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The Dimensions of Clinical Behavior Analysis

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In most talk therapies for outpatient adults, the therapist has no control over the client's daily life or contingencies outside the treatment session. The fundamental theoretical issue facing the behavior analyst is, "How can the talking that goes on during the session help the client with problems that occur outside the session in the client's daily life?" An historical analysis and the application of verbal behavior principles are used to answer the question and form the basis of clinical behavior analysis (CBA). The implications of CBA range from providing a theoretical base for psychotherapy to suggesting new forms of treatment.
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The following situation occurs innumerable times each day. Two people sit in an office and talk to each other. One, the client, says he or she is there due to unhappiness and problems in daily life. The client voluntarily comes on a regular basis to participate in these discussions and pays for the time of the other discussant. The other discussant, the therapist, does not observe the client outside the one or two weekly 50-min therapy sessions, and furthermore, has not control of the events that occur in the client's day-to-day environment. Nevertheless, the process, which is referred to as outpatient adult psychotherapy or behavior therapy (BT), is supposed to help the client in his or her daily life.

The fundamental theoretical issue facing the behavior analyst is, "How can the talking that goes on during the session help the client with problems that occur outside the session in the client's daily life?" For convenience, we will refer to this issue as the "talk therapy question." The manner in which the question is answered is important because it has implications for the methods and form of psychotherapeutic practice.[1]

The conceptual foundations of a behavior-analytic approach to psychotherapy were laid by Skinner (1953, 1957) and Ferster (1972a, 1972b). Notwithstanding this early groundwork, behavior analysts have said little about the topic since then, and as a result have had virtually no influence on the present practices of most psychotherapists and behavior therapists. Only recently have radical behaviorists continued Skinner's and Ferster's early work by beginning to address the fundamental issues of adult outpatient psychotherapy (Glenn, 1983; Hamilton, 1988; Hayes, 1987; R. Kohlenberg & Tsai, 1991). Because of these recent endeavors on the part of behavior analysts, termed *clinical behavior analysis* (CBA), we are now in a position to offer unique and important conceptual contributions to the field of psychotherapy.

As a means of explicating CBA, we will

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[1] We use the term *psychotherapy* to refer to outpatient therapy for adults that involves a primarily verbal interchange. We use the term *behavior therapy* to refer to a form of psychotherapy, verbal in nature, that was originally based on learning principles.

first discuss the historical factors responsible for the hiatus in development that occurred between the early work of Skinner and Ferster and the present time. As it turns out, the historical factors responsible for the absence of behavior-analytic influences on talk therapy are also responsible for the development of behavior therapy in its current form. In particular, we will describe how behavior analysis went from playing a central role in the origins of behavior therapy to its nearly complete exclusion today. We will then describe how CBA approaches the talk therapy problem and how it adds to the conceptual basis of current BT practice.

HISTORY OF BEHAVIOR THERAPY[2]

Present-day behavioral approaches to outpatient psychotherapy or BT evolved from early attempts to apply respondent and operant conditioning principles developed in the animal laboratory to human behavior. Examples include Watson and Rayner's (1920) "little Albert" and Fuller's operantly shaped arm movements using a sugar-milk solution in a "vegetative idiot" in 1940 (Krasner, 1982; Lutzker & Martin, 1981). Then, in the 1960s, there was a virtual explosion of research examining behavior-change techniques based upon operant principles (e.g., Ayllon & Azrin, 1965; O'Leary & Becker, 1967; Wolf, Risley, & Mees, 1964). In all these cases, the focus was on actual within-session occurrences of the client's problematic behavior (e.g., head banging, math problems, tics, mutism, avoidance of bunny rabbits, towel hoarding) and how the therapist's within-session actions (e.g., applications of reinforcement and punishment, shaping, exposure to feared stimuli) produced behavior change during the session. At this early stage, behavior analysis was a foundation of behavior therapy and thus would have been expected to continue to be important in its evolution. One of the factors that foiled this expectation concerned the relation between the client's problems in daily life and the behavior observed in the treatment session.

