Journal of Contextual Behavioral Science ∎ (∎∎∎∎) ∎∎∎–∎∎∎

Contents lists available at ScienceDirect

Journal of Contextual Behavioral Science

journal homepage: www.elsevier.com/locate/jcbs

Conceptual Articles

Where is the love? Contextual behavioral science and behavior analysis

Jonathan W. Kanter [a,*], Gareth Holman [b], Kelly G. Wilson [c]

[a] Department of Psychology, University of Washington, Box 351525, Seattle, WA 98195, USA
[b] Evidence-Based Practice Institute, Seattle, WA, USA
[c] University of Mississippi, MS, USA

ARTICLE INFO

Article history:
Received 29 December 2013
Received in revised form
20 January 2014
Accepted 5 February 2014

Keywords:
Contextual behavioral science
Behavior analysis
Middle-level terms
Love
Functional Analytic Psychotherapy

ABSTRACT

This article explores some tensions between contextual behavioral science (CBS) and radical behaviorism or behavior analysis (BA), particularly with respect to the study of emotion. We contrast Darrow and Follette's (in this issue) discussion of alexithymia from a radical behavioral perspective, which we view as representing a traditional behavior analytic approach, with a CBS approach, as we understand it. As a convenient anchor for our discussion, we discuss how CBS and BA might view the term "love." We present suggestions for how "love" may be used as a middle-level term in a CBS approach, and why usage of such middle-level terms is important to the mission of CBS to create a science more adequate to the challenges of the human condition.

1. Introduction

As the Journal of Contextual Behavioral Science (CBS) evolves, its content, as much as anything, will define Contextual Behavioral Science. Thus, it was wise that Hayes, Barnes-Holmes, and Wilson (2012), in the inaugural issue of this Journal, articulated in detail the nature, scope and purpose of CBS:

> Contextual Behavioral Science (CBS) is a principle-focused, communitarian strategy of reticulated scientific and practical development. Grounded in contextualistic philosophical assumptions, and nested within multi-dimensional, multi-level evolution science as a contextual view of life, it seeks the development of basic and applied scientific concepts and methods that are useful in predicting-and-influencing the contextually embedded actions of whole organisms, individually and in groups, with precision, scope, and depth; and extends that approach into knowledge development itself so as to create a behavioral science more adequate to the challenges of the human condition.

Our purpose, here, is to explore some of the implications of this definition, specifically with respect to tensions between CBS, radical behaviorism, behavior analysis (BA) and the study of emotion. We contrast Darrow and Follette's (in this issue) discussion of alexithymia from a radical behavioral perspective, which we view as representing a traditional behavior analytic approach, with a CBS approach, as we understand it. As a convenient anchor for our discussion, we discuss how CBS and BA might view the term "love." We choose love because of new interest in this topic, particularly in relation to Functional Analytic Psychotherapy (FAP; Tsai, Kohlenberg, Kanter, Kohlenberg, Follette, & Callaghan, 2009), an approach with which we (JWK and GH) have worked with Darrow and Follette – often quite lovingly – as treatment developers, researchers, and trainers. We hope this response to their article, although it represents a different perspective in several fundamental ways, does not change that.

1.1. The relationship between CBS and BA

The relationship between CBS and BA is fundamental to the identity of CBS and, from our perspectives as members of both the CBS and BA communities, pivotal with respect to the degree to which CBS will meet its pragmatic, stated mission: To create a behavioral science more adequate to the challenges of the human condition.

While some may read into the CBS mission statement the clear implication that traditional behavioral (i.e., radical behavioral, behavior analytic) science was, essentially, inadequate to the challenge, it is important in our view to remain true to, without enshrining, the fundamental contributions of BA scientific practices and concepts to the development of CBS. Specifically, as noted by Hayes et al. (2012), CBS has roots in BA as both a philosophical system and as a source of basic principles. Both CBS and BA focus on the identification of functional relations of actions of the whole organism and the environment, and in so

* Corresponding author. Tel.: +1 206 221 2591.
E-mail address: jonkan@uw.edu (J.W. Kanter).

http://dx.doi.org/10.1016/j.jcbs.2014.02.001
2212-1447

Please cite this article as: Kanter, J. W., et al. Where is the love? Contextual behavioral science and behavior analysis. *Journal of Contextual Behavioral Science* (2014), http://dx.doi.org/10.1016/j.jcbs.2014.02.001

doing, emphasize variables that are pragmatically useful in achieving prediction-and-influence.

