

# Do As I Do, Not As I Say: A Behavior-Analytic Approach to Supervision

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There is a limited amount of empirical data on how to train therapists. This article first presents *limitations in commonly used training procedures*. It then describes a training methodology based on contingent shaping, using video feedback to increase responsiveness to the ongoing client-therapist interactions. The approach attempts to overcome some of the problems encountered when teaching therapy by using primarily rule-governed or direct instruction. The authors describe the therapeutic approach used in this research, provide a clinical illustration of the training procedure, and discuss the role direct instruction plays in this training model. A methodology for determining whether the therapist's behavior changes as a result of training is described, as well as a method for identifying the relationship between the therapist's behavior and subsequent changes in client responding. This methodology is broadly applicable and can be empirically tested and compared with other approaches for its utility in training therapist effectiveness and changing client behavior.

The training and development of therapists is one of the primary goals of many clinical psychology doctoral programs. Although there is considerable theoretical writing on the supervision process (e.g., Greben & Ruskin, 1994; Hess, 1980), there is less empirical literature that addresses the evaluation of existing supervision theories (Borders, 1989). Much of the writing about supervision takes a descriptive developmental approach to characterizing what supervisees need and want at different points in their training. A recent review on training effective supervisors described the characteristics of supervisors who are liked by supervisees (Russell & Petrie, 1994) but did not describe any empirical data on what information should be taught, how it should be taught, whether the teaching actually affects supervisee behavior in session, or how the client's behavior changes in response to supervisee growth.

Using a radical behavioral perspective, this article describes one view of what should be taught, proposes a method of super-

vision to accomplish those goals that has advantages over existing methods, and describes procedures that allow one to assess changes in therapist behavior and subsequent change in client problem behaviors. We cannot do justice to the variety of perspectives on the supervision process in this article and do not suggest that, for example, psychodynamic or client-centered supervision would value the same goals and procedures, though in principle these methods are applicable to a variety of theoretical paradigms should researchers wish to adapt them.

In describing how to train and supervise behavior therapists, Strosahl and Jacobson (1986) pointed out the importance of having theory guide the process of treatment. Specific techniques were discussed from a coherent analytic system that the supervisor teaches to the therapist, often didactically. Occasionally the authors made references to the importance of having the therapist remain sensitive to changing contingencies in the therapeutic interaction. However, these references were fleeting, and no specific methods were proposed for teaching therapists to identify and be sensitive to (i.e., be influenced by) changes as they occur in session. When Strosahl and Jacobson commented on the therapist being attentive to important client behavior, discussion focused on how to add these changes into the existing agenda for the session. Although the position that Strosahl and Jacobson took with regard to the importance of theory was reasonable, the approach taken to supervision relied primarily on rule giving in the form of direct instruction. This is a common supervision practice. We believe, though, that there is an alternative approach that merits consideration.

This article first describes some limitations resulting from commonly used training procedures. Then, using a contingent shaping approach to therapy and training that takes advantage of behavioral principles, we describe a new methodology and corresponding goals for training therapists in a way that promotes maximum flexibility of the therapist during a treatment session. We then briefly describe the therapeutic approach used in this research, provide a clinical illustration of this type of training, and discuss the role of direct instruction in the training

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of behavior therapists. We also discuss a methodology for determining whether the therapist's behavior changes as a result of this approach, as well as a method for identifying the relationship between the therapist's behavior and changes the client shows in response.

A supervisor of behavior therapists in training has the goal of establishing a set of conditions in courses and supervision that will help the therapist adopt a particular philosophy of behavior and behavior change, learn to apply a distinct set of basic principles, and develop the ability to apply an analytic method to understanding behavior problems *in vivo*. Thus, behavior therapists should be able to functionally analyze client problems, apply behavioral principles to those problems, and provide a theoretically driven rationale for how treatment of those problems will occur using these principles.

Although behavior therapy is generally cited and regarded as an effective form of therapy (e.g., Barlow, 1993), the typical approach to teaching it is to provide direction to the therapist in the form of instruction. That is, verbal descriptions for how to behave (e.g., what to say and do) are often given to trainees in the form of face-to-face supervision or a treatment manual. In behavior therapy outcome studies, treatment integrity is often tested by an identification of techniques performed in a given session or by a checklist of tasks to be completed during that session (Kazdin, 1992).

However, as those readers who have conducted supervision realize, giving direct instructions to the therapist can often produce rigid, rule-governed behavior where the therapist assiduously follows the supervisor's agenda regardless of what new problems may emerge in the next session. Such rigidity is not entirely the fault of the therapist. Instead, it is a rather predictable consequence of supervisors giving rules during supervision and then experiencing the disadvantages of using such a training approach. Studies such as that by Hayes, Brownstein, Zettle, Rosenfarb, and Korn (1986) have shown that when people rely on rules to understand consequences, they become insensitive to actual changes in these consequences. In the case of learning therapy, rule following can interfere with attending to what is actually occurring in the room during the session and how to respond to the contingencies as they change.