In many cases, the problem of how treatment was related to the client's daily life was obviated by the fact that the treatment took place in the same environment in which the problem occurred (e.g., the hospital ward, the school, or the home of a child). In other cases, transfer to the outside world was a discrimination problem to be solved by instituting procedures to produce generalization (e.g., training teachers or parents, making the training environment more similar to real life). In all of these early cases, however, the problematic behavior and its environmental context were directly observed and manipulated during the treatment session. As long as the clinical populations included residents of hospitals, students in classrooms, and young or severely disturbed children, the relationship between the effects of within-session treatment applied to within-session behavior and the client's daily life was straightforward and was thus a non-issue. Correspondingly, the application of behavior-analytic theory was straightforward and permeated behavior therapy practice.

Pragmatic and theoretical problems did arise, however, when the behavioral treatments were extended to the treatment of outpatient adults. These clients presented complex issues (such as having "difficulties in intimate relationships") that were presumed not to occur in the office where it could be directly observed and reinforced or reconditioned. These issues were problematic for two reasons. First, the behavioral treatments that had been developed required within-session observation of the problem behavior and the within-session application of the treatments (contingencies) to change that behavior. Second, most of what seemed to happen in the session was a lot of talking, and at this early stage, behavior-analytic conceptions or techniques that could be applied to complex verbal behavior were not relevant. Thus, the treatment of outpatient adults was a conun-

[2] This history section is based on an unpublished paper by Barbara S. Kohlenberg.

drum for radical behaviorists who wished to do applied work with adults in the psychotherapy environment.

This dilemma was resolved by behaviorists in at least two ways. The first was simply not to work with adult outpatients and instead concentrate efforts on perfecting and developing procedures to use with populations whose behavior could be directly observed and reinforced. The only verbal behaviors that were targeted were simple verbal responses such as tacting simple objects (e.g., "nose," "my nose," and "your nose") for individuals with severely limited verbal repertoires. This solution led to present-day applied behavior analysis.

The second solution involved misguided and unsophisticated attempts to use behavioral principles with outpatients adults. These were inadequate in at least two ways. First, they were not effective (R. Kohlenberg, Tsai, & B. Kohlenberg, in press). The lack of effectiveness was obvious in those cases in which clinical relevance was ignored (e.g., the study by Reisinger, 1972, in which tokens for smiling and fines for crying were used to treat a depressed client). However, even well-researched and widely accepted methods, such as Wolpe's (1958) treatment for phobia, have been found to have limited effectiveness (Barlow, 1981). Second, they were theoretically compromised. In particular, the contextualistic, functionalistic, and idiographic nature of radical behaviorism was lost. Because it was not generally recognized that radical behaviorism was misapplied in this early work, it was mistakenly identified as the problem and was eventually abandoned by behavior therapists as a viable option for dealing with complex outpatient problems. The rejection of radical behaviorism in the analysis of the talk therapy problem led to present-day behavior therapy and the cognitive "revolution."

An early example of this second solution to the talk therapy problem was developed by Wolpe (1958), who treated imagined stimuli as though they were equivalent to daily life stimuli. In this tradition, other therapy models (e.g., covert reinforcement, Cautela, 1970; cf. Dougher, Crossen, & Garland, 1986) relied on imagery not only to bring the client's problem behaviors into the session but to submit them to consequences. The uncritical and imprecise extension of behavioral conceptions used in these approaches contained the seeds that led to the abandonment of behavior analysis in BT. In particular, the contextual and verbal nature of the client's presenting problems was ignored. That is, client behaviors—such as identifying certain thoughts and feelings as problems that need to be changed, seeking help in this way (seeing a therapist), imagining and following instructions to imagine, or how imagination results in behavior change—were not analyzed.