This has large implications. At its core, CBS is a science designed, from the ground up, to produce findings that influence – by intention, not by happy accident – those who are working on human behavior problems, at the human scale: Psychotherapy, education, organizational psychology, racism/discrimination, behavioral patterns of public health significance (obesity, safety, addiction), human conflict and cooperation, peace and love.

1.2. Traditional behavior analytic mandates

The emphasis on prediction and influence in traditional BA creates the mandate that analyses should trace the causes of a behavior back into either the historical or current context of the individual. The flip-side of this mandate is an aversion to analyses that stop at, or even emphasize, feelings, thoughts, biological variables, or other private phenomena, as significant causes of behavior. The idea is to define and focus on variables that are useful for intervening in specific contexts, e.g., events that can be manipulated in therapy. This emphasis on history and context was a necessary and useful corrective to other early theories of psychology that focused excessively on intrapsychic phenomena and did so in ways that were not seen as particularly useful for behavioral scientists who hoped to achieve prediction-and-influence of human behavior through science. Focusing on the nature of the intrapsychic phenomenon itself, rather than environmental antecedents and consequences, required too many assumptions about the nature of the experience for behavioral scientists, and took them too far from direct prediction and influence (e.g., Skinner, 1953).

For example, consider the emotional expression, "I love you." Of course, there are many reasons why a person may utter such an expression. For our purposes, let us assume one mainstream view that a person states "I love you" as in "I am having a feeling of love towards you." The assumption is that the person is referring to what he or she perceives to be an emotional state – love – that has an essential composition: a condition of the body, presumably with a physiological basis. The traditional behavior analytic view has problems with this mainstream view because it is argued that there is no actual, essential, reliable referent within the body to which most emotion words refer. Emotion words, instead, refer to loose, poorly defined categories – the very private nature of the referrant makes it hard to define with precision (Moore, 1980).

This idea is supported, as cited by Darrow and Follette (in this issue), by studies indicating that physiological data do not reliably correspond to reports of emotional states. Accordingly, BA may take as its focus of study *the behavior of referring to the emotion* and then looks to identify more reliable, manipulable causes of this behavior outside of the body (e.g., Skinner, 1945). To put it technically, love as an emotion (where emotion is equivalent to a condition of the body) is not a sufficiently precise stimulus condition to serve as a discriminative stimulus for the tact "I love you." A more pragmatic and precise account requires looking outside the body for the causes of the tact, rather than inside the body for the nature of love.

As behavior analysts look for environmental causes, they also emphasize that each individual's history and context is unique such that topographically similar behaviors may have very different functions depending on the person's history and context. Thus BA also has traditionally mandated individualized ('idiographic') *de novo* functional analyses of each individual client and their environmental context to guide interventions, avoiding topographical descriptions and unassessed assumptions of all kinds – whether mentalistic or functional (e.g., Darrow, Dalto, & Follette, 2012).

Putting these two principles into action, Darrow and Follette (in this issue), in their behavioral analysis of alexithymia, focused on the public accompaniments of emotion, specifically verbal emotional expressions, and defined alexithymia as a deficit with respect to such publicly observable emotional expressions. The task then became describing various environmental conditions and learning histories that could result in deficits with respect to emotional expression, rather than focusing on the quality of, content of, or individual differences with respect to any private stimuli relevant to emotional expression. To stay true to the mandate that idiographic functional analyses are performed, the discussion presented multiple possible histories that might produce deficits that might reasonably be labeled alexithymic, and focused on how the therapist may assess what is relevant for and how to tailor interventions to each particular client.

To continue our discussion of love, a behavioral analysis in line with Darrow and Follette's (in this issue) approach might define the conditions in which one would likely utter the words, "I love you." For example, one might say "I love you" when in the presence of a person whose responses have significant eliciting, evoking, and especially reinforcing stimulus functions with respect to one's own behaviors, especially those behaviors that would be punished in most other social situations (Cordova & Scott, 2001).

