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Caution: The Differences Between CT and ACT May Be Larger (and Smaller) Than They Appear

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Hofmann and Asmundson (this issue) offer an overview of cognitive-behavior therapy (CBT) as well as its similarities and differences from so-called "third-generation" behavior therapies, particularly Acceptance and Commitment Therapy (ACT). In this commentary we suggest that CBT is most accurately viewed as a broad family of distinct psychotherapy models that includes the traditional Beckian approach of cognitive therapy as well as newer acceptance-based approaches such as ACT. We argue that Hofmann and Asmundson's discussion of the differences in CT and ACT's view of the causal role of cognition lacks clarity. For instance, the behavior analytic framework of ACT does not categorically deny any causal role of cognitions in behavioral and emotional responses. Similarly, we disagree with the authors' contention that CT utilizes primarily antecedent-focused and ACT employs response-focused emotion regulation strategies. In addition, we take the view that the empirical evidence for CT, although very impressive, does not reduce the impetus to innovate. We object to some of Hofmann and Asmundson's interpretation of component and mediational analyses and argue that the field does, in fact, need to question CT's postulated mechanism of action (i.e., cognitive change), both on theoretical and pragmatic grounds. At the same time, although preliminary research on ACT is promising, we suggest that its proponents need to be appropriately humble in their claims. In particular, like CT, ACT cannot yet make strong claims that its unique and theory-driven intervention components are active ingredients in its effects. We conclude that the fundamental differences between CT and ACT are philosophical and theoretical rather than technological.

Keywords: cognitive therapy; cognitive behavior therapy; behavior therapy; acceptance and commitment therapy; psychotherapy research

THE PAST DECADE HAS witnessed the rapid rise of models of psychotherapy that highlight the importance of entanglement with distressing thoughts, feelings, and other subjective experiences in the etiology and maintenance of psychopathology, and of experiential acceptance and mindfulness technologies in its treatment. Sometimes referred to as "third generation" psychotherapies (to distinguish them from earlier generations that focused on conditioning principles and then on cognitive change strategies), these approaches are often compared to more established models of cognitive behavior therapy (CBT). Proponents of third generation approaches argue that they are different and innovative relative to traditional models, both theoretically and technologically. Others have taken the position that so-called third generation approaches offer nothing substantively new. Not surprisingly, this has led to considerable controversy, and to sometimes heated debates, regarding the substantive claims on both sides.

In this context, Hofmann and Asmundson (this issue) offer an overview of traditional CBT. They highlight the distinguishing feature of this perspective, i.e., that "cognitions causally influence emotions and behaviors" (p. 5). They correctly note that CBT cannot be reduced to simple-minded replacing

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of "bad" thoughts with "good" ones, nor does it aim to encourage thought suppression or emotional avoidance techniques. Hofmann and Asmundson also review data from various sources supporting the effectiveness of CBT interventions for a variety of psychiatric disorders, the cognitive model on which these treatments are predicated, and for the mediational role of cognitive constructs. The authors touch briefly on one prominent third-generation model, Acceptance and Commitment Therapy (ACT; Hayes, Strosahl & Wilson, 1999), but their brief analysis misses important substantive issues. In this commentary, we comment on the specific claims made on behalf of traditional CBT, discuss how these relate to emerging work on ACT, and provide thoughts for further research in this area.