Supervisors often face the problem of getting beginning therapists to pay attention to what is going on in session between them and the client rather than force an agenda on the client. This might be referred to as keeping the therapist "in the moment." By "in the moment" we mean that the therapist is being sensitive to the changing interactions and conditions as they occur in a particular treatment session. In this way, being in the moment means that the therapist is responding appropriately to the client given the evolving interaction. Part of what keeps therapists from closely attending on ongoing interactions is being distracted by making sure they are accomplishing all the tasks set forth in the last supervision session, that is, obeying the rules.

### Problems With Teaching Rules

During the past 3 years, William Follette has been conducting research investigating the limitations of rule-governed behavior

and developing a methodology to use contingency-based shaping of complex social behavior. This work has primarily focused on analyzing the acquisition of effective social behavior with significantly impaired clinical populations consisting of persons with schizophrenia and depression, but the principles can be applied to a wide variety of training situations. Briefly, the problem of teaching effective social behavior has been a largely unsuccessful endeavor when one tries to teach people what the form of rules for complex social behavior are supposed to be. Teaching someone a complex social skill (such as therapy) using a strictly rule-governed approach presents at least the following problems.

First, it is difficult to assume that we even know and could specify an adequate set of rules to teach. Second, there are unique circumstances that imply unique rules. That is, even if we knew the rules, they would have all kinds of caveats depending on specific situations. We could consider these to be client variables, those stimulus properties that each client expresses. Third, not all people will necessarily use all of the same rules. This is most likely a function of the individual's reinforcement history for rule following. For the present discussion we can refer to these as therapist variables. Fourth, and here the picture begins to look dim, rules are often too complex to communicate and teach. Often the behavior that occurs in a social interaction is filled with very subtle contingencies. Responses are made to subtle environmental events that may be difficult to notice and many times impossible to specify. Fifth, therapy skills are most likely not learned merely through rules. The behavior of the therapist is also shaped by the natural contingencies that occur during any session. However, when rules are introduced as the sole or primary teaching instrument, there is often a decrease in the amount of responsiveness to the available environmental contingencies in favor of rule following.

This leads us to the last problem we will mention. Rules produce behavioral inflexibility (Hayes et al., 1986). Again, when a therapist is following a rule, as in the instruction given by the supervisor in our illustration above, the therapist's behavior is reinforced for following the rule (Skinner, 1957). This reinforcement is presumably a consequence of a process of generalized conditioned reinforcement, where the individual's rule-following behavior is, in fact, reinforced through praise from a historically reinforcing person. (The process by which rule-following occurs is not, however, the focus of the present article.) The point we are trying to illustrate is that when the supervisee is engaging in rule-following, he or she is at that time less sensitive to the current environmental stimulus functions that are occurring in the session; that is, the therapist is being less "in the moment." For efficient learning to occur, therapists should be sensitive to the consequences of his or her interactions with the client rather than solely following a proscribed agenda.

For those readers not convinced that the rules needed to teach therapy skills are sometimes unidentifiable, often pragmatically unteachable using current methods, and sometimes even counterproductive to the process, we will approach the issue from another angle. For the moment let's assume we could agree that there are 10 "rules for successful therapy."

If all that you had to do were these 10 things each and every time, teaching rules would be a viable training approach. The

problem is that one most likely cannot get away with simply doing 1 through 10 each and every session, and we quickly encounter an unsettling finding about the complexity of using rules. If it is not always appropriate to use all of the rules at a time, and one had to attend to all of the possible sets of rules, such as use Rules 1, 2, 4, 6 or use Rules 9 and 10 only, and so forth then there are 1,023 different combinations of rules that could be chosen and behaviors emitted.

The problem is even more complex, and the hope for using our set of rules even more bleak, if we decide that not only what rule or rules one selects matters but also the ordering of those rules (e.g., reflect before you self-disclose). In this case there are 9,864,100 permutations of all possible sets of rules. Clearly, this is an unmanageable load for the supervisor to try to teach to the supervisee, and the supervisee would have no hope of remembering that many combinations, much less permutations. In reality the list is probably much longer than 10 rules, making the problem even worse.

We need to point out that some types of rules actually are quite reasonable ways of instructing new therapists, but these rules are of a particular form. Rules about therapist actions that are universally true will generally cause no problems either mathematically or practically. For example, rules such as "always ask about suicidal ideation when a client reports increasingly depressed mood" or "never sleep with a client" are always valid and can be given quite freely to therapists. However, rules that fit this category usually do not describe the behavior of excellent therapists, but rather establish the minimal acceptable standards to the therapist. Rules that truly describe behaviors that therapists should always (or never) do can easily be recalled and followed.

We are not intending to present a strawperson argument here. It is reasonable to follow a treatment manual that has been shown to be effective. However, we suspect that most supervisors have had the experience of making a suggestion in supervision only to see it followed instead of pursuing a more clinically important event that occurs in the next session. We also know that supervisors engage in a host of other training techniques to get the therapist (and client) more in contact with the theoretically important features of the interaction. We are arguing what most people know: Telling therapists what to do is not very effective. What we now present is our theoretically derived alternative.