Interestingly, while the term "alexithymia" was the starting point for Darrow and Follette's (in this issue) analysis, the analysis itself, by focusing simply on the idiographic contingencies around verbal emotional expressions, arrives at a set functional descriptions of clinical presentations that would, in our judgment, be more likely labeled something other than alexithymic. The analysis is not specific to those circumstances in which a client would likely be labeled alexithymic by a therapist, but rather represents a primer on how traditional clinical behavior analysis might approach problems with emotional expression, broadly defined. Essentially the term alexithymia is left behind in favor of what are expected to be clinically useful analyses of clinical presentations. The overall result is what a good analysis of a problematic mentalistic term should achieve in traditional behavior analysis: a fuzzy term is replaced with an analysis in which the original phenomenon is recognizable, yet the conditions for and variations in the behavior of interest are much more precisely defined.

From either a CBS or BA perspective, the term "alexithymia" is problematic. It is not precise; nor is there much indication that it can function usefully as a middle-level term (discussed below), even if imprecise. It probably will not map well with other scientific disciplines; thereby the term does not add depth to our science. By submitting the term to a functional analysis, a set of potentially more precise and clinically useful contingencies can be identified.

The problem is that such a behaviorally precise and exhaustive exercise – to define the construct of emotion in terms of all possible public antecedents to and consequences of the public verbal expressions of emotion words, without actually referencing any qualities or characteristics of private emotional experience itself, and expecting the therapist to perform a sophisticated assessment each time a new case is presented – is a whole lot of work. The analysis also results in language that strains common ways of talking and is often incomprehensible to the layperson – this is fine if the goal is purely talk among behavioral scientists but not if it is talk between a therapist and client, or between therapists of different orientations. It is indeed very difficult to purge more conventional ways of speaking about emotion from the analysis. Conducting this analysis alone requires considerable behavior analytic sophistication – let alone collaborating with a client in the analysis and then operating within it to therapeutic effect.

Most importantly, given the pragmatic nature of our science, this whole strategy had better pay off in terms of clinical or some other applied utility. Darrow and Follette (in this issue) argue that this is indeed the case: The analysis *should* be more useful to the

Please cite this article as: Kanter, J. W., et al. Where is the love? Contextual behavioral science and behavior analysis. *Journal of Contextual Behavioral Science* (2014), http://dx.doi.org/10.1016/j.jcbs.2014.02.001

therapist as it promotes direct influence over behavior that is observable and accessible to the therapist. It should be more useful, according to traditional behavior analytic thought. But is it, in actuality?

If history is to be our guide, such exquisite precision and application of behavioral analysis in this particular realm of human behavior will again fail to prove as useful as hoped. Or, at least, it will fail to produce the kind of clear evidence of impact that is the currency today. Such disappointments may have been a large part of the impetus for the development of contemporary CBS.

1.3. A view from CBS

If that is how the analysis might proceed with BA, what is love, alternately, to CBS? A few guidelines in defining such a term may be gleaned from Hayes et al. (2012). The first priority is to maintain a loose hold on whatever definition we present, and submit it, as soon as possible, to empirical investigation to explore its potential to achieve prediction-and-influence in specific contexts, rather than holding it rigidly as the only possible definition or the Right definition.

Second, while a CBS definition of love will involve basic behavioral principles, CBS, unlike traditional BA, makes a more explicit point to reference its basic principles and functional relations against constructs that apply at different levels of analysis. Hayes et al. (2012) have termed this coherence 'depth', and it sits alongside precision and scope as primary and pre-analytic criteria for effective analyses in CBS. That is, CBS is betting on the notion that analyses with greater precision, scope and depth will have greater applied impact.

For example, consilience with evolution science (Wilson, 2012) suggests that we as a field take seriously the notion that certain basic emotional responses evolved to serve important – some would say *fundamental* – social communication and connection functions in humans (Cacioppo & Patrick, 2008; Fredrickson, 2013). Behaviorists do not have to stretch their own concepts too far to understand such emotional responses as coordinated systems of unconditioned respondents. A broader CBS definition of love can be built from this starting point. In this view, while there remain many uses of the term "love," one potentially useful view is that our complex experience of love is elaborated from a primary emotion – an unconditioned response – that, like other primary emotions, has conferred a survival advantage, presumably in the case of love increasing successful pair-bonding for mating and successful rearing of offspring (De Boer, Van Buel, & Ter Horst, 2012). This addition of a private response (albeit a behavioral concept, a respondent) to the analysis is a first step beyond the traditional BA analysis offered by Darrow and Follette (although the importance of identifying the contextual determinants of unconditioned respondent reactions has been clear for generations of behavior analysts, even if effort has focused more on operant than respondent relations).

A CBS definition of love, however, would not stop with love as an unconditioned respondent reaction. It would explore the entire historical context, both within and outside the organism, in which that reaction has occurred, and the effects of that history in turn on the reaction. In other words, CBS emphasizes not just environment–behavior relations (how events accessible to the therapist and others influence behavior) but also the rich, more private world of behavior–behavior relations (Hayes & Brownstein, 1986): How events within the skin influence and give meaning to other events within the skin, and how all of these relations in turn are contextually controlled by environment–behavior relations. This analysis, in large part, is that which is offered by relational frame theory (RFT) of arbitrarily applicable stimulus relations and transformations of function (Hayes, Barnes-Holmes, & Roche, 2001).

Thus, in CBS, it appears to be beneficial to understand not just how such basic respondents like the emotion of love are elicited by the environment but also how such basic respondents participate in functional relations with other reactions and behaviors, have their functions transformed and augmented through participation in relational frames with other stimuli, and otherwise are elaborated and networked over our histories into the loose, fuzzy, functionally complex, meaningful, and emotional rich category we label "love" as adults.

When we start with a core, unconditioned respondent reaction (perhaps better stated as a coordinated biological system of reactions), evolved over the history of our species to be elicited and functional in the context of pair-bonding and child-rearing, and then elaborate this simple reaction through a lifetime's worth of environment–behavior relations, behavior–behavior relations and additive, entailed, transitive relational transformations of function (one's parents' expressions and reinforcements of experiences of love; how love was talked about; one's exposure to social media, songs, poems, literature, movies, about love; and the success or failure of one's early and formative intimate relationships, to name some possibilities), the analysis, compared to a traditional BA analysis, suddenly explodes into complexity. The best we may do is depict this complexity as a relational network (see Blackledge (2003), for an example), recognizing that this depiction is a poor stand-in for the exquisite complexities of our histories. If the analysis works, we experience this complexity as perfectly resonant with the actual experience of ourselves uttering and hearing others utter the words, "I love you."

Relational framing produces this complexity but also provides us an opportunity to produce verbal short-cuts that allow us to organize and function effectively with respect to this complexity. In relation to the right short-cut, idiographic, de novo functional analyses become unwieldy and time-consuming, and – and this fact should not be overlooked – one ultimately only guesses at historical controlling variables in any event.

In this spirit, CBS, unlike BA, has developed a pragmatic interest in "middle-level terms" (p. 6), such as defusion and acceptance, which are user-friendly "interfaces" that may be drilled down to precise behavioral terms, but only if pressed (Hayes et al., 2012). These middle-level terms sacrifice behavioral precision for pragmatic utility: If designed well, they orient the user towards relevant functional relations but do not require thorough knowledge of basic principles or individual histories. While less precise, they are potentially easier for behavioral experts to disseminate and research using a variety of methodologies, potentially easier for non-behavioral experts to learn and apply, and potentially easier for scientists from other disciplines to link with to give the science additional depth. These potentials for dissemination and research are, in our view, to date well fulfilled by the volumes of research demonstrating positive clinical effects of Acceptance and Commitment Therapy (Hayes, Luoma, Bond, Masuda, & Lillis, 2006) in areas where traditional BA has had little impact.

With the intention of developing a middle-level term that performs these functions for FAP, we will consider how "love" may be seen as a middle-level term. Our working hypothesis is that it will be useful to treat love as such. In this way, we suggest that, rather than jettisoning all such fuzzy terms in favor of idiographic functional analyses, as BA would mandate, there is room for some terms whose meaning is not precise. Specifically, love as a middle-level term may represent a functionally complex set of stimulus relations and behaviors around a core, adaptive respondent reaction, all concerning the fundamental importance of deep and meaningful moments of human connection and emotion that feel "loving." This definition is imprecise, and requires elaboration, but for now we state that it is not arbitrary, and with elaboration it could summarize our behavioral knowledge about the term and

Please cite this article as: Kanter, J. W., et al. Where is the love? Contextual behavioral science and behavior analysis. *Journal of Contextual Behavioral Science* (2014), http://dx.doi.org/10.1016/j.jcbs.2014.02.001

cohere with evolutionary and biological sciences. It hopefully points toward useful functional relations (i.e., behaviors that produce feelings of love and connection) and perhaps may usefully be employed in clinical applications and seen potentially as a discriminative stimulus in such applications. While used clinically in this fashion, theory and basic and translational research can clarify that there are many uses of the term "love," clarify what we hope to mean when using the term in particular to achieve prediction-and-influence, and help us unpack and drill down the term to increasingly precise behavioral principles and complex histories. Importantly, using this term effectively in a clinical setting would entail organizing responses with respect to both public and private events (Batten & Santanello, 2009).