It is important at the outset to be clear about terminology. Hofmann and Asmundson (this issue) claim to speak for a broad approach known as CBT, which they define as endorsing the centrality of the causal role of cognitions with respect to emotion and behavior. In fact, as now commonly used, the term CBT has become much broader. The term does not describe a particular theory, psychotherapy model, or group of technologies, but rather a very broad family of psychotherapies that share core cognitive and behavioral strategies as well as a commitment to scientific empiricism (Forman & Herbert, 2009). The definition of a CBT need not include a belief in the causal role of cognition or the use of cognitive disputation strategies. What Hofmann and Asmundson describe as CBT is more accurately described as cognitive therapy (CT; Beck, 1976; 2005), one particular model within the larger CBT family. Likewise, ACT and other new acceptance- and mindfulness-oriented psychotherapies (e.g., Dialectical Behavior Therapy, Linehan, 1993; Mindfulness-Based Cognitive Therapy, Segal, Williams, & Teasdale, 2002) are themselves part of the larger CBT family. Attempting to contrast CBT with ACT represents a category error, analogous to comparing "trees" with "oaks." Rather, it makes more sense to compare specific models within CBT, such as CT and ACT. Because Hofmann and Asmundson's discussion of CBT more accurately refers to CT, we use the latter term in an attempt to be more precise.

The Causal Role of Cognition

Hofmann and Asmundson (this issue) correctly note that the key distinguishing feature of CT is the centrality of cognitive causes. They write, "Negative emotions and harmful behaviors are products of dysfunctional thoughts and cognitive distortions" (p. 6). They go on to claim that ACT affords no such causal role to cognitive factors:

> This view is in stark contrast to other theorists who reject the notion that cognitions can cause emotions and behaviors (Wilson, 19[illegible] Wilson, Hayes, & Gifford, 1997). For example, Wilson and colleagues have stated that "Cognition plays an important role in the regulation of other forms of behaviors (…), but it is not a causal role" (p. 5)

Wilson and colleagues' writings on this subject appear confusing and seemingly contradictory, especially to scholars unfamiliar with the behavior analytic tradition. Perhaps for this reason, Hofmann and Asmundson's interpretation of their claims about the role of cognition reflect a superficial understanding of their perspective. In fact, the behavior analytic tradition, and by extension ACT, does indeed speak of cognitive factors as causal, but just not in the same way that CT does. To understand the ACT position, one must appreciate behavior analytic perspectives on "private" (i.e., internal) causes. Behavior analysts have long accepted that thoughts can participate in causal chains between antecedent events and behavioral outcomes. However, rather than a simple bivariate causal chain, the goal is to analyze how environmental events cause (a) cognition, (b) behavioral actions, and (c) the relation between the two (Hayes & Wilson, 1995). As such, cognition is given no special status and in fact is viewed as one form of behavior (Wilson et al., 1997). It is noteworthy that three decades ago Zuriff (1979) discussed 10 distinct ways in which internal events such as thoughts can play a causal role with respect to behavior according to the quintessential behaviorist B. F. Skinner.

Behavior analysts do not assume that when cognition co-occurs with overt behaviors, thoughts caused the action; this causative link must be demonstrated. Cognitive therapists, on the other hand, are much quicker to attribute causal primacy to cognitions when they co-occur with a behavior of interest. For example, consider a woman who, around the presence of strangers, has thoughts about being negatively evaluated and marked social avoidance. The cognitive therapist would likely assume that the fears of negative evaluation cause her behavioral avoidance. The ACT therapist, on the other hand, would view the degree to which her avoidance followed from her fearful thoughts to be a target in and of itself. A fundamental distinction between the two approaches lies in what is considered a complete causal analysis. By highlighting the causal role of cognitions, CT does not

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require an explication of the origin of the cognitions themselves. It is enough to understand how specific cognitive factors give rise to specific emotional and behavioral effects. In contrast, behavior analytic perspectives, while acknowledging a possible causal role of cognitions, require that the causal chain be traced as much as possible to factors outside the individual. In this way, external, and thus, manipulable, causal factors are identified. One cannot directly manipulate thoughts or other internal phenomena; the only way to impact them is through some environmental intervention. Such interventions can include a wide range of possible factors, including specific verbalizations by a psychotherapist. Cognitive theorists, on the other hand, view this prioritization of external causes as arbitrary (Bandura, 1981). For the reasons described above, however, the distinction is anything but arbitrary for the behavior analyst. Instead, it is CT's prioritization of cognition over other causes that the behavior analytic framework sees as arbitrary. If, as Hofmann and Asmundson, state, "…the relationship between emotions and cognitions is bi-directional because changes in emotions can also lead to changes in cognitions" (p. 5), why privilege cognition over emotion and behavior? If cognitive, affective, and behavioral phenomena are all interdependent and mutually determined, what is the basis for highlighting one over the others?