### A New Methodology: Contingent Shaping of Therapist Behavior

As we stated previously, it is our belief that complex social skills are taught not merely by a process of rule giving but by a process of having one's behaviors shaped by the contingencies that operate in any interaction. This applies to teaching therapy to supervisees. The remainder of this article will describe how training of therapists could occur by a process of shaping clinical skills contingently using a unique methodology.

In vivo feedback in the form of a "bug-in-the-ear" (e.g., Boylston & Tuma, 1972; Gallant & Thayer, 1989), a telephone call, or a knock-on-the-door-interruption in session (e.g., Storm & Richie, 1982) has been available for several years. Such ap-

proaches emphasize the utility of providing real-time supervision. The liability with those approaches is that supervision may result in giving direct instruction to the therapist that the therapist subsequently turns into a rule. The methodology we are developing has centered on providing in-session feedback that does not involve the giving of verbal rules or direct instruction.

The method we have developed can be described as "monitor-in-the-room" approach. This procedure provides visual feedback to the therapist in real time in the form of a rising and falling light bar. The supervisor sits behind a one-way mirror in an observation room watching the trainee conduct a session. Although the supervisor observes, he or she also rates the general effectiveness of the therapist using a joystick connected to a computer. The computer records the position of the joystick each second and relays the joystick position to a videomonitor in the therapy room. The monitor is located across from the therapist and behind the client.

The supervisor has been instructed to push the joystick forward in proportion to how effective he or she determines the therapist is being with the client and to pull the joystick back proportionally when the therapist is not being effective, perhaps having missed an opportunity to intervene. If the supervisor believes the therapist is being neither effective nor ineffective, but is simply having a neutral impact on the client, such as when gathering information, the supervisor is instructed to leave the joystick in the center position. These ratings are based on the information the supervisor is given about the case in consultation with the therapist and the goals of a given session.

Similarly, the therapist is instructed that the supervisor will give feedback in the form of a light bar displayed on the videomonitor. As the bar rises, the therapist is informed that what he or she is doing is being evaluated by the supervisor as increasingly effective therapeutically; as it falls, it is less effective. When the light bar remains in the neutral position, he or she is having a neutral impact. The therapist is instructed to conduct the session as he or she normally would, given the goals of therapy for that client and that session, but to notice the changes in the light bar position that occur when he or she chooses to do so. The therapist may decide to look at the light bar when he or she is unsure about how a particular choice was evaluated, or the therapist may periodically glance at it for general sorts of feedback. The therapist is also instructed to continue to notice the effect of what he or she is doing in session with respect to the interaction between the client and him or her. The therapist is to notice the effect he or she has on the client as it occurs, as well as the nonverbal contingent feedback received at that moment through the monitor.

### The Goals of Contingent Training

If the therapist attends to the visual feedback during sessions and learns to identify the conditions in the therapy situation that are associated with higher and lower ratings, two general goals can be achieved. First, therapists can learn to discriminate the occurrence of instances of elements in an important response class when they occur.<sup>1</sup> This can happen in real time and not by

<sup>1</sup>A *response class* is defined as a group of behaviors that are occasioned by similar stimulus conditions and have similar consequen-

post hoc instruction during later supervision. If the light bar descends in the absence of a therapist's behavior, it is likely that an intervention opportunity occurred and the therapist missed it. Thus, discrimination should improve over time. Complex discriminations are often better learned by pointing out multiple examples and letting the individual learn to form the category than to try to enumerate the features exhaustively (Catania, 1992, p. 345; Skinner, 1966).

The second goal is to provide external reinforcement to shape a therapist's responses to events that occur during a session. This is important for several reasons. It is crucial for therapists to be important providers of natural reinforcement for clients who are trying to act more constructively. However, teaching therapists to be genuinely supportive of the effort to improve while simultaneously being accurate about the quality of the attempted improvement is difficult. Shaping how to be naturally reinforcing, rather than arbitrarily, or worse, inappropriately reinforcing, can be accomplished by the supervisor directly (Ferster, 1967).

Another occasion where external reinforcement by the supervisor may be useful is when the appropriate behavior required of the therapist is to create a circumstance in therapy that will cause the client to feel distress or other negative affect. Therapists can be supported by the supervisor even though the immediate consequence supplied by the client may be aversive. For example, seeing a client crying or hearing talk about a very distressing subject may be difficult for the therapist. The contingencies in the therapy room would maintain talking about comfortable but not clinically important topics initially.