Similarly, social skills training was another behavior therapy technique that seemingly dealt with the talk therapy problem in behavioral terms but that theoretically compromised behavior-analytic principles and contributed to its abandonment. In social skills training, the client's problems and improvements were ostensibly brought into the session by role playing, acting, and rehearsal. Such training rarely involves the direct observation of symptoms or the conditions that bring them about, and therefore it is difficult to describe the specific components of the target behavior (Ciminero, Calhoun, & Adams, 1977; Conger & Conger, 1982). This approach epitomized the underlying structuralistic assumption of present-day behavior therapy that behavior has meaning independent of context. This assumption is in direct contrast to the functionalistic assumption of behavior analysis that behavior acquired via coaching, modeling, role playing, and behavioral rehearsal during the session is functionally different from the behavior that occurs in daily life, even though it might look exactly the same.

An allusion to this problem can be found in a review of the literature on the generalization of social skills training by Scott, Himadi, and Keane (1983). They concluded that lack of demonstrable generalization is responsible for the limited acceptability of this procedure as a viable

treatment. From a functional viewpoint, the lack of functional similarity between training and natural environments that typifies social skills training provides no guarantee that trained behavior will transfer. Instead, explanations are needed to account for those instances in which it does.

The most far-reaching solution to the talk therapy problem involved the proposition that faulty cognition was the cause of the client's problem. According to this view, therapy could then be directed at the dysfunctional cognition that, as part of the mental apparatus existing within the client, was present in the therapist's office. Unfortunately, most behavior therapists embraced the view that cognition is something other than behavior (e.g., schemata, core structures), thereby completed the break with behaviorism.

CLINICAL BEHAVIOR ANALYSIS

We have argued that current behavior therapy and its rejection of radical behaviorism occurred because (a) the behavioral approach required within-session occurrence of the problematic behavior, and (b) early behavior therapists assumed that adult outpatients had problems in their daily lives that did not directly occur in the therapy session. The acceptance of (b) logically precluded a radical behavioral approach to adult outpatient psychotherapy. In disagreement with (b) above, CBA is based on the assumption that problems of daily life can and do occur in the session. This assumption has the following implications.

First, if the client's problematic behaviors occur in the presence of the therapist, then they can be directly observed. Direct observation, in turn, facilitates processes such as specification of the problem, quantification, and reinforcement, all of which are important to the behavior-analytic approach. It also provides an optimal opportunity to shape the client's clinically relevant behaviors directly.

Second, the occurrence of the client's problems in the therapy context is relevant to the issue of how treatment effects generalize to daily life. Historically, behavior analysts have accomplished transfer by delivering immediate reinforcement in the natural milieu (e.g., institutions, classrooms, and homes). Although it might appear that the psychotherapeutic session does not resemble the natural milieu, the occurrence of problems during the session is evidence for its functional similarity to daily life. That is, rather than looking at physical characteristics in order to determine whether therapy and daily life environments are similar, the environments are compared on the basis of the behavior they evoke. If they evoke the same behavior, then they are functionally similar. For example, a man whose presenting problem is hostility in close relationships would show that the therapy context is functionally similar to his daily environment if he becomes hostile toward the therapist as their relationship develops.

Within-Session Occurrences of Problematic Behavior

The behavior-analytic approach to psychotherapy thus focuses on the types of client problems that can occur within the context of the psychotherapy session. Rather than formally identifying classes of problematic behavior, clinical behavior analysts have discussed several psychotherapeutic contexts for problematic behavior (e.g., S. Hayes, 1987; R. Kohlenberg & Tsai, 1991).

Having problems and asking for help. The first of these is simply the context of seeking help from a therapist, which, by definition, is characteristic of all adult outpatient clients. CBA leads to a focus on the reinforcement history that brings a client to ask for help and to identify certain behaviors as "the problem."

From a behavior-analytic standpoint, the "asking for help" itself is seen as a behavior that needs to be accounted for (Dougher, in press-b; S. Hayes, 1987; R. Kohlenberg & Tsai, 1991; R. Kohlenberg, Tsai, & B. Kohlenberg, in press). Although there are probably as many different kinds of reinforcement histories relevant to the "asking for help" as there

are clients, we will describe several types that serve to illustrate the implications of CBA. For each of these cases, we can assume there is a distressing problem in daily life.