The foregoing is not, of course, intended to be a thoroughgoing analysis of causation in CBT, a task that would obviously be far beyond the scope of this brief commentary. Rather, we wish simply to illustrate that the ACT perspective on the causal status of cognition is much more nuanced than reflected in Hofmann and Asmundson's description. Both ACT and CT acknowledge cognitive causes, but differ in the degree of emphasis placed on such causes, and more importantly on the specific role they play in theoretical analyses.

Antecedent vs. Response-Focused Emotion Regulation

We are intrigued by Hofmann and Asmundson (this issue) notion that traditional CBT strategies such as restructuring are antecedent-focused emotion regulation strategies (i.e., "strategies that occur before the emotional response has been fully activated"), whereas acceptance- and mindfulness-based strategies are response-focused strategies (i.e., strategies "to alter the expression or experience of an emotion after the response tendency has been initiated"; Gross, 1998). However, we are not convinced that this division is accurate. It is possible, for example, that most cognitive restructuring takes place well after the emotional response has been fully activated. In fact, Barber and DeRubeis (199[illegible]present empirical evidence that this is the case. Also, it seems perfectly plausible that the less avoidant and judgmental mindset that acceptance interventions train are brought to bear at least as early as traditional cognitive strategies, and thus should be classified as antecedent strategies. In addition, experiential acceptance can be viewed as a long-term antecedent-focused strategy in the sense that acceptance of a distressing experience without struggle and concomitant focus on achieving greater behavioral flexibility likely lead to a decrease in distress over time. Moreover, ACT makes a distinction between the reactions directly elicited by a stimulus (e.g., the experience of pain resulting from a physical injury, psychological pain resulting from loss of a loved one) and the added distress that can result from efforts to eliminate these primary experiences. By fully accepting the former, one can decrease the latter. This process would also presumably be classified as antecedent-focused.

Hofmann and Asmundson's (this issue) view that ACT prohibits emotion regulation reflects another (perhaps understandable) misinterpretation of the ACT model. First, there is no blanket prohibition in ACT against efforts to modify distressing thoughts, feelings, sensations, memories, etc., provided that such efforts are effective and do not cause more problems than they solve. On the other hand, it is certainly true that the ACT model highlights the pernicious effects of experiential avoidance (i.e., efforts to change one's thoughts, feelings, and other internal states even when doing so is ineffective, causes harm, or both), and ACT therapists tend to be skeptical of both the value and necessity of direct cognitive and affective change strategies (so skeptical, at times, as to sow confusion on this point). Although CT and ACT make use of both antecedent and response-focused emotion regulation strategies, each approach uses the strategies in different ways, with different emphases, and for different purposes. In sum, the antecedent-response distinction does not map well onto the CT-ACT distinction.

Outcome and Process

There is no doubt that considerable evidence has accumulated over the past three decades on the efficacy of CT for a wide range of conditions. Hofmann and Asmundson (this issue) correctly conclude that CT has unparalleled scientific support from large, well-controlled studies, and further imply that CT is highly effective and well established, and that ACT is neither. Although more limited efficacy data are available in the case of ACT relative to CT and proponents of ACT should

