Introduction to the Special Issue on Third Wave Behavior Therapies

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It can be perhaps be argued that the advent of a modern science of clinical behavior analysis began with the operant behaviorism of Skinner [1]. While the then nascent clinical science was surely built upon the foundations of preceding experimental work, some of which concerned processes of learning and behavior change in humans (e.g., [2]), operant behavioral theory offered an organizing framework for pursuing adaptive behavior change in complex humans with complex histories existing in complex environments. The early clinical work in this area, which has been labeled as the 1st wave of behavior therapy [3], placed high value on an empirical epistemology, a way of generating and evaluating knowledge that relied primarily on the experimental method and allowing the data to be the primary determinant of what is scientifically “true” or “false” ([4]; see also Moore, chapter 19 [5]). This reliance on “data first” has carried through the two subsequent waves of behavioral therapy, the second of which incorporated cognitive and operant approaches. This special issue of *Current Opinion in Psychology* focuses specifically on the third wave of behavior therapy and provides a summary of the current state of the data.

The third wave therapies offer an extension to the first and second waves, and a reconsideration of the influence of private verbal behavior (thoughts and feelings) on subsequent action. They also provide pragmatic guides for scientists and clinicians as a particular strength of the third wave approaches are their potential to form a cohesive whole, with a foundation based on theory and the findings from basic science, elucidation of primary clinical principles, clear guides for application in healthcare, and identification of broader societal and cultural relevance. Across the included papers of this issue, a particular focus is Acceptance and Commitment Therapy (ACT; [6]), Relational Frame Theory [7], and the functional contextualistic orientation that underpins them both. In combination, ACT and RFT have been the two most widely researched areas within the third wave, and are therefore the most discussed within the following articles. Other third wave therapies are also well-
represented, including Functional Analytic Psychotherapy [8], Dialectical Behavior Therapy [9], as well as relevant aspects of the mindfulness-based approaches. This special issue is structured in four sections, which intentionally reflect the four areas detailed above: Theoretical foundation & basic science, clinical principles, clinical applications, and broader social/cultural ramifications.

The first three papers provide a synopsis of key facets of verbal behavior and verbal relations. In the opening paper, Guinther and Dougher [10] review key findings in relation to stimulus equivalence and the transformation of stimulus function, which in combination offer a coherent and scientifically-viable behavioral account of verbal behavior, that of RFT. Next, the paper of Hussey, D. Barnes-Holmes, & Y. Barnes-Holmes [11] provides a conceptual account of how verbal behavior can give rise to problematic human behavior and offers a thorough overview of how this account can be tested in experimental and applied settings. In the third and final paper concerning important theoretical foundations of the third wave behavioral therapies, McHugh [12] focuses upon a widespread, and perhaps historically ill-defined issue, that of the “self”. The thesis articulated here is that there may be pragmatic clinical utility in defining the self, and the related issue of perspective-taking, in modern behavior analytic terms.

The next paper, by McEnteggart, Barnes-Holmes, Hussey, & Barnes-Holmes [13], provides a connection to the key clinical principles highlighted in the next section of the special issue. Within this paper, they convey the allegiance at the core of the third wave towards an empirical epistemology and the identification of testable functional processes, while also making note of the pitfalls in translating the findings from basic science to clinical application. In this same vein, Callaghan and Darrow [14] detail the foundational role that functional analysis plays across the behavior therapies and caution that compromises in its application pose a risk to the integrity and utility of the model. Finally, Dahl [15] provides an overview of values and valuing, including a clear articulation of the link to behavior analysis, as well as a summary of experimental and clinical work in this area.
The largest collection of papers in this issue details the breadth and range of clinical applications. In his review of the depression literature, Zettle [16] not only details the results of more traditional face-to-face therapy, but also more recent work utilizing alternative delivery systems, such as bibliotherapy and tele-therapy. In the first of two papers on anxiety, Landy, Schneider, and Arch [17] summarize the findings of randomized controlled trials of ACT for anxiety, and also detail the most recent advances in this area, including work on mediation and moderation. Twohig and Smith [18] emphasize a unifying aspect of the third wave behavioral therapies in relation to anxiety and related problems, which is their functional view of private events and emphasis on altered responding to them.

Two papers concern the area of substance use. In the first, Stotts and Northrup [19] report on the status of ACT and DBT as an intervention for substances use. Their review, in particular, helpfully identifies important areas of heterogeneity, both potentially helpful (e.g., variety of target substances and intervention settings) and unhelpful. The second paper of McCallion and Zvolensky [20] details the literature on ACT and smoking cessation, with a focus not only on outcome trials, but also the potential importance of smoking-specific experiential avoidance as a marker of broader psychosocial functioning.