First, there are clients for whom asking for help with a particular problem in the past has been reinforced by actually being helped with that problem. This history probably involved childhood experiences with parents who were good at providing help when asked; later similar experiences with doctors, ministers, and friends would also be relevant. In asking for help, the client acts toward the psychotherapist in a manner that resembles similar past relationships; thus, it is a social interaction and one aspect of the therapist–client relationship. We will term this type of history the "face-value" history.

In contrast to this analysis, present-day behavior therapists are not inclined to pay much attention to the client's asking for help as a behavior to be analyzed or to the therapist–client relationship as a central issue. Thus, the asking is probably not considered in terms of its history, or as a social interaction, or as a behavior that reflects experiences in past relationships. Instead, behavior therapists tend to assume a face value history and do not see the asking as an important aspect of the therapist–client relationship.

Second, in contrast to the face-value history, there are clients whose asking for help for one problem has been reinforced in the past by the avoidance of other, unrelated negative situations or is used as a means to discover what they really want. In this case, the problem presented to the therapist is not the client's most important problem. For example, a client who is asking for help in saving his or her marriage may actually want to end the marriage and may not even be able to admit that to himself or herself. Another example is a client who asks for help with agoraphobia but who has learned to accept the phobic response and is instead asking for help in order to stop a spouse from pressuring him or her to go into feared places or to avoid conflict in the relationship. In these cases, the verbal behavior of asking for help for a particular problem cannot be taken at face value. These clients do need help, but not for the problem presented. The inclination of behavior therapists to avoid viewing the asking as a verbal behavior to be analyzed may have deleterious effects. The treatment interventions selected are not likely to be appropriate, and improvement will probably be minimal.

Third, another type of non-face-value history may result in the client asking for help in order to obtain the attention and caring of the therapist. Histories leading to this kind of asking for help involve parents or other caretakers who gave attention and care only when the client was dysfunctional and requested help. The client continues to approach relationships, including the client–therapist relationship, in this manner. These clients are sometimes known as dependent personalities whose problems involve an overreliance on others. Their presenting symptoms, such as depression or anxiety, are only indirectly related to their main problem. The within-session behavior of the client is thus an instance of his or her problems in daily life. In this instance, the behavior therapist may inadvertently strengthen the problematic behavior if he or she fails to view (a) the asking as a behavior to be analyzed and (b) the client–therapist relationship as having stimulus properties that evoke the same behavior that occurs in other problematic relationships.

Fourth, clients may ask for help because they do not believe that they fit the culture's definition of a "well-adjusted" individual. As portrayed in the popular media and communicated more indirectly in the culture at large, well-adjusted people simply do not have certain thoughts and feelings. These thoughts include self-doubts, self-criticisms, wishing ill toward others, apparently irrational associations, confusion about how to act with others or how to act in intimate situations, uncertainty about what to do for a living, or the meaning and purpose of their lives. These feelings include sadness, anxiety, guilt, despair, hopelessness, helplessness, frustration, anger, and

boredom. Well-adjusted people, on the other hand, supposedly are confident, certain, happy, socially adept, independent, widely competent, and free of debilitating and distressing thoughts, feelings, and actions. Contributing to clients' beliefs about mental health and what constitutes psychological problems is the mental health profession in general. Disorders are often defined by the presence of negative thoughts, feelings, and behaviors.