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temper their claims about its effectiveness accordingly, this state of affairs is to be expected given ACT's relative newness and the speed at which a field of study can advance. In addition, Hofmann and Asmundson barely acknowledge the rapidly growing evidence base for ACT, including meta-analyses suggesting that ACT results in gains comparable to (and sometimes surpassing) alternative treatments, including CT (e.g., Powers, Zum Vörde Sive Vörding, & Emmelkamp, 2009). Even a conservative reading of the extant literature suggests that ACT is quite promising and warrants further investigation in large-scale clinical trials. Moreover, Hofmann and Asmundson's citing the fact that various CT protocols meet the APA's criteria for empirically supported treatments (ESTs) is not really saying much. As we have argued elsewhere (Herbert, 2003), the criteria for defining such treatments are highly flawed to the point of being meaningless. In fact, in recognition of the serious problems with the original EST criteria, the field has moved away from such lists in favor of identification of empirically supported treatment principles (Rosen & Davison, 2003) and treatment guidelines (Herbert & Gaudiano, 2005). Finally, it is important not to rest on our laurels. While acknowledging the impressive literature on CT, it is also important to appreciate that many patients do not respond to current treatments, and even among those who do respond, most remain at least somewhat symptomatic or impaired following treatment. Neither authoritative appeal to EST lists nor appreciation of the ground-breaking and award-winning work of Aaron Beck should stifle innovation (Moran, 2008).

We also disagree with Hofmann and Asmundson (this issue) conclusions regarding mediation. To state that, "a wealth of experimental evidence clearly supports the central assumptions of the cognitive model" (p. 11) appears to overly emphasize literature that supports cognitive models while ignoring studies that have failed to demonstrate cognitive mediation (see Longmore & Worrell, 2007). Additionally, Hofmann and Asmundson fail to acknowledge the substantial mediational literature within ACT. This literature suggests that ACT-consistent processes (e.g., reductions in experiential avoidance) are reliable mediators of ACT interventions (Levin, Yadavaia, Hildebrandt, & Hayes, 2007).

Component-control studies (with additive or subtractive designs) represent another approach to studying mechanisms of action in psychotherapy. A surprisingly large set of component analysis studies across depression, social anxiety, PTSD, GAD, and OCD have revealed that adding cognitive strategies to behavioral strategies offers no advantage or, in some cases, possibly even a disadvantage (Longmore & Worrell, 2007). In contrast to some psychotherapy researchers who view these designs as critical to establishing cause-effect relationships (Borkovec & Sibrava, 2005; Lohr, Lilienfeld, Tolin, & Herbert, 1999), Hofmann and Asmundson (this issue) have a curious take on such studies. They argue that component control studies are completely irrelevant to the question of the causal mechanisms of CT. Essentially, the argument is that cognitive change can be produced by a variety of means, including interventions that do not directly target cognitions. So if a noncognitive intervention is as effective as a classic cognitive intervention, it may be that both operate by means of cognitive change. Thus, only studies of statistical mediation are thought to address causal questions. Such an argument comes dangerously close to a post hoc effort to escape empirical refutation, which would render the cognitive model tautological and untestable. Moreover, Hofmann and Asmundson do not acknowledge the pragmatic implications of the extant component analysis studies, i.e., that direct cognitive change strategies (potentially) ought not to be a part of psychotherapeutic interventions, as time spent training therapists in these strategies and administering them to clients might be better spent otherwise. To be fair, ACT has not yet been subjected to component analyses, and it is quite possible that some of its strategies are also superfluous.

The fact that the majority of component control studies have failed to support incremental effects of direct cognitive change strategies, combined with the mixed results of statistical mediation analyses, raise doubts about the specific causal role of cognitive change in CT. In discussing these findings, Hofmann and Asmundson state that,

> . . . an argument of some critics of CBT is that the CBT is invalid because treatment component analyses have not consistently demonstrated that the cognitive component is more effective than exposure without explicit cognitive intervention. This is not a valid criticism because a component analyses is neither a necessary nor a sufficient test for the cognitive model (Hofmann, 2008) . . . (p. 11). Q3

No quotation is given to support the assertion that critics of CT have dismissed it as "invalid," and we know of no leading critics of CT or proponents of alternative approaches who have made such sweeping conclusions. Rather, questions have been raised about the presumed mechanisms of CT, including both the necessity of direct cognitive change interventions and the causal status of cognitive change in CT's effects. But this is a far cry from declaring CT "invalid."