Robinson [21] and Dindo [22] next describe the characteristics and use of third wave therapies in distinct healthcare situations. The former paper provides an insightful introduction to the application of contextual behavioral science-based interventions to primary care medical practices, summarizes the results of the relevant literature, and points to the future role that these approaches can serve within those settings. The latter shifts the focus to chronic medical conditions and illustrates the potential utility of a one-day “workshop” format to aid in adaptation and self-management.

As the third wave approaches have been extensively studied in several areas of behavioral medicine, these literatures are also represented. Wicksell, Kanstrup, Holmström, Kemani, & Olsson [23] identify areas where ACT has been used in pediatric healthcare and
provide a synopsis of these areas, which include chronic pain, sickle cell disease, cystic fibrosis, and brain injury. Next, Gregg, Lillis, and Schmidt [24] discuss a functional contextual account of obesity and its treatment, including a broadened focus beyond weight and obesity alone, to include related medical problems such as diabetes and heart disease. The theme of weight control is continued in the article of Forman, Butryn, Manasse, and Bradley [25], who describe the literature on Acceptance-based Behavioral Treatments. In addition to a thorough description of the rationale and evidence of effect, the authors document both the limitations and needs of this literature. The final paper in this area, contributed by Scott and McCracken [26] defines the theoretical underpinnings of ACT for chronic pain and provides a summary of the efficacy literature, as well as an assessment of its strengths and weaknesses.

The final series of articles pertain to the connections and relevance of the third wave therapies to community, social and vocational issues. These articles intentionally look beyond the more well-established environs of the clinic and hospital and collectively suggest that the third wave therapies have relevance more broadly. The article of Luoma and Platt [27] considers the role of shame and self-criticism through the frame of both problematic verbal relational responding (often towards oneself) and as a potential target for behavior change, where augmentation of self-compassion may be of relevance. Next, Moran [28] defines the relevance of ACT to vocational settings, including an elucidation of the model itself, defined in terms of the workplace, and the findings of extant literature of this area. The article of Thompson [29] details the relevance of third wave behavioral approaches to the challenging issue of poverty – it provides a useful review of relevant outcome literature in those who live in impoverished circumstances and illuminates the potential to leverage these approaches at a level of wider societal and cultural change. In the final article of the issue, Hayes and Sanford [30] highlight the connections among the third wave behavioral therapies, and evidence-based practice more broadly, with key concepts of evolutionary science, including effective variation, selection, retention, and context sensitivity in the pursuit of behavior change.
As the editor for this special issue of *Current Opinion in Psychology*, my primary goals were for these articles to provide an update on the field in a format that was accurate with regard to the extant database and also presented in a manner that was accessible. The result was a body of articles that span the theoretical foundations, clinical principles, clinical applications, and broader social implications of the third wave behavior therapies in a way that I believe noteworthy, particularly given the concise nature of the articles themselves. I am hopeful that readers will find that both of the above stated goals were achieved and that the articles in this volume provide a useful touchstone for both research and clinical endeavors.

While these articles are a testament to the strengths and broad applicability of the third wave behavior therapies, it is also remarkable that they are highly consistent in the deficiencies noted and in the identification of areas in need of further development. While many of the methodological difficulties have been noted elsewhere (e.g., [31]), they are critical enough that it is worth summarizing them here. Further, while these difficulties are perhaps also applicable to other areas of psychotherapy (e.g., see [32] and [33] for examples from depression and chronic pain, respectively), the empirical epistemology that is at the core of the third wave behavior therapies necessitates that this field take steps to address and rectify these issues. These issues can be summarized as follows. From a methodological perspective, a number of treatment outcome studies contain small samples, lack of comparison conditions, and an absence of follow-up periods (or short term follow-up only), as well as potential threats to internal validity. Further, and of key importance, are concerns about gaps between the laboratory (where basic principles can be derived and tested), trials of clinical intervention (where attempts to maximize internal validity are prioritized), and the ‘real world’ of implementation in naturalistic settings (the plausible true ‘litmus test’ of effectiveness). A healthy and coherent science of human behavior change requires that these gaps be small or non-existent [34].
Bearing these challenges in mind, the articles in this issue provide a synopsis of the current state of the field and a base from which future work can grow. Speaking on behalf of all of the contributors, we believe that these articles represent a useful snapshot of the field at this point in its history and deliver a forthright assessment of current status, as well as identify several routes for future development and progression.
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