Fifth, clients may assume a mechanistic view of their problem, in which thoughts and feelings have causal roles. In these cases they report, for example, that they cannot engage in intimate relationships *because* they are afraid of getting rejected, or they cannot get out of bed *because* they are too depressed (see Zettle & S. Hayes, 1982, for an extended discussion of this issue). The client then seeks help from a therapist to get rid of the dysfunctional causal private event in much the same way that patients go to dentist to have a diseased tooth repaired. The problem with attributing causal status to the feeling is that it may direct attention away from the factors that are responsible for both the inclination to overt behavior as well as the private event. A behavior-analytic alternative is to help the client see thoughts and feelings as behavior evoked by the context of their lives. As such, the thoughts and feelings need not always be altered in order to achieve significant clinical change. This alternative is at the heart of some recent work falling under the general rubric of "emotional acceptance." The approach, which because of space limitations cannot be fully described here (for a more thorough discussion of acceptance and its use in various clinical contexts see Dougher, in press-a; S. Hayes, 1987; Jacobson, in press; Linehan, 1993), essentially involves the acceptance of or allowing of thoughts and feelings as they occur with no attempt to control them. Rather than attempting to control or to modify private events, the therapeutic work focuses on helping clients clarify, articulate, and pursue the experiences and objectives that enrich and give meaning to their lives.

Although CBA incorporates a noncausal view of feelings, they certainly are not ignored in the therapeutic process. S. Hayes (1987) encourages clients to begin deliberately experiencing feelings that previously were avoided. R. Kohlenberg and Tsai (1991) emphasize that feelings are the collateral product of environmental causes that nevertheless often play central roles in interpersonal problems and the change process. For one, Kohlenberg and Tsai describe the operant and respondent behaviors relevant to "expressing feelings" and their importance for the development and maintenance of intimate relationships. Kohlenberg and Tsai also show how avoidance of feeling can lead to diminished contact with the environment, which in turn can lead to the clinical problems associated with reduced long-term positive reinforcement density. Based on such considerations, Kohlenberg and Tsai designed a therapeutic environment that evokes, shapes, and reinforces feeling and its expression.

The evocative interaction. As we described earlier, the therapy setting is defined by two people who come together to talk about the problems of one of the discussants. By its very nature, the therapy setting is an interpersonal context that requires intimacy, disclosure, trust, and honesty; therefore, it carries with it all of the stimuli associated with evaluation, rejection, and social punishment. One might reasonably assume that within-session instances of the client's problematic behaviors are almost certain to appear in this context. In fact, this context might be almost perfect to observe directly those behaviors that are most clinically relevant for an individual client. Psychoanalytically oriented therapists refer to this set of behaviors as transference, and in fact, one readily sees clients emitting clinically relevant behaviors, especially when the client's major issues are interpersonal. Examples include:

1. A client whose problem is that she has no friends and "does not know how to make friends" exhibits these behaviors: avoids eye contact, answers questions by talking at length in an unfocused and tangential manner, has one "crisis" after another and demands to be taken

care of, gets angry at the therapist for not having all the answers, and frequently complains that the world "shits" on her and that she gets an unfair deal.

2. A man whose main problem is that he avoids getting into love relationships always decides ahead of time what he is going to talk about during the therapy hour, watches the clock so he can end precisely on time, states that he can only come to therapy every other week because of tight finances (he makes $40,000 a year), and cancels the next session after making an important self-disclosure.

3. A self-described "hermit" who would like to develop a close relationship has been in therapy for 3 years and continues to muse periodically that his therapist is only in this for the money and is secretly contemptuous of him.

4. A woman who has a pattern of getting into relationships with unattainable men develops a crush on her therapist.

5. A woman who has a history of people leaving her because they "get tired" of her introduces new and involved topics at the end of the hour, frequently threatens to kill herself, and shows up drunk at her therapist's house in the middle of the night.

6. A man suffering from speech anxiety "freezes up" and is unable to talk to his therapist during the session (see R. Kohlenberg & Tsai, 1991, for a more detailed discussion of the evocative properties of the client–therapist relationship).

Verbal Behavior and Clinical Practice

CBA draws upon verbal behavior theory and research as the basis for devising therapeutic interventions. In this section, we will discuss the most recent thinking by behavior analysts on how concepts of verbal behavior can be applied to psychotherapy.