We are not trying to state that therapists will not generate their own rules at some point; no doubt they will. However, if they are still attempting to remain sensitive to the nonverbal contingencies in the form of the video feedback (being in the room), those rules may be more modifiable. That is, a therapist may develop a rule that sounds like, "When I do this (e.g., self-disclose), I get a positive rating." As we would predict from learning theory, the therapist will try to maximize the reinforcement for that behavior. Here is where rule-governance appears to become a potential problem. If the therapist applies the rule, "self-disclose whenever possible," he or she will not be responding to what is actually occurring in the session and will be a less effective therapist. He or she will be too busy trying to self-disclose to notice changes that occur in session. However, if the therapist remains sensitive to the light bar, if even perhaps to a lesser extent given the rule that has been generated, he or she will soon realize that self-disclosure does not *always* result in an increased or positive rating and may even result in a negative rating if the supervisor believes it to be inappropriate, excessive, or ineffective. The point is that therapists may, indeed, generate

their own rules, but remaining sensitive to the available nonverbal feedback may enable them to better select from their developing repertoire those behaviors that are most useful in a particular clinical situation.

As the contingent shaping process continues, therapists will have an increased repertoire of effective behaviors to choose from and will be more sensitive to their effects on the therapeutic interaction. Moreover, it is predicted that therapists will rely less over time on the video feedback as they come to notice that what they are doing is being effective with a particular client in achieving the evolving goals of therapy.

### The Behavior-Analytic Approach Used in This Research

In this article we describe a methodology that uses behavioral principles to address some shortcomings of traditional approaches to teaching therapy. Whereas the actual technique we describe makes sense from a behavior-analytic perspective, the problems we are addressing seem endemic to most models of teaching therapy, and many schools of therapy could find a way to incorporate these methods from their perspective.

To focus our discussions, we describe the training of behavior therapists in a therapy based on a radical behavioral analysis of psychotherapy called *functional analytic psychotherapy* (FAP), as described by Kohlenberg and Tsai (1991).

For the purpose of this article, there are some terms and ideas that are useful to understand. The training of FAP therapists involves teaching therapists to discriminate and respond to three types of events that occur in therapy. These three types of events are called *clinically relevant behaviors* or CRBs.

CRB1s are the first type of behavior to notice. They are the behaviors clients exhibit that contribute to the client's problems. They may be thought of as behavioral excesses, though such a definition can be a little misleading. An example may be that a client is too aggressive in situations where others are expressing a desire for change. Another example is that a client may show a tendency to avoid experiencing aversive emotions in such a way as to take the client out of contact with the consequences of his or her behavior, or the avoidance may be so pervasive as to limit the experience of pleasant affect as well. These are both CRB1s.

The second type of clinically relevant behavior FAP therapists must discriminate (CRB2s) are instances when clients exhibit low rates of useful behaviors. These are initially behavioral deficits either because the client does not have the appropriate behavior in his or her repertoire, or it is exhibited too infrequently. A simple example might be that the client lacks assertive skills or is too passive. FAP therapists must be able to discriminate instances of these desirable behaviors when they occur, even if the occurrence is inconvenient to the therapist. For example, a nonassertive client who wants to reschedule therapy for a time inconvenient to the therapist is emitting a CRB2, and this behavior should be reinforced.

CRB3s are instances when clients accurately identify and talk about a functional relationship between specific events and their own behavior. Examples include the identification of antecedents for CRB1s or CRB2s or consequences for each. Such functional talk differs from what might pass as insight in that

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ces. That is, behaviors are grouped together on the basis of how they function in the environment as opposed to what they look like. An example of a response class is "emotional avoidance behaviors." These are responses that, under similar circumstances, serve to prevent a person from contacting the consequences of having some kind of affect (often-times negative). Again, the behaviors in this class typically vary widely in their appearance or topography.

it describes controlling variables for the occurrence of specific behavior. The self-statement, "I'm just not a very expressive person" would *not* be a CRB3 because it defines no functional relationship between the world and being expressive. The statement, "When people confront me, I don't say anything because I might make them mad at me," is a CRB3 because it defines the behavior in the context of the conditions that give rise to it and the consequences that maintain the behavior.

When the therapist learns to recognize one of these CRBs, he or she must then make a therapeutic response. Another difficult thing for FAP therapists to learn is how to respond effectively (functionally) to these client behaviors. Briefly, therapists need to establish a meaningful relationship with the client so that the therapist's natural reactions function to strengthen CRB2s and decrease CRB1s.<sup>2</sup> When CRB3s occur, the therapist needs to reinforce such statements when they are accurate so the clients learn to better predict and control their own behavior.

An effective FAP therapist must be a significant mediator of social reinforcement; that is, the client must care about the therapist and how the therapist reacts to him or her. The therapist must also be able to form a caring relationship with the client so that he or she responds naturally and genuinely to the client and his or her attempts to change. For meaningful change to occur, the therapist must be a mediator of natural reinforcers for the client rather than merely providing arbitrary reinforcement. The distinction between natural and arbitrary reinforcement as described by Ferster (1967) is crucial to effective FAP therapy. Reinforcers are stimuli that function to increase or maintain higher rates of responding of a particular behavior. Natural reinforcers are those that occur in the natural environment and that could be supplied by anyone in that environment. Examples would include getting one's needs met after being assertive, or having someone reciprocate an emotional reaction when one has shared his or her own emotions. Arbitrary reinforcers are reinforcers, generally supplied by a particular person, usually the therapist, that would not be of the same type that would occur in other environments where the behavior might be emitted. Natural reinforcers usually follow wider response classes, whereas arbitrary reinforcers are usually for more specific behaviors (Kohlenberg & Tsai, 1991, pp. 8–13). Both reinforcers function to increase the future probability of the response occurring. The distinction is based on attaining a goal of maximal generalizability to different contexts. FAP therapists would need to respond to improvements in client behaviors in a particular sort of way that promotes generalized behavior change on the part of the client in other environments.

