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## Acceptance and commitment therapy: towards a unified model of behavior change

Well-established research programs should be evaluated relative to progress toward their stated purposes. The 35-year old program of development of acceptance and commitment therapy (ACT; said as a word, not initials) has followed an unusually lengthy strategy that was dictated by its ambitious goal: the creation of a unified process-based model of how to alleviate human psychological problems and promote behavioral effectiveness<sup>1</sup>.

Instead of generating and refining a technologically-defined protocol for the treatment of specific syndromes, ACT research has from the beginning been based on an alternative vision more characteristic of its roots in behavior analysis and early behavior therapy: namely, the aspiration to identify change processes that facilitate psychological development based on principles that have high precision and scope of application, and depth across levels of analysis.

The resulting body of work now spans more than 2,000 studies, including research on ACT outcomes; research on the psychological flexibility model that underlies ACT (and its primary psychological change processes of acceptance, cognitive defusion, flexible attention to the now, a transcendent sense of self, values, and committed action); and work on relational frame theory (the analysis of human cognition that adds needed symbolic learning principles to the existing behavioral and evolution science principles on which this entire “contextual behavioral science” program stands<sup>1</sup>).

There are currently over 280 randomized controlled trials of ACT, involving nearly 33,000 participants (see [bit.ly/ACTRCTs](http://bit.ly/ACTRCTs)), in virtually every major area of mental and behavioral health, and many social and recreational areas as well<sup>2</sup>; over 60 mediational studies; scores of component studies<sup>3</sup>; assessment devices ranging from implicit measures to overt behavioral measures, in all of the process areas delineated by the research program; longitudinal studies on flexibility processes as long as a decade; and treatment studies with follow-ups as long as five years. Approximately 90% of the existing research base has appeared in the last decade. There are currently 40 meta-analyses of this literature, including eleven in the last year alone.

Characterizing a rapidly expanding literature with broad conclusions is risky, because any specific statement may have one or two exceptions, but I believe that a fair reading of these studies supports the following conclusions.

First, ACT outcomes are as good, or in some cases better, than alternative evidence-based approaches designed to target specific areas of mental and behavioral health (anxiety, depression, substance use, chronic pain, and so on), but they are produced by a single unified model of behavior change.

Second, ACT works largely by modifying psychological flexibility processes. When these processes are successfully modified by ACT methods, long-term positive outcomes follow, whether the domain being addressed is in traditional areas of psychopathology, behavioral aspects of physical health (diet,

exercise, coping with disease), social areas such as reducing prejudice and its impact, or positive outcomes in sport, business, leadership, relationships, and similar areas. ACT and psychological flexibility processes are now known to be relevant to a much broader range of human functioning than alleviation of mental health problems alone.

Third, ACT is a prime example of “process-based therapy” (PBT)<sup>4,5</sup>, in which the intervention method is defined not by a protocol but by a practical model containing a limited set of evidence-based processes that are fitted to the needs of the individual, and a linked set of evidence-based kernels that can be deployed on a case-by-case basis to alter particular processes of change, so as to help individual clients meet their health and prosperity goals across a range of targets, beyond the meaning even of terms like “transdiagnostic”. As such, ACT is a successful “proof of concept” of PBT, offering a more generally applicable alternative to the “protocols for syndromes” era that arguably is now passing away and that has dominated evidence-based psychological and psychiatric care over the last several decades.

Fourth, while ACT methods reliably alter psychological flexibility processes, as do some methods from other traditions, they fail to do so in a small set of contexts that are presently difficult to characterize. When ACT intervention kernels do *not* successfully alter flexibility processes, outcomes are hit and miss, suggesting the need for continued procedural development linked to the underlying process model.

Fifth, psychological flexibility processes form a coherent set, and outcomes are less positive if any are left behind. Psychological flexibility fosters healthy forms of variation (through acceptance and cognitive defusion), selection (through values), retention (through behavioral habits formed by the practice and pattern integration of committed action), and context sensitivity (through flexible attention to the now and the greater conscious awareness emerging from a transcendent sense of self), that target needed dimensions of development (affect; cognition; attention; motivation; self; overt behavior) at the right level of selection (sub-organismic; whole organism; small group).

Because of this focus on variation and selective retention in context at the right dimension and level, psychological flexibility provides a coherent set of skills needed for behavioral systems to evolve. It is helpful for forms of psychological care to fit within an extended evolutionary synthesis<sup>6</sup>, because they can be combined with evolutionarily sensible processes at other levels of analysis to create programs of intentional change, such as combining individual change with the effort to evolve more

prosocial groups<sup>7</sup>. If the ACT research program is determined to be successful, it thus indirectly supports the possible value of an integration of evolutionary science and behavioral science<sup>8</sup>.

Sixth, ACT can be successfully delivered across a very wide range of settings (e.g., outpatient, inpatient), methods of delivery (e.g., online, books, apps, face to face), forms (e.g., groups, individual therapy, peer support), providers (e.g., nurses, occupational therapists, physical therapists, psychologists, psychiatrists), and systems of care (e.g., preventive, acute, aftercare). Robust ACT research programs exist in every area of the world, and the relationship of flexibility processes to health outcomes is similar across cultures, ethnicities, languages, and religious background.

Finally, relational frame theory is an evolutionarily sensible model of cognition that can be used to refine ACT methods<sup>1</sup>, to derive additional change methods in psychotherapy directly<sup>9</sup>, and to facilitate work in education, developmental disabilities, intellectual development in normal populations, implicit cognition, and many other applied areas of behavioral science<sup>10</sup>.

In summary, as evaluated against its unusually ambitious goals, the ACT research program appears to be progressive. Much more remains to be done, but ACT has established itself as a viable form of evidence-based therapy, based on a unified model of behavior change grounded in evolutionary and contextual behavioral science principles.

**Steven C. Hayes**

Department of Psychology, University of Nevada, Reno, NV, USA

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