Disguised or metaphorical communication. Multiple contingencies influencing what clients say during the therapy session. Presumably, clients want to communicate their problems and interact honestly with the therapist, but other factors, such as the social contingencies associated with punishment and multiple sources of stimulus control, might also be strong. As Skinner (1953, 1957) suggests, this is exactly the kind of situation that evokes disguised or metaphorical communication. That is, clients often speak metaphorically in therapy sessions, and their behavior requires some interpretation. In a case report on hidden meaning, CBA was used by R. Kohlenberg and Tsai (1993) to elucidate clinically important variables that were covertly influencing a client's statement.

Skinner's report of his interaction with the eminent mathematician and philosopher, Alfred North Whitehead, is relevant here. While still a graduate student at Harvard, Skinner took the opportunity to approach Whitehead while both were eating at the dining hall on campus. Skinner enthusiastically explained to Whitehead that he was developing a thorough science of behavior. Whitehead responded that he doubted that verbal behavior could be accounted for scientifically because the virtually infinite number of possible combinations of words make it appear indeterminate. He challenged Skinner to account for his saying something like, "There is no black scorpion falling at this table." As is well known to most behavior analysts, Skinner interpreted the black scorpion as a metaphor for behaviorism and concluded that Whitehead was metaphorically rejecting his thesis (Skinner, 1957, pp. 456–460).

The clinical usefulness of interpreting the metaphorical communication of clients was driven home to the third author while on clinical internship. He was seeing a client who came to treatment complaining of low self-esteem, feelings of inadequacy and inferiority, and debilitating interpersonal anxiety. The therapist confidently and reassuringly explained to the client that her reactions were the result of her conditioning history, and he proceeded to explain to her the behavioral processes that likely had led to her problems. The client listened attentively and nodded knowingly throughout. After the lecture, the client went on to describe her childhood and mentioned an uncle who used to visit her family periodically. The uncle was a uni-

versity professor who was prone to lecture the family at great length on various topics. She went on to say that although his lectures were sometimes interesting, nobody understood much of what the professor had to say, and he was generally perceived to be rather uncomfortable and distant in social situations. He also tended to intensify the client's feelings of inferiority. In response to this story, the therapist stopped the academic explanations of the client's behavior. The client in turn appeared less anxious and became more willing to talk about delicate matters. The implication here is that the client's behavior in the therapy session has to be observed for its clinical relevance and interpreted in line with the contingencies of reinforcement operating in that context.

Rule-governed behavior and equivalence classes. Recent work on the general issue of how verbal stimuli influence what we do is also clearly relevant to the "talk therapy issue." Although behavior analysts have termed this type of behavioral control *rule-governed behavior,* the process by which verbal stimuli come to control behavior is not at all clear and has only recently generated systematic investigation (Blakely & Schlinger, 1987; Catania, Matthews, & Shimoff, 1990; Cerutti, 1989; S. Hayes & L. Hayes, 1989, 1992; Schlinger, 1993; Zettle & S. Hayes, 1982). Nevertheless, rule governance is relevant to CBA because it very likely plays an important role in the etiology of clinical problems and the process by which the verbal behavior that occurs within sessions influences the client's behavior outside the session.

A common observation in clinical settings is that when clients come to treatment they often bring with them a rather elaborate and rigid rule-governed repertoire. Rule-governed behavior seems relatively insensitive to changing contingencies (Catania et al., 1990; Zettle & S. Hayes, 1982), and thus leaves clients with inflexible and often ineffective ways of interacting with the world. As an example, a client who was seen by one of the present authors came to treatment complaining that she had great difficulty in meeting other people and maintaining relationships. As the therapy developed, it became clear that the client was given to suspicion and temper outbursts, and that she had a fundamental distrust of others. It was difficult for her even to drive around town without becoming enraged. For example, she often engaged in verbal confrontations with other drivers who she felt were not strictly adhering to the rules of the road. She believed that these people were trying to take advantage of her and that she had to stand up for herself or her situation would get out of control. Further into the therapy, the client recalled that her father often warned her that other people cannot be trusted and will take advantage of any opportunity to exploit her. Moreover, she reported that he told her repeatedly that being taken advantage of means that you are a fool. Her father's rules exerted a good deal of control over this client's behavior, even though they often resulted in aversive interpersonal consequences.

