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Translating the Theoretical Into Practical: A Logical Framework of Functional Analytic Psychotherapy Interactions for Research, Training and Clinical Purposes

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What is This?

Translating the Theoretical Into Practical: A Logical Framework of Functional Analytic Psychotherapy Interactions for Research, Training, and Clinical Purposes

Cristal E. Weeks[1], Jonathan W. Kanter[1], Jordan T. Bonow[2], Sara J. Landes[3,6], and Andrew M. Busch[4,5]

Abstract

Functional analytic psychotherapy (FAP) provides a behavioral analysis of the psychotherapy relationship that directly applies basic research findings to outpatient psychotherapy settings. Specifically, FAP suggests that a therapist's in vivo (i.e., in-session) contingent responding to targeted client behaviors, particularly positive reinforcement of a client's effective behavior, should be a powerful mechanism of change. However, much of the previous literature on FAP has been theoretical, broadly defining FAP techniques rather than explicating them with the precision necessary for replication and training. In this article, the authors explicate a logical framework for turn-by-turn

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interactions between the client and therapist that may guide research, training, and dissemination of FAP. This molecular behavioral description of the events of the proposed logical interaction lends itself to microprocess research methodology, and a discussion of potential hypotheses to explore follows. Prescriptive, direct guidance for the application of FAP for training and dissemination purposes is given.

Keywords

functional analytic psychotherapy, in vivo responding, reinforcement, mechanism of change, psychotherapy training

Functional analytic psychotherapy (FAP; Kohlenberg & Tsai, 1991; Tsai, Kohlenberg, Kanter, Kohlenberg, et al., 2009) is an interpersonal psychotherapy based on the fundamental behavior analytic principle of reinforcement. Simply put, when behavior is followed by reinforcement, it is strengthened (i.e., increases in frequency and intensity). Conversely, when behavior is no longer followed by reinforcers, it is weakened (i.e., decreases in frequency and intensity), which is the principle of extinction.[1] A vast body of research supports these basic behavioral principles, and researchers have explored myriad intricacies of how the timing and strength of contingent reinforcement affects behavior (Catania, 1998). Direct application of these basic research findings to outpatient psychotherapy suggests that a therapist's contingent responding to targeted client behavior as it occurs, particularly positive reinforcement of a client's effective behavior, should be a powerful mechanism of change (Follette, Naugle, & Callaghan, 1996; Kohlenberg & Tsai, 1991).

Previous writings on FAP, however, have not led to the empirical research necessary to evaluate FAP's efficacy (Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004), as most FAP writings have been theoretical discussions of basic FAP principles and processes (Bolling, Parker, Kanter, Kohlenberg, & Tsai, 1999; Follette et al., 1996; Kohlenberg, Kanter, & Bolling, 2004; Kohlenberg, & Tsai, 1987, 1991, 1994, 1995; Kohlenberg, Tsai, & Dougher, 1993; Kohlenberg, Yeater, & Kohlenberg, 1998; Rodriguez-Naranjo, 1998; Tsai, Kohlenberg, & Kanter, in press; Vandenberghe & Sousa, 2005), case studies (Baruch, Kanter, Busch, & Juskiewicz, 2009; Callaghan, Summers, & Weidman, 2003; Carrascoso, 2003; Ferro, Valero, & Vives, 2006; Kanter et al., 2006; Kohlenberg & Tsai, 1994; Kohlenberg & Vandenberghe, 2007; Lopez, 2003; Manos et al., 2009; Wagner, 2005), or theoretical discussions of FAP as an enhancement to other psychotherapy

approaches (Baruch et al., 2009; Callaghan, Gregg, Marx, Kohlenberg, & Gifford, 2004; Gaynor & Lawrence, 2002; Holmes, Dykstra, & Williams, 2003; Hopko & Hopko, 1999; Kanter et al., 2009; Kanter, Manos, Busch, & Rusch, 2008; Kanter, Schildcrout, & Kohlenberg, 2005; Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002; Kohlenberg & Tsai, 1994, 1998; Manos et al., 2009; Rabin, Tsai, & Kohlenberg, 1996; Tsai & Kohlenberg, in press; Vandenberghe, 2007, 2008, 2009; Vandenberghe, Ferro, & Furtado da Cruz, 2003; Wagner, 2005). Of these enhancements, only FAP-enhanced cognitive therapy (CT; Kohlenberg et al., 2002) has been submitted to empirical study, with a nonrandomized design showing incremental effects of FAP on depression and interpersonal outcomes over standard CT. A small additional body of research on FAP has involved process coding of turn-by-turn psychotherapeutic interactions in FAP, providing some preliminary support for the notion that contingent reinforcement of target behavior in session increases the frequency of that behavior both in and out of session (Busch, Callaghan, Kanter, Baruch, & Weeks, 2010; Busch et al., 2009; Callaghan et al., 2003; Kanter et al., 2006).

Consideration of the important issues in FAP research (Follette & Bonow, 2009) reveals an abundance of complexity. One particularly troublesome aspect of this complexity is FAP's functional and idiographic nature, which makes it difficult for its techniques to be described in a way that leads to manualization and replicability. Thus, typical descriptions of FAP have focused on broad discussions of FAP's five functional rules without specific instruction to therapists on precisely how to instantiate those rules (Kanter, Manos, et al., 2008; Kohlenberg & Tsai, 1987, 1991, 1994; Kohlenberg, Tsai, Parker, Bolling, & Kanter, 1999). A more recent FAP text (Tsