religious traditions, in that the latter emphasize the importance of acceptance for its own sake rather than as a tool to foster movement toward other life goals (Herbert, Forman, & England, 2009).

The distinction between the traditional concept of acceptance derived from ancient traditions and the modern psychological version is exemplified in a recent study examining the construct validity of acceptance. Kollman, Brown, and Barlow (2009) examined psychological acceptance in relation to two similar constructs: *cognitive reappraisal*, defined as “a form of cognitive change that involves construing a potentially emotion-eliciting situation in a way that changes its emotional impact” (Gross & John, 2003, p. 349, as cited in Kollman et al., 2009, p. 206), and *perceived emotional control*, defined as “perceived behavioral or indirect control over internal events, or the extent to which people believe they can continue to act in valued directions and meet life challenges regardless of their internal experiences” (Kollman et al., 2009, p. 207). The results of the study were mixed; on the one hand, analyses supported the convergent and discriminant validity of acceptance relative to both of the other constructs. On the other hand, acceptance was not associated with other predicted constructs of worry, social interaction anxiety, and well-being, whereas both cognitive reappraisal and perceived emotional control were. However, examination of the specific items the authors used to define the three constructs reveals that their “acceptance” items refer to “pure” acceptance, without any link to goal-directed actions. This use of the term reflects the ancient perspective described above. In contrast, their “perceived emotional control” items do not, in fact, reflect the ability to control one’s emotions as the name implies, but rather reflect the concept of psychological acceptance as it is commonly used in acceptance-based CBTs, that is, as the ability to engage in purposeful behavior without needing to alter one’s distressing experiences. Examples of these items include “I can perform effectively while having negative thoughts; I am able to deal with challenges when I’m anxious; I can handle my work or school obligations when feeling negative emotions.” Thus, despite the problematic way in which the scales were labeled, these results suggest, not surprisingly, that the ability to behave effectively while simultaneously embracing distressing thoughts and feelings is correlated with relevant psychological constructs more than “pure” acceptance detached from behavior. In keeping with their roots in the behavior therapy tradition, acceptance-based CBTs therefore seek to cultivate psychological acceptance as a way of fostering behavior change and improving the human condition.

CHARACTERISTICS OF ACCEPTANCE-BASED MODELS OF CBT

The ideas that thoughts and beliefs lead directly to feelings and behavior, and that to change one's maladaptive behavior and subjective sense of well-being one must first change one's cognitions, are central themes of Western folk psychology. We encourage friends to "look on the bright side" of difficult situations in order to improve their distress. We seek to cultivate "positive attitudes" in our children in the belief that this will lead to better academic or athletic performance. Traditional cognitively-oriented models of CBT (e.g., CT, stress inoculation training, and rational emotive behavior therapy) build on these culturally sanctioned ideas by describing causal effects of cognitions on affect and behavior, and by interventions targeting distorted, dysfunctional, or otherwise maladaptive cognitions.

In contrast, a central feature of acceptance-based CBT models is the decoupling of subjective experience from overt behavior. That is, cognitions and other subjective experiences are not viewed as necessarily causally linked to behavior, and one can learn to behave in ways that are inconsistent with what would normally be expected based on one's cognitive or affective state. The emphasis is on changing the *relationship* between cognitions and behavior rather than changing the *content* of the cognitions themselves. It should be noted that this characteristic of acceptance-based approaches is a matter of emphasis, and not of definition. As discussed further below, cognitively oriented approaches sometimes emphasize acceptance rather than change of distressing cognitions, and acceptance-based approaches sometimes permit direct efforts to modify one's experience. Nevertheless, the respective approaches clearly differ in the degree of emphasis they place on acceptance versus change of subjective experience in the service of larger goals.

Like all forms of CBT, the various acceptance-based models are all committed to quantitative, empirical evaluation of therapeutic procedures and their associated theories. This scientific emphasis sometimes surprises certain clinicians and patients alike, who are initially drawn to acceptance- and mindfulness-based approaches because of their perceived "new age," "alternative," or even "mystical" qualities, but who do not share the core scientific values characteristic of the field of CBT. As one example, we have personally witnessed the shock among a number of clinicians who enthusiastically embrace ACT upon learning that the approach is grounded in functional contextualism, a modern philosophy derived from Skinner's radical behaviorism. Although the term mindfulness in particular has recently become a buzzword of popular psychology, its use (as well as the use of similar terms) in the approaches described in this volume is distinguished by a firm grounding in scientific theory and research. Despite their differences, all of the approaches reviewed herein share a common commitment to science.