## Description of the Actual Training

### Identification of Clinically Relevant Behaviors

Before the contingent visual feedback sessions are implemented, an assessment is conducted to identify the clinically relevant behaviors that will be the focus of therapy. This is done in a rather traditional manner, with two to four sessions of background information being gathered. The therapist and supervisor closely attend to those behaviors that the client emits during interactions with the therapist that produce clear affective re-

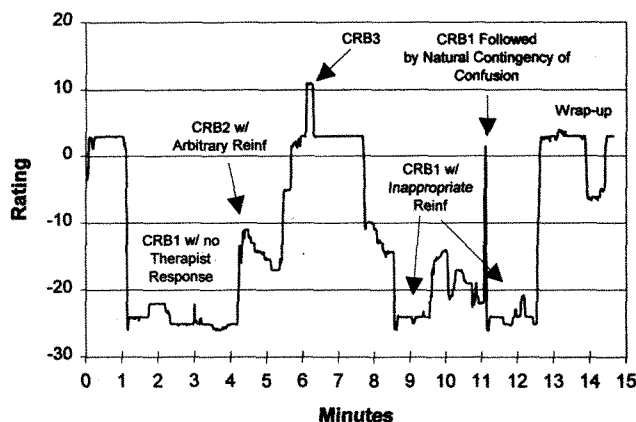


Figure 1. Supervisor rating of therapist's in-session behavior. CRB = clinically relevant behavior; Reinf = reinforcement.

sponses in the therapist. This process leads to the identification of responses that are problematic (CRB1s) or useful (CRB2s). It is helpful for the supervisor to view sessions or videotapes so that the trainee and the supervisor can agree on the kinds of things to which the therapist should initially attend.

It is important to teach therapists the difference between the topography of behaviors the clients emit and the function of those behaviors. This is done by identifying response classes that are problems rather than simply describing topography. The distinction is important and requires therapists to be aware of the effect the client's behavior is having rather than merely what the client is doing. Many different-looking responses in a class all function similarly and should be understood in terms of the effect they have. For example, a client may cry, attack, skip sessions, or describe suicidal ideation. If each of these behaviors functions to avoid talking about a particular subject or feeling, even though the behaviors have different topographies, they could all be instances of the same response class of avoidance behaviors, or CRB1s.

### Shaping Therapist Behavior

As a result of the assessment and consultation between therapist and supervisor, the relevant response classes are defined and therapy can begin. This is also when the video feedback using the "monitor in the room" is introduced into the sessions.

An example of the moment-by-moment rating of therapist behavior is presented in Figure 1. This graph was generated from a supervisor rating a videotaped session of a therapist-client interaction. These data were not gathered from an in vivo training session. Although the data in this figure were not taken from an actual training session, they are representative of the

<sup>2</sup>Although a discussion of how to decrease CRB1s goes beyond the scope of this article, it generally does not involve punitive interactions, but rather clients replace CRB1s with CRB2s because it has a better impact on the therapist and is expected to work better for them outside of therapy.

type of data this methodology produces and are thus suitable for illustrative purposes.

Figure 1 shows the different ratings for a 15-minute segment of a videotaped therapy session. Each point on the solid line indicates where the joystick was positioned at that moment. The abscissa indicates the time in minutes of the session, and the ordinate indicates the supervisor's rating of therapist effectiveness.

The portion of the session in the figure begins with a relatively neutral rating. At Minute 1, there was a large decrease in ratings. Here, the supervisor noticed the client behaving in problematic ways toward the therapist in similar ways that he does outside of therapy (a CRB1), and the therapist did not notice or did not respond to that behavior. Again, it must be kept in mind that the rating displayed is not in reference to the behavior of the client. It is in response to the ineffective behavior by the therapist at that moment with regard to what the client was doing. At Minute 4 there was a slight increase in the rating when the client began emitting more useful behavior (a CRB2) and the therapist responded. The slight, or relative, improvement is due to the therapist using what appeared to the supervisor to be arbitrary rather than natural reinforcement when the therapist responded to the client's behavior change. The rating increases to above neutral from Minutes 6 to about 7.5 when the therapist was rated favorably when the client described why he had improved (CRB3), and the therapist responded appropriately. From Minutes 8 to approximately 12.5, the therapist's behaviors were rated as less effective because of inadvertently responding to the client's problematic behavior (CRB1) with reinforcing comments for it; that is, the therapist was inappropriately reinforcing the behaviors that brought the client in for therapy in the first place. The therapist's goals were not to reinforce such behavior but to provide natural contingencies to dissuade the client from engaging in such actions, or better yet, to strengthen a competing, more useful behavior by the client to replace the problem behavior (Hawkins, 1986). This type of natural reinforcing contingency occurred for a brief moment at Minute 11 (positive rating spike) but was not effective enough to sustain the positive rating. As the therapist took a more active and appropriate approach in the session, the ratings increased to slightly above neutral from Minute 12.5.