2. An example

Consider Tom, Dick and Jane. In conditions under which most individuals would be expected to say "I love you" to someone, Tom, Dick, and Jane do not. Why? Let us imagine that all three had caregivers who were inattentive and not skilled at noticing opportunities to teach them how to identify and express their emotions; this identifies a useful history, as per Darrow and Follette's (in this issue) account, because, among other things, it allows us to then provide the learning history that was lacking.

However, from our CBS view, another critical variable is also at play: The quality of the private experience itself. For Tom, the respondent emotional signal that underlies our middle-level construct of love is very weak, such that it did not participate historically in many behavior–behavior or other relations (such as functioning as a discriminative stimulus for the expression "I love you"). Tom simply did not identify the feeling of love to tact, because it was not salient as a stimulus for either him or his care-givers. His care-givers, in fact, described him as "so level, even kind of cold."

For Dick, the emotional signal of love is of relatively normal strength, but his history involves verbal relations and rules that equate love with weakness and rejection (e.g., his father taught him "love is for sissies"). So for Dick, the functions of love have been transformed and augmented into something more aversive than would otherwise be the case. Dick often feels viscerally uncomfortable during romantic movies or at his wife's (more emotionally expressive) family reunions.

Jane, in contrast, was born with a very sensitive emotional reaction to love triggers; the emotional signal of love is very strong for her. She describes feeling intense waves of warmth in her body when she is first sees someone she loves and reports physical pain in her chest when she experiences rejection. This private experience is often overwhelming for her and tends to dominate over other signals, such that environmental triggers that for others would be largely innocuous for Jane are dysregulating, and in turn when she is 'dysregulated' others are surprised by her reactions to apparently benign comments.

Tom, Dick and Jane exhibit individual differences in the strength and quality of their emotional reactions, and in how these reactions participated in behavior–behavior and arbitrarily applicable relations with other private and public behaviors, resulting in qualitatively distinct, rich, complex and meaningful private experiences of love. While the sources of these experiences can be traced back into the environment, the experiences themselves can become the clinical focus, and we suggest that neglecting these differences would have a negative impact on clinical progress.

From a FAP perspective, consider also the possibility that Tom, Dick and Jane are not clients. Consider the possibility that they are therapists, wishing to perform effectively with their clients by having a loving impact on them.

3. Conclusion

The rich, influential private worlds of Tom, Dick and Jane are accepted by most psychological scientists (e.g., evolutionary biologists, geneticists, affective neuroscientists) and most mainstream psychologists, and are clinically obvious, but are purposefully neglected by BA on the grounds that replacing talk of such epistemologically troublesome private events with more rigorous analysis of publicly observable stimuli is useful. Accordingly, Darrow and Follette's (in this issue) analysis of alexithymia focuses on the antecedents and consequences of emotional expression, resulting in avoidance, throughout their analysis, of talking about the private emotional experience with the rest of the world.

Wait a second.

Is traditional behavior analysis alexithymic? If effective emotional expression is the ability to use middle-level emotion terms to respond efficiently and effectively with respect to a complex array of private and public stimuli, and if alexithymia is a deficit in this area, then perhaps the shoe fits. There must, of course, be functional impairment. Socially, such impairment appears to be the case, as BA is widely misunderstood at best, and maligned at worst, by the mainstream, and there is no doubt that the debate about the role of emotion and similar constructs in psychology is at the heart of the problem.

But what about scientific or clinical impairment? The clinical implications presented by Darrow and Follette (in this issue) have a clear, compelling logic (especially if you are a behavior analyst), but there are no identified research implications. It remains to be demonstrated that such a clinical behavior analysis has any clinical efficacy, either in terms of controlled single-subject research designs or randomized trials. It has been argued in other places, in fact, that interpretive clinical functional analyses such as that by Darrow and Follette do not allow for operationalizations of the independent variable – in this case, the therapeutic intervention – that are replicable (Hayes & Follette, 1992) or researchable in randomized trials (Maitland & Gaynor, 2012; Weeks, Kanter, Bonow, Landes, & Busch, 2012). In other words, the purported clinical utility – which remains to be demonstrated – sacrifices a lot: A researchable agenda and an ability to talk with the rest of the world.