Another feature of most acceptance-based CBTs is their de-emphasis of the putative historical roots of problems. Historical narratives are viewed as constructions that may or may not be accurate, and even if accurate, their exploration is viewed as neither necessary nor sufficient for therapeutic gains. In fact, focusing on a historical narrative may

serve to crystallize it as a central part of one's identity, thereby reducing one's flexibility to behave in different, more adaptive ways.

Although they share an emphasis on mindfulness and acceptance processes and a de-emphasis on direct cognitive or affective control strategies, the various acceptance-oriented models of CBT derive from different theoretical streams, resulting in differences in basic assumptions, theoretical terms, and assessment and intervention techniques. For example, mindfulness-based stress reduction (Kabat-Zinn, 1990, 2003) developed largely outside of the CBT tradition as an approach to assist patients with chronic medical conditions. In contrast, a number of approaches were derived from earlier, traditional streams of CBT, and CT in particular. These include mindfulness-based cognitive therapy (Segal et al., 2001), metacognitive therapy (Wells, 2000, 2008), panic control treatment (Barlow & Craske, 2006), exposure and ritual prevention (Foa et al., 2005; Kozak & Foa, 1997), various exposure-based interventions (e.g., Marks, 1981), cognitive processing therapy (Resick & Schnicke, 1992, 1996), schema therapy (Young, Klosko, & Weishaar, 2003), and emotional schema therapy (Leahy, 2002). Reflecting their roots in traditional CBT, a characteristic of these approaches is that they often blend cognitive change strategies characteristic of CT with mindfulness and acceptance principles and interventions. Still other approaches have roots in the behavior analytic tradition; these include functional analytic psychotherapy (Kohlenberg & Tsai, 1991), behavioral activation therapy (Martell, Addis, & Jacobson, 2001), relapse prevention (Marlatt, Barrett, & Daley, 1999; Marlatt & Gordon, 1985), integrative behavioral couple therapy (Christensen, Jacobson, & Babcock, 1995; Jacobson & Christensen, 1996), and ACT (Hayes, Strosahl, & Wilson, 1999). These approaches tend to de-emphasize direct cognitive or affective change strategies in favor of more thoroughgoing cultivation of psychological defusion and acceptance. Each of these approaches is unique, and some represent general models of psychotherapy whereas others focus on a particular population or condition.

The various acceptance-based CBTs have profited from a free exchange of techniques. For example, the practice of formal mindfulness meditation, which was originally popularized by Kabat-Zinn in MBSR, has been adopted by a number of other models, including DBT and MBCT. Even traditional cognitive therapists working within the tradition of Beck's CT acknowledge the value of techniques aimed at fostering mindfulness and acceptance (Dozois & Beck, this volume). Where controversy has developed between the various perspectives, it has focused on two themes. First, as discussed above, there is the issue of whether these developments represent mere extensions of earlier models or more radical departures from them. Second, there is discord over the causal status of cognitions. Approaches derived from traditional streams of CBT retain an emphasis on cognitive causation, although they focus more on beliefs about the role of thoughts (e.g., metacognition) rather than automatic thoughts per se. In contrast, approaches rooted in behavior analysis, while acknowledging the importance of language and cognition in understanding and treating psychopathology, view cognition itself as a form of behavior, and focus on contextual control of the relationship between cognition, emotion, and overt behavior.

From this perspective, cognitions can participate in causal chains, but are not granted full causal status with respect to other behaviors. This tension has sometimes resulted in each camp presenting data that they believe support their perspective and that refute the position of the opposing camp, only to be met with bewilderment when the other side remains unmoved. For example, proponents of behavioral activation point to the results of component control studies of CT, in which behavioral activation or exposure alone is compared to behavioral activation (or exposure) plus cognitive restructuring. The majority of these studies have failed to demonstrate incremental effects of cognitive restructuring strategies (Dimidjian et al., 2006; Gortner, Gollan, Dobson, & Jacobson, 1998; Hope, Heimberg, & Bruch, 1995; Jacobson et al., 1996; Zettle & Hayes, 1987; see Longmore & Worrell, 2007, for a review). Cognitive theorists retort that such studies do not bear on the issue of cognitive causation, because even putatively “behavioral” interventions like behavioral activation can, and almost certainly do, produce cognitive changes, which remain the presumed proximal causes of therapeutic gains (Hofmann, 2008; Hofmann & Asmundson, 2008). Similarly, proponents of ACT have accumulated a substantial body of research demonstrating that psychological acceptance mediates therapeutic gains, which they view as supporting their contextual theory of cognition (Hayes, Levin, Plumb, Boulanger, & Pistorello, in press). They are sometimes surprised when cognitive theorists are unimpressed, insisting that these measures of acceptance are simply proxies for belief changes.