So far, we have used the actual in vivo feedback training procedure for several sessions with one therapist. Overall, the therapist enjoyed the process and found it useful. She reported that it was not nearly as aversive as she had thought it might be, either with respect to being distracted or continuously evaluated. She had been affected by the moving light bar, but it was not distracting to her because she could see the feedback with her peripheral vision as the monitor was placed directly behind the client's shoulder at about eye-level. The therapist reported that she enjoyed the extra supervision attention this procedure afforded her on a difficult case. Moreover, the therapist reported that she appreciated the immediate feedback she received when she was unsure about what to do.

The therapist noticed increases and decreases in effectiveness ratings that were consistent with what the supervisor was attempting to train (e.g., she noticed the light bar went up when she addressed her relationship with the client and when she reinforced the client's CRB2s, and she noticed the light bar went

down when the client switched topics and she responded only with nodding). The therapist did not, however, verbally identify several of the things that were being explicitly trained by the supervisor (e.g., attempting to decrease head nods as possible inappropriate reinforcers for nonsense talk of client).

An interesting event occurred around the issue of rule formation by the therapist. When the supervisor began to reinforce (i.e., give higher ratings through the computer) talk that focused on values to identify important variables that might control the client's behavior, the therapist began to talk increasingly about this issue. Presumably she was attempting to maximize the amount of reinforcement she was receiving and may have generated a rule something like, "Talking about values is very good." However, later in the session the therapist attempted to initiate another discussion about values that was off topic and not appropriate in the particular situation. She quickly received lower ratings, and the therapist decreased talk about this issue quickly. In this example, when the therapist was asked about her impressions of the session, she recognized that talk about values was being shaped but alluded to it topographically, not yet identifying the function that discussing the topic served.

This example illustrates the importance of understanding that therapists will form their own rules (e.g., "talk about client's values is good"), but as long as they are being sensitive to the video feedback, rules will be very flexible and not adhered to rigidly.

The client in the previous example reported no anxieties about the introduction of extra equipment in the room and appeared to not notice its presence. This is not surprising because the small videomonitor can be seen only by the therapist. However, the client did want to know who was observing the session from behind the one-way mirror, a common question in training clinics with observation mirrors.

### The Role of Direct Instruction

The technical arrangement we have described is designed to reduce some of the rigidity and inefficiency inherent in traditional therapy instruction and to create a circumstance where one can learn as much as possible from coming in direct contact with therapeutic contingencies. That is, we believe being "in the room" leads to more effective client-therapist interactions than does simply following rules and advice or sticking to an agenda set forth by a supervisor. A strictly rule-governed approach is not the most effective way to teach and learn how to do therapy. Does this mean there is no role for direct instruction? The answer is obviously no. It would not be ethical or appropriate to omit direct instruction from teaching therapy. What we propose is a method to minimize the less useful aspects of direct instruction and improve the efficiency of training therapists to make complex discriminations and shape sophisticated and effective therapeutic repertoires.

There are at least four sets of circumstances that require direct instruction. The first is when a supervisor observes the beginnings of, or an actual occurrence of, an ethical or legal violation. When such behavior occurs, it is not appropriate, in our view, to merely pull the joystick back and wait until more ethical behavior occurs to give positive feedback. A second circum-

stance, related to the first, is the failure of a therapist to adequately assure the safety of the client or other person by failing to recognize and act on information suggesting suicidal or homicidal behavior that the client might exhibit. Again, direct, immediate instruction is required by the supervisor. The third occasion for direct instruction is when the therapist may give misinformation to the client whether it is benign or not. If, for example, a therapist were to tell a client that most victims of child abuse themselves become abusers later in life, it would be necessary to correct that misinformation directly. Finally, and probably most important, from a behavioral perspective an essential part of therapist training is ongoing assessment and case conceptualization. This process involves a direct dialogue between therapist and supervisor. Therapy begins with a tentative description of the relevant response classes that are made up of various clinically relevant behaviors. However, this conceptualization often changes or develops during therapy, or new issues emerge that require a rethinking of the function of certain behaviors (Hayes, Follette, & Follette, in press). These are hypotheses that are formed and evolve during therapy, and this type of conceptualization is probably most efficiently taught by interaction with and modeling by the supervisor. This aspect represents much of supervision and should not be eliminated.<sup>3</sup> We do believe, however, that what typically follows from this dialogue in supervision is a discussion of how the therapist should do what, and when this should be done. The what to do is part of the therapist's ongoing training for understanding why people behave the way they do. Training therapists when to do a specific thing in therapy is very difficult for supervisors and is not typically a part of teaching therapy by instruction. It is difficult to teach a therapist when they should do something because the supervisor does not have access to the variables that operate in the therapist-client interaction that affect timing. Telling the therapist how to do therapy involves giving rules, and this becomes problematic because it tends to produce rule-following much more than being sensitive to what is happening between the client and the therapist.