Given that rule governance is important to clinical behavior analysis, the question remains as to precisely how verbal stimuli exert control over behavior. One line of thought is that verbal stimuli acquire their function by their participation in equivalence classes (S. Hayes & L. Hayes, 1992; Sidman, Wynne, Maguire, & Barnes, 1989). In particular, laboratory research has demonstrated that once stimuli enter into equivalence classes, they automatically acquire the functions of the other members of the class (e.g., Gatch & Osborne, 1989; Green, Sigurdardottir, & Saunders, 1991; S. Hayes, B. Kohlenberg, & L. Hayes, 1991; B. Kohlenberg, S. Hayes, & L. Hayes, 1991; Lazar, 1977; Lazar & Kotlarchyk, 1986; Wulfert & S. Hayes, 1988). In this way, verbal stimuli become equivalent to the stimuli or events for which they stand and influence behavior accordingly. An example from the laboratory illustrates this process. After establishing three three-member equivalence classes, Augustson and Dougher (1992) selected one member from one class and paired it with an aversive stimulus in a Pavlovian conditioning paradigm until it reliably elic-

ited a skin conductance response. The authors found that this fear-eliciting function spread to the other members of the class, even though none of the other members had been paired with the aversive stimulus. As Sidman et al. (1989) have suggested, a primary function of equivalence classes might be to transfer behavioral functions to other members of the class in the absence of direct training. If verbal stimuli become equivalent to nonverbal stimuli with existing functions, then we can understand the behavioral effects of rules as an instance of transfer of function across equivalence classes.

The influence of our own verbal behavior on subsequent behavior. The CBA approach to the relation between our own verbal behavior and its influence on subsequent behavior (known in BT as the "thought–behavior relationship") offers an alternative to cognitive therapy. Consistent with Skinner's analysis (see Skinner, 1957, p. 444), R. Kohlenberg and Tsai (1991) propose that thoughts can be viewed as rules (such as tacts or mands) to oneself that initially occur due to variables that are similarly responsible for their overt forms, including their participation in equivalence classes (S. Hayes & Brownstein, 1986). According to this model, these responses have influences that lie on a continuum in which our own private verbal behavior contributes extensively, contributes partially, or does not contribute at all to subsequent behavior.

In the case in which the clinical problem is influenced by one's own prior verbal behavior (i.e., when we say something about the world and then act accordingly), we are said to be under the control of self-rules. This analysis opens the door in turn to a discussion of what it means to believe. To the extent that verbal stimuli share the functions of events with which they share an equivalence relation, we can be said to believe them. Thus, to the extent that clients act in accord with their verbalizations about the world and themselves, they can be said to believe their verbalizations. If a client says, "I am self-critical; there must be something wrong with me," and then acts in accord with that statement, the client believes that statement. That is, the statement engenders feelings of depression and may lead the client to avoid social situations and to seek professional help. Moreover, the statement itself has derived implications. That is, the statement is likely to lead to other statements and behavior through intraverbal processes. This intraverbal chain can become quite debilitating, as can be seen in the downward spiral commonly observed with depressives.

In other cases, the client's prior verbal behavior (including thoughts) may appear to be influential but in reality may have little effect on clinical problems. For example, a client with a problem of avoiding intimate relationships might say, "I've got to get out of here" or "this is dangerous," immediately before such avoidance takes place. The prior verbal behavior was possibly evoked by the same conditions that evoked the avoidance and may simply be a correlate of the avoidance. The fact that the thought precedes the problematic behavior adds to the mistaken conclusion that a causal relation exists. In this case, R. Kohlenberg and Tsai (1991) suggest that the avoidance may be primarily contingency shaped and is best treated by corrective experiences during the therapy session in which avoidance is blocked and intimate relating to the therapist is reinforced.