What the parties to these debates may be failing to appreciate is that the various perspectives are deeply rooted in distinct philosophical traditions and corresponding theoretical principles, and that differences among these philosophies and theories cannot be directly resolved through data. Cognitively oriented theorists are able to explain virtually any imaginable results produced by behavior analysts as deriving from some form of cognitive change. A change in experiential acceptance, for example, can be conceptualized as reflecting a shift in beliefs (or metacognition) about the truth or dangerousness of a specific class of thoughts. Conversely, behavior-analytically oriented theorists can explain findings supporting cognitive mediation as reflecting changes in derived stimulus functions. Thus, it will be impossible to design a definitive empirical test that will pit the two perspectives against one another in order to resolve which is more accurate or useful.

This does not mean, however, that the two perspectives are equally valid, or that these issues are doomed to remain unresolved. Modern philosophers and historians of science note that competing theories (and even more so their philosophical underpinnings) cannot be directly resolved through data (Kuhn, 1970). Rather, the theory that ultimately prevails will be the one that makes risky predictions that are then confirmed by data, especially predictions that have both high precision and broad scope (Herbert & Forman, in press). In contrast to such progressive theories, regressive theories make few novel and risky predications, insulate core concepts from falsification, and are left to offer post hoc explanations for new findings. It is too early to tell how the cognitive and the behavior analytic perspectives will fare in this regard, although some early

signs raise concerns about the cognitive perspective. For example, upon publication of a component control study of CT by Dimidjian and colleagues (2006) that found no incremental effects of cognitive restructuring over behavioral activation alone for depression, the listserv for the Academy of Cognitive Therapy (a leading organization of cognitive therapists) erupted with posts dismissive of the findings. These posts centered either on the idea that behavioral activation must necessarily have resulted in cognitive change, which in turn produced the reductions in depression, or focused on methodological limitations of the study. Yet it is doubtful that many champions of CT would have predicted the results a priori, and it seems clear that few would have honed in on perceived methodological weaknesses had the results turned out differently. Had the results demonstrated incremental effects of cognitive restructuring, the study would have been heralded as a breakthrough by cognitive therapists. The reaction to this landmark study would appear to represent an example of regressive, post hoc theorizing. Although all theories rely at times on post hoc hypotheses to explain away inconvenient results, overreliance on such tactics at the expense of theory development is a sign of a theory in retreat. Of course, this one example does not mean that the cognitive perspective is doomed. Rather, it points to the importance of theories evolving with data if they are to stay relevant; more critically, it illustrates the kinds of factors that ultimately resolve tensions between competing theories.

UNRESOLVED ISSUES WITH REGARD TO COGNITIVE CHANGE STRATEGIES

A host of unresolved questions surround the use of cognitive change strategies such as cognitive disputation and restructuring. First, the expected pattern of evidence supporting cognitive change as a key mediator of CBT effectiveness has not materialized (Longmore & Worrell, 2007). For instance, in the majority of studies examining the question, changes in dysfunctional thoughts do not reliably predict improvements in outcome variables. Moreover, improvements in dysfunctional thinking tend to be equivalent whether someone is treated with CT or with a pharmaceutical agent. However, some cognitive therapists have pointed out that a set of studies supporting cognitive mediation do exist (Hofmann & Asmundson, 2008). Others have asserted that cognitive change in response to pharmaceuticals is to be expected, given that cognition is part of the psychobiological system (Beck, 1984). Still others assert that cognitive change can be a mediator of CT in one study and an outcome of pharmacotherapy in another (DeRubeis et al., 1990). Potentially even more challenging to CT is the fact that a number of component analysis trials have found that adding cognitive change components to behavioral treatments produces no benefit and in some cases may even reduce effectiveness (Forman & Herbert, 2009). A counterargument is that the experiences resulting from “behavioral” interventions (e.g., exposure and behavioral activation) are almost certain to produce cognitive change. However, even if it were demonstrated that cognitive change is an important mediator of improvement, these component analysis

studies beg the question of whether cognitive change *interventions* are necessary or advisable. After all, it is quite possible that treatments without cognitive change strategies may be more efficient, easier for patients to understand, easier for therapists to master, and/or easier to disseminate.