As we gain experience with this technique we will undoubtedly notice other instances where direct instruction seems effective and efficient. However, at this point we are inclined to resist the temptation to give a rule or explanation for everything we, as supervisors, might notice because it may be neither accurate nor the best way for the therapist to learn what we think we know.

#### Assessment of Effectiveness

We wish to make clear that we have not yet fully collected and analyzed data on this training method. However, an important consequence of this approach to therapy training is that it allows us to actually determine whether the training technique is having an effect on the therapist's in-session behavior and whether the therapist is affecting the client's in-session behavior. We will briefly present how this might be done without raising distracting mathematical issues at this time.

#### *Does the Therapist's Behavior Change Over Time?*

The simplest way to answer this question would be to sample sessions over time and calculate the amount of time the thera-

pist engages in behavior rated as positive versus negative by the supervisor. Presumably this index should increase over time if the training method is judged to be effective. The computer program to give the visual feedback can accumulate these data automatically as the integral of the plot shown in Figure 1. This is merely the sum of the products of the number of seconds at each rating level. Alternatively, one could keep track of the counts of positive versus negatively rated moments and plot those over time.

However, for the purposes of therapist training and research, a more elaborate method might consist of examining the conditional probabilities of therapist responses to the occurrences of CRB1s, CRB2s, and CRB3s. Using a lag sequential approach (Bakeman & Gottman, 1986), one would code therapy sessions and identify classes of client and therapist behaviors. To keep it simple enough to be practically useful, client codes could be reduced to identification of CRBs and therapist behaviors could be coded in whatever detail was of interest. For instance, a set of codes might include silences, natural reinforcement, arbitrary reinforcement, questions, punishers, reflective statements, and so forth. If therapists studying FAP were learning, then the probability of a natural reinforcer, given a particular CRB has occurred, should increase relative to any other kind of response the therapist might give. Alternatively, these data could be presented in the form of a cumulative record, where the occurrence of a CRB was the horizontal movement unit and the occurrence of a natural reinforcer caused a vertical movement. The slope of cumulative records over time should increase if the therapist were both learning to discriminate CRBs and learning to respond appropriately. It would be instructive for a supervision team to code these tapes collectively and talk about what constitutes relevant therapist and client behaviors.

In addition, a multiple baseline approach could be taken to plot the effect of the supervisor's feedback on selected therapist target behaviors. For example, after the conditional probabilities for therapist behaviors such as giving inappropriate reinforcement, making reflective statements, providing natural reinforcement, and silences are known, the supervisor could attempt to shape each successively and continue to record the baseline for the therapist behaviors not yet targeted for change. This multiple baseline approach would add further support to the methodology we propose.

#### *Does the Client's Behavior Change Over Time?*

Again at a simple level, the frequency of occurrences of CRB1s should decrease, whereas the frequencies of CRB2s and CRB3s should increase over time. The more interesting question is whether that behavior is influenced by the therapist. This question can also be addressed by calculating the conditional probability of the client emitting a CRB2 given that a previous CRB2 had been reinforced by the therapist. Moreover, the multiple baseline approach would be applicable to changing cli-

<sup>3</sup>In fact, direct instruction seems to be enhanced by this training process because the therapist and supervisor are continually in contact with what is and should be shaped in therapy.

ent behaviors such that certain targeted CRB1s and 2s could be monitored over time as the therapist attempts to decrease or increase one response class at a time.

Other analyses are possible. An important feature of our method is that one can compare training techniques and the rate of acquisition of therapist skills. Other theoretical writings on supervision and training offer little in the way of methodology to test the efficacy of the approaches described.

### Discussion

If one were to use such training strategies, there are several issues to consider:

#### *Why Not Have the Client Hold the Joystick?*

There are at least two reasons. For one, clients often find it difficult to talk about some issues or try new behaviors. Thus, they could be expected to find some constructive kinds of work initially aversive, and they might give negative feedback to therapists who are appropriately pushing clients to change. Of greater theoretical importance is the fact that some clients come to therapy with significant behavioral deficits or excesses that might prevent them from discriminating useful interactions occurring with the therapist. The supervisor has the obligation to maintain responsibility for shaping and training.

#### *How Does the Supervisor Know What Effect the Therapist's Behavior Is Having on the Client?*

At any given moment, the supervisor does not actually know, and is only making educated guesses. By watching the interaction, the supervisor can give positive feedback to the therapist, who may be meeting with a less than enthusiastic response from the client in the short run. By evaluating the changes in the conditional probabilities of the client behavior in response to contingent shaping by the therapist, the progress made in therapy as well as a functional understanding of the process can be empirically evaluated. For example, the supervisor can shape the discriminative ability of the therapist or establish behaviors he or she believes are likely to function to strengthen CRB2s and CRB3s while reducing CRB1s. By examining the relationship between the shaped therapist behavior and client behavior, one can eventually "know" if what the supervisor thought was useful empirically turned out to actually be so.