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The Importance of Cognition

To illustrate the importance of cognition in the genesis and treatment of psychopathology, as well as in human behavior more broadly, Hofmann and Asmundson (this issue) contrast traditional behavioral learning theory accounts of various clinical phenomena with modern cognitive accounts. They argue that analyses that omit cognitive factors will be incomplete. The irony is that proponents of third-generation approaches would agree wholeheartedly with Hofmann and Asmundson's conclusions. Proponents of ACT, for example, argue that traditional learning theory accounts of human behavior were limited by their failure to provide an adequate account of language and cognition. RFT is an attempt to provide just such a theoretical account, and ACT is the technological application of that theory. This is not to suggest that the specific theories underlying CT and ACT are the same; it should be clear by now that they are not. However, both approaches share the conviction that theories of psychopathology must address the role of cognition.

Concluding Thoughts

We have attempted elsewhere to compare and contrast CT and ACT, as prototypical models of so-called second-generation and third-generation CBTs, respectively, along philosophical, theoretical, and technological grounds (Forman & Herbert, 2009). Although there are indeed important differences along each of these dimensions, there is also a great deal of overlap. Comparisons of the models typically highlight distinctions, and common ground can be obscured. Ultimately, both CT and ACT aim to reduce human suffering and are committed to a scientific epistemology.

The most critical differences between CT and ACT are at the level of theory and philosophy. Philosophically, although the two models share many common values, they differ somewhat regarding their respective visions of a scientific research program and what constitutes probative data. Such assumptions are pre-analytical, and cannot be directly pitted against one another in experimental tests. Although certain theoretical concepts can be directly compared, even there data will rarely be conclusive because they will be interpreted through the lenses of distinct theoretical systems that are in turn shaped by basic, paradigmatic philosophical differences. For example, Bach and Hayes (2002) and Gaudiano and Herbert (2006a, 2006b) found that treatment of psychotic inpatients resulted in decreases in the believability of hallucinations, and that such changes mediated not only reductions in psychotic symptoms but decreases in rehospitalization rates over follow-up periods. Proponents of ACT would explain these results in terms of modified stimulus relations. Even though the treatment did not specifically target changing the content of hallucinations or increasing reality testing, cognitive therapists would have no problem explaining these results as stemming from a change in beliefs about the reality or meaning of the hallucinatory experiences. In fact, it is difficult to imagine a result from either an ACT or a CT study that could not be readily explained within the framework of the opposing paradigm. Ultimately, then, the value of the respective programs will be determined less by critical head-to-head experiments, but rather by how well the theories generate risky predictions that stand up to experimental tests, and the utility of the resulting technologies.

So where does this leave us? First, proponents of either perspective should be willing to embrace useful technological innovations from the other without hesitation. Technical eclecticism in this sense makes infinitely more sense that theoretical dogmatism. Even the most ardent proponents of CT acknowledge that the third-generation CBT models have yielded interesting technological innovations (Leahy, 2003). Likewise, ACT therapists already readily incorporate traditional behavioral technologies into their treatment protocols. They should not reflexively reject even direct cognitive change interventions when those are theoretically compatible and technically useful. An obvious example is the provision of psychoeducation about the role of anxious arousal in panic attacks. ACT proponents ought to acknowledge the possibility that there may exist certain contexts in which direct cognitive change strategies yield better results than acceptance-based strategies. Or, perhaps future empirical work will suggest that the most effective approach is to engage in a limited restructuring phase, after which the patient is encouraged to cease all cognitive change attempts and adapt an accepting stance. In fact, we have found anecdotal support within our own clinical work for just such a hybrid strategy. Finally, it is absolutely critical to productive dialogue that critics of any particular psychotherapy strive to achieve a sufficiently deep understanding of the approach, not only in terms of its technology but its theory as well. Otherwise, we risk attacking straw men, which serves no useful purpose.

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