In addition to these questions stemming from empirical findings, some intriguing issues exist regarding each treatment's theoretical stance with respect to cognitive change strategies. Traditional CBT approaches regard cognitive change strategies as the bread and butter of treatment. However, CT cautions against direct attempts to "control" thinking (Alford & Beck, 1997), and strategies such as thought stopping have been discredited and are not part of mainstream CT. It is also true that CT conceives of cognitive change quite broadly. For example, one of the most common reminders to patients in CT is "just because you had a thought does not make it true," which is closer to constructs like cognitive defusion than to a direct attempt to change the content of the thought. Similarly, although a staple CT strategy concerns helping patients question the accuracy of their thoughts, a secondary strategy revolves around challenging the *usefulness* of thoughts.

As described above, metacognitive approaches take an even more nuanced view on cognitive change strategies. These approaches hold that thoughts that occur in the moment and provoke affective and physiological reactions (i.e., automatic thoughts) are *not* amenable to direct modification efforts, whereas beliefs about these thoughts (i.e., metacognition, such as about the usefulness of worry) are responsive to cognitive restructuring (Wells, 2008; Teasdale, Moore, et al., 2002). Yet little if any direct empirical evidence exists to support the assertion that cognitive change strategies are more effective with certain types of cognitions than others. (Data showing that metacognitive interventions that target second-order—but not first-order—cognitions produce benefit can only be regarded as indirect support.)

ACT for its part is openly skeptical about any direct cognitive change strategies out of concern that they would lead to further elaboration of and entanglement with problematic cognitions, will drain resources away from more valued pursuits, and, like other forms of experiential control, are likely to fail, especially when the "stakes" are highest (Ciarrochi & Robb, 2005; Hayes, 2005; Hayes et al., 1999). On the other hand, ACT's fundamental pragmatism allows for cognitive (and other) change strategies to the extent they are effective and do not come with undue costs.

Such theoretical suppositions again demand both further theoretical specification and evidence that is not (yet) forthcoming. Under what circumstances it is useful to attempt to restructure thoughts, and when is it not? For example, surely it would be unwise for a middle-aged man who suddenly experiences shortness of breath and chest pains simply to accept these sensations without efforts to evaluate whether they may be signs of acute heart disease. On the other hand, targeting acceptance may indeed be appropriate for the same individual if he has been medically cleared and experiences these sensations regularly. Although some guidelines have been suggested to clarify when acceptance strategies are indicated (e.g., Farmer & Chapman, 2008; Herbert et al., 2009), further work is needed in this area. Additionally, what empirical findings would (and

currently do) support contentions that cognitive change strategies are often psychologically problematic? Thus, many questions related to the use of cognitive change strategies are unanswered.

A related set of questions surrounds the role of psychological interventions in facilitating behavioral change. Although we have good reason to believe that behavioral strategies such as behavioral activation and exposure are among the most potent interventions in the CBT arsenal, it is not clear how we can best help patients make the necessary behavior changes. Any experienced clinician recognizes that one cannot simply prescribe behavioral activation or exposure in the same way one can prescribe a medication. Much work remains to be done in developing the most effective means of targeting such processes, especially when doing so provokes highly distressing thoughts and feelings.

Another unresolved issue is the role that component analysis studies ought to play in helping to revise current intervention technologies. Borkovec and Sibrava (2005) make a strong case that additive component control designs should be the methodology of choice because of their powerful ability to reveal cause-effect relationships, and therefore the active ingredients of psychotherapy. As discussed above, extant component control trials raise the possibility that the cognitive change components of CT are not active ingredients and should be abandoned. A good argument could be made that similar designs should be applied to acceptance-based treatment packages. Results may well indicate that many or even all of the nonbehavioral aspects of these treatments are superfluous. For all of the methodological elegance of additive designs, however, their interpretation is often not clear. First, the most dramatic findings concern a null result (i.e., that treatment component A is equivalent in effectiveness to treatment components A plus B), but the interpretation of null results should not take place without sufficiently large sample sizes and specialized statistical analyses. Also, some treatment components may be effective in one context and but not others. For example, it is possible that cognitive change components that target metacognitions may substantially add to the effectiveness of behavioral interventions, whereas cognitive change components that target automatic, first-order cognitions may not. Also possible is that an initial dose of cognitive restructuring is highly effective at establishing that a belief or set of beliefs (e.g., catastrophic misinterpretations of panic symptoms) is distorted, but further restructuring interventions add nothing to the treatment (whereas perhaps behavioral and/or acceptance-based strategies do). These types of questions are not addressed by current component analyses. Finally, using component control studies to deconstruct established multicomponent packages is far less efficient than using additive designs to test the incremental effects of treatment components in earlier stages of treatment development.