Although the CBA approach to the relationship between prior verbal behavior and subsequent clinical problems accommodates cognitive therapy techniques, it emphasizes the importance of verbal processes such as rule governance and stimulus equivalence as well as contingencies of reinforcement in planning therapeutic interventions.

The classification of client utterances. Clinical behavior analysts have also explored the use of Skinner's *Verbal Behavior* as the basis for classifying client utterances. Glenn (1983) applied Skinner's approach to several kinds of maladaptive behaviors that are presented clinically. These include lying, denial, and poor observing skills that were related to

defective tacting repertoires. Demanding and manipulative behaviors were viewed as mands that result in short-term gains at the expense of long-term aversive consequences. Glenn examined the variables that enter into these maladaptive functional relations.

Hamilton (1988) looked at verbal behavior concepts as offering an integrative view of the psychotherapeutic process. According to Hamilton, a behavior-analytic conceptualization of the role of verbal behavior leads to a focus during treatment on the discriminative functions of verbal behavior. R. Kohlenberg and Tsai (1991) devised a classification system that is designed to aid therapists in maintaining a contextual view of their clients' responses. This system helps to identify controlling variables and within-session instances of problematic behavior. Kohlenberg and Tsai also suggest that the reinforcement of verbal behavior under the control of within-session discriminative stimuli and direct mands often leads to therapeutic gains.

Implications of CBA for Behavior Therapy

The CBA concept of psychotherapy and its consideration of the context in which the client seeks help have much to offer behavior therapy. First, it provides a unifying theoretical background that can accommodate the traditional methods used by behavior therapists as well as the procedures of cognitive therapy (R. Kohlenberg, Tsai, & B. Kohlenberg, in press). Along these lines, because CBA embraces a broad range of therapeutic methods ranging from the interpretation of hidden meaning to emotional acceptance, it also offers a theoretical basis for the integration of psychotherapy in general, which is increasingly being called for by researchers in the field (e.g., Messer, 1986). Second, a consideration of the psychotherapy environment as a context for client behavior leads the behavior therapist into a more complete consideration of the therapist–client relationship. The neglect of the therapeutic relationship has been increasingly lamented by behavior therapists (e.g., Goldfried & Davison, 1976; Safran, 1990). Third, CBA leads the behavior therapist to considerations of the larger context and the influence of cultural values on the identification of clinical problems. Fourth, CBA leads to new avenues of treatment such as acceptance (as opposed to behavior change) and nondirective, in-depth, emotionally based methods (e.g., Dougher, in press-a; S. Hayes, 1987; Jacobson, 1992; R. Kohlenberg, S. Hayes, & Tsai, 1993; Linehan, 1993). Fifth, it can expand the types of client problems that are suitable for behavior therapy. CBA has been applied to difficult clients (S. Hayes, 1987), and problems of the self, such as multiple personality, narcissistic personality disorder, and self-identity problems (R. Kohlenberg & Tsai, 1991), which have traditionally been difficult to describe in cognitive behavioral terms, can be included.

SUMMARY AND CONCLUSIONS

This paper began with the question of how the behavior analyst can answer the question, "How can the talking that goes on during the session help the client with problems that occur outside the session in the client's daily life?" We have proposed that the very definition of CBA is the answer to the question. We have suggested first that the talking that occurs in treatment sessions should be viewed in the larger context of the culture and the client's reinforcement history. Second, we have suggested that the talking is important verbal behavior that can have significant influence on clinical problems through its participation in equivalence classes. Third, we have suggested that the talking occurs in the context of the client–therapist interaction in which the therapist has an opportunity to evoke, observe, and change clinically relevant behaviors as they occur. Because CBA is a relatively recent endeavor and has focused mainly on conceptual analyses, few empirical studies are available at this time. The available data come mainly from Hayes and colleagues and are promising (S. Hayes, Afari, McCurry, & Wil-

son, 1990; Khorakiwala, 1991; McCurry, 1991; Zettle, 1984; Zettle & Raines, 1989). As additional functional analyses and data are generated, we expect that the definition, scope, and influence of CBA will evolve and expand.

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