Is it the case that the CBS view of love as a middle-level term, sacrificing behavior analytic precision in the service of consilience with evolutionary and biological sciences, emphasizing proximal private functional relations rather than distal public functional relations, renders the analysis less clinically useful? Or more useful?

Can contextual behavioral science approach a fuzzy, emotion-laden term like "love" and develop a scientific agenda for it, not by avoiding the emotional core – the heart – of the term, but embracing it, in all its complexity, in order to help humans learn what love is at the human scale, how to cultivate love, how to be more loving? In this communitarian science, some members of the community would only understand the middle-level term "love" and its clinical implications, but there would be others working to inform that understanding and those implications. Some would perform experimental analog research to guide these interventions to cultivate love, others would perform experimental RFT analyses to better understand contextual control over functional transformations of love as a simple respondent, and others would link with evolutionary biologists, neuroscientists, and geneticists to fill in the gaps in our analyses and allow for bi-directional scientific influence. Love would be seen as scientifically complex but contextually controlled, behavioral phenomenon. Not many would understand the entire continuum of relevant knowledge, but there would be good communication in the reticulated network to allow for rapid progress in the many areas of human endeavor and relations where love may be relevant.

Please cite this article as: Kanter, J. W., et al. Where is the love? Contextual behavioral science and behavior analysis. *Journal of Contextual Behavioral Science* (2014), http://dx.doi.org/10.1016/j.jcbs.2014.02.001

Will this approach bear fruit? It remains to be demonstrated. It is possible that the success of the middle-level terms in ACT had more to do with their compelling, useful content than with how they functioned as middle-level terms in a contextual behavioral science. It is possible that the process of developing successful middle-level terms cannot be abstracted from the evolution of ACT and generalized successfully to new applications, such as a conceptualization of love. It is possible that, when the terms are applied to a new domain such as FAP, behavior analytic concerns about middle-level terms – that their topographical features will dilute functional thinking and obscure the need for it (e.g., Darrow et al., 2012), and that these changes will diminish clinical effectiveness – will be valid.

We do not yet know. It seems clear to us, however, that the traditional behavior analytic approach has not succeeded in terms of broad influence, and it may be time to try something new.

There are several challenges, however, to the development of middle-level terms. On the one hand, behavior analysis has always resisted the addition of new terms, and CBS should be cautious when adding new terms as well. When we look at psychology more generally, it is easy to see why this might be so. Psychology, including scientifically-oriented psychology, has seen a near endless proliferation of terms. Parsimony seems a lost aspiration in mainstream psychology.

Since the collapse of most of the big integrated behavioral theories in the 1950s and 60s, like Hull and Tolman's, psychology has experienced an incredible fractionation of theory. Whereas in earlier eras, there was a responsibility to fit new terms within a larger integrated system, fractionated modern psychology has no such responsibility. In fact, there are not even any integrated theories of narrow domains. For example, we have a plethora of theories of different aspects of memory, but not a single integrated theory of memory, and no particular motivation to create one. Thus, the potential downside of middle-level terms within CBS is that we see a proliferation of terms with no particular linkage or systematization. The only requirement for a new term would be a spark of interest by some research group.

On the other hand, we do not want to be so conservative in the proliferation of terms that we become willing to neglect potentially rich and meaningful areas of human functioning that may only prove accessible through a middle-level approach. It is not clear to us if alexithymia is such an area, but love may be. Whole psychologies have been constructed around meaningful interpersonal connection (e.g., object relations, Roger's humanistic approach). While most of these previous efforts have been from less empirically focused traditions, FAP may be uniquely focused among the contextual therapies to explore this domain in functional contextual scientific terms. The challenge will be to generate a system of terms and begin immediately to examine the capacity of such a terminological set to generate interesting experiments in the laboratory, in clinical research, and in measurement research. As with terms in the psychological flexibility model, there may be a bit of fuzziness in the conceptualization of the terms, but precision is not a *defacto* necessity. In CBS, precision is a functional matter. We could use a micrometer to measure shoe size, but we would gain little in the fitting of shoes going to that extreme. Another reason to promote the development of such a system within FAP is that an over-reliance on ACT's psychological flexibility model could potentially stifle the development of a comprehensive systematic approach to the development of a psychology more adequate to the improvement of the human condition.