FUTURE DIRECTIONS

Regardless of exactly how one situates these new developments, there can be no doubt that the growth of interest in acceptance and mindfulness over the past two decades has dramatically altered the field of CBT, and currently represents a major focus of theoretical

development, clinical innovation, scientific research, and dissemination efforts. The initial resistance to these concepts within the field has now faded. Instead, psychologists are increasingly focusing less on the degree to which these approaches represent paradigmatic breaks with prior models, and more on substantive theoretical and empirical issues.

Several challenges lie ahead. First, there has been a proliferation of interrelated theoretical terms and concepts, which contributes to confusion. Some of these (e.g., cognitive defusion) derive from specific theories and have specific meanings within that theory, but nevertheless overlap significantly with similar concepts derived from other theories. In other cases, there are concepts shared by more than one theory (e.g., metacognition), but that have different meanings within each. Finally, there are broad concepts such as “mindfulness” that are borrowed from prescientific traditions and consequently are used quite differently by various theorists. Although it is unrealistic to expect widespread consensus across theorists on the precise meaning of these terms any time soon, it is incumbent on scholars to be as clear and precise as possible with respect to terminology.

Second, there is a need for creative technological innovations. There appears to be value in ideas such as seeing one’s experience from a psychological distance; fully embracing distressing thoughts, feelings, sensations, and memories; avoiding excessive attachment to one’s personal narrative; and decoupling subjective experience from overt behavior. However, these ideas are all counterintuitive and difficult to realize. Although many creative strategies have been developed, there remains much room for innovation.

A related issue is the need for clinical innovations to be firmly tied to testable theories, which are themselves subjected to empirical evaluation. As the father of modern social psychology Kurt Lewin noted, “there is nothing so practical as a good theory” (Lewin, 1951, p. 169). The new acceptance and mindfulness-based models of CBT vary in the degree to which they grounded in well-developed theories. Although an absence of close ties between theory and technology does not necessarily preclude the value of a technological innovation, such developments are most likely to make a lasting contribution when linked to a viable underlying theory.

A fourth challenge is the need for more research, including clinical outcome trials, treatment process studies, additive component analysis trials, and related theoretical studies of psychopathology and intervention models. There has been an explosion of relatively small-scale studies over the past decade, and larger, more methodologically sophisticated studies are now clearly warranted. Studies addressing important questions such as how and when to use cognitive change strategies would be particularly welcome. Challenges in securing funding for such studies remain, however, perhaps owing to the lingering association of concepts such as mindfulness with nonscientific, “new age” beliefs and practices. On a related theme, even clinical scientists themselves sometimes become overly wedded to particular concepts, terms, and procedures. We should not assume that “mindfulness,” for example, is a sacred concept that cannot be deconstructed scientifically, nor that fostering the various aspects of mindfulness will necessarily always be beneficial. We cannot assume that meditative practices are uniformly helpful. These are questions to be studied, rather than foregone conclusions.

A related issue is the importance of ensuring that all of these new developments remain firmly grounded in science. Mindfulness-based therapies have tended to attract two types of followers: scientifically oriented theorists, researchers, and clinicians working at the cutting edge of new developments in CBT on the one hand, and clinicians and laypeople who are ambivalent—and sometimes even hostile—to a scientific approach to psychotherapy on the other. The latter are often attracted to these approaches due to their perceived status as “alternative” and nontraditional. If these developments are to represent substantive contributions rather than passing fads, they must remain firmly grounded in science.

Finally, there is the important issue of dissemination. Proponents of various acceptance- and mindfulness-based models of CBT have tended to be very active in disseminating their work, both to professionals and to the public at large. These efforts have often proceeded before the scientific status of an intervention for a particular domain has been well established. This is not necessarily as much of a problem for professionals, who at least in principle have the background and skills to interpret the extant state of the literature on behalf of their patients. But dissemination efforts directly targeting the public raise more questions, and consensus has yet to emerge on the most appropriate stage in the treatment development and evaluation process for widespread public dissemination, such as through self-help books (Redding, Herbert, Forman, & Gaudiano, 2008). At a minimum, proponents of CBT, and in particular the newer acceptance-based models of CBT, have an obligation to provide a frank discussion of the scientific status of their particular approach in any dissemination project.

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