Those who spend their careers trying to understand and teach therapy find it disheartening to hear some people dismiss the goal as being hopeless, or worse, inappropriate, because therapy is an art form. We do not believe "therapy as art" is a useful simile. What we think is meant is that skilled therapists do not have complete verbal access to discriminations they make or the reasons (rules) behind everything they do. It is difficult to exhaustively describe why one did everything he or she did in a therapy session. A therapist may have noticed some feature in a client's responses that prompted a nonverbal response that affected the client but he or she may not be able to explain why, or at least not with certainty, that the explanation is correct. That does not mean the discrimination and the appropriate re-

sponse cannot be taught; it just cannot be directly taught by instruction. Certainly, many technical skills are taught by shaping successive approximations. In therapy, learning from experience with the client does not always provide the immediate and accurate feedback that makes such learning maximally efficient. This method, in which the supervisor provides improved and continuous feedback and support for therapists, helps the process. Each therapist has his or her own interpersonal strengths and weaknesses. If a supervisor tells a therapist how to behave, the supervisor assumes that the therapist has an adequate repertoire and appropriate stimulus value for a particular behavior to work. However, some therapists have better skills in some areas than others, and they could be more effective if allowed to choose what to do to accomplish a particular goal in therapy. A supervisor watching a session may notice a strong quality in a therapist to build on, rather than struggle trying to teach a particular technique that seems alien to the therapist. If other, more easily emitted behaviors can function effectively, then the supervisor may find it more appropriate to shape those.

If one wants to provoke an argument among clinical psychologists, he or she need merely cite the empirical evidence that professional therapists get no better results than nonprofessional therapists (e.g., Berman & Norton, 1985). That is a different issue than saying all therapists produce equivalent results. There is variance among therapists; not much of it, however, is explained by training or years of experience (Stein & Lambert, 1984). Other variables may be important, identifiable, and modifiable. Among those that occur to us, given our appreciation of the theoretical basis for functional analytic psychotherapy, is the ability to discriminate clinically relevant behavior and the development of the therapists' interpersonal repertoire to alter it. Discrimination training and development of complex behaviors are both tasks well suited to contingent shaping. An obvious limitation in training is that the supervisor must be able to recognize clinically relevant behaviors and recognize therapist behaviors that are appropriate to alter or strengthen. We know of little research on the ability of supervisors to shape and train therapists.

#### *Contingent Shaping and Treatment Manuals*

There is a need to empirically test the efficacy of proposed interventions for clinical problems. Experimental tests of treatments often use standardized treatment manuals as a means of assuring that the treatment is reliably implemented (Elkin et al., 1989). Although the spirit of the training described in our article is not consistent with following a rule-governed treatment approach, it has its place, even in the realm of treatment trials. One of the advantages of this training approach is that it is a useful way to teach therapists to discriminate important clinical moments or behaviors. A cognitive-behavioral supervisor might give feedback on the recognition of a dysfunctional cognition or how the therapist presents a challenge to an irrational belief. What the supervisor evaluates is paradigm specific. Different paradigms require different discriminations and have specific techniques for addressing clinical problems. This shaping procedure allows for development of therapist skills for

the recognition of the problem and the quality of the delivery of the intervention.

### Less Technical Approaches

The procedure we described for the actual in vivo training only requires a low-level computer system, a joystick and connector port, and a monitor. We used this equipment because it allowed us to give more finely scaled feedback to the therapist and collect continuous data for research. It would be possible to provide nonverbal contingent feedback with much simpler hardware. All one would actually need is a three-way switch hooked to two different-colored lights. When the therapist was emitting useful behavior, the supervisor could throw the switch to light up one light. When the therapist behavior was not useful, the switch could be thrown to light the other light. When the therapist was behaving in a way evaluated as neutral, the switch could be placed in the position where no light was lit. The important element of the feedback is that it is discriminable and not presented in a way that promotes rigid rule formation.

### Summary

We have described a novel method for training behavior therapists and have used a behavior-analytic therapeutic system (FAP) as an example. This methodology would be applicable to many therapeutic schools because what one gives feedback on is up to the supervisor. The methodology is based on learning principles and is designed to overcome some of the problems encountered when trying to teach therapy by using direct instruction. Apart from the benefit of being theoretically driven, this system can be empirically tested and compared with other approaches for its effect on changing both therapist and client behavior.

An advantage of using this methodology to train therapists is that it requires therapists to remain present to what is going on in the moment between them and their clients. As feedback to the therapist changes, he or she only knows that something of importance has happened. It is up to the therapist to identify which of the events happening in therapy at the moment is controlling the supervisor's ratings. What therapists will eventually learn, perhaps, is that it is not what they are doing that is being shaped; rather, they will learn to notice the effect of what they do in the way it affects the client. Using FAP as a model, we have presented the case for how therapists can be taught to attend to and manage the relationship between them and their clients. This is the most difficult skill to teach, and we know of no other method to systematically train this skill.

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