CBS and BA share a common desire for the analyses to achieve prediction-and-influence. Skinner's (1953) vision was that, by defining a science that skirted around the private experiences of emotions, we would create a science that predicted-and-influenced those emotions more effectively. Instead, a science was produced that was not able to communicate effectively with the outside world about emotion, and in the end, the logical analysis had no heart. CBS, by overcoming some rule-governed emotional avoidance built in to the BA system, and demonstrating a certain flexibility about and acceptance of emotional experience as a scientific topic, may be the treatment for the alexithymia of behavior analysis.

References

Batten, S. V., & Santanello, A. P. (2009). A contextual behavioral approach to the role of emotion in psychotherapy supervision. *Training and Education in Professional Psychology*, *3*, 148–156.

Blackledge, J. T. (2003). An introduction to relational frame theory: Basics and applications. *The Behavior Analyst Today*, *3*, 421–433.

Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York, NY: Norton.

Cordova, J. V., & Scott, R. I. (2001). Intimacy: A behavioral interpretation. *The Behavior Analyst*, *24*, 74–86.

Darrow, S. M., Dalto, G., & Follette, W. C. (2012). Equifinality in functional analytic psychotherapy: Different strokes for different folks. *International Journal of Behavioral Consultation and Therapy*, *7*, 38–44.

Darrow, S.M., & Follette, W.C. A behavior analytic interpretation of alexithymia. *Journal of Contextual Behavioral Science*, in this issue.

De Boer, A., Van Buel, E. M., & Ter Horst, G. J. (2012). Love is more than a kiss: A neurobiological perspective on love and affection. *Neuroscience*, *201*, 114–124.

Fredrickson, B. (2013). *Love 2.0: How our supreme emotion affects everything we feel, think, do, and become*. New York, NY: Hudson Street Press.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition*. New York, NY: Plenum Press.

Hayes, S. C., Barnes-Holmes, D., & Wilson, K. G. (2012). Contextual behavioral science: Creating a science more adequate to the challenge of the human condition. *Journal of Contextual Behavioral Science*, *1*, 1–16.

Hayes, S. C., & Brownstein, A. J. (1986). Mentalism, behavior-behavior relations and a behavior analytic view of the purposes of science. *The Behavior Analyst*, *9*, 175–190.

Hayes, S. C., & Follette, W. C. (1992). Can functional analysis provide a substitute for syndromal classification? *Behavioral Assessment*, *14*, 345–365.

Hayes, S. C., Luoma, J., Bond, F., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes, and outcomes. *Behaviour Research and Therapy*, *44*, 1–25.

Maitland, D. W. M., & Gaynor, S. T. (2012). Promoting efficacy research on functional analytic psychotherapy. *International Journal of Behavioral Consultation and Therapy*, *7*, 63–71.

Moore, J. (1980). On behaviorism and private events. *The Psychological Record*, *30*, 459–475.

Skinner, B. F. (1945). The operational analysis of psychological terms. *Psychological Review*, *52*, 270–276.

Skinner, B. F. (1953). *Science and human behavior*. Oxford, UK: Macmillan.

Tsai, M., Kohlenberg, R. J., Kanter, J. W., Kohlenberg, B., Follette, W. C., & Callaghan, G. M. (Eds.). (2009). *A guide to functional analytic psychotherapy: Using awareness, courage, love and behaviorism*. New York, NY: Springer.

Weeks, C. E., Kanter, J. W., Bonow, J. T., Landes, S. J., & Busch, A. M. (2012). Translating the theoretical into practical: A logical framework of functional analytic psychotherapy interactions for research, training and clinical purposes. *Behavior Modification*, *36*, 87–119.

Wilson, D. S. (2012). Consilience: Making contextual behavioral science part of the united ivory archipelago. *Journal of Contextual Behavioral Science*, *1*, 39–42.

Please cite this article as: Kanter, J. W., et al. Where is the love? Contextual behavioral science and behavior analysis. *Journal of Contextual Behavioral Science* (2014), http://dx.doi.org/10.1016/j.jcbs.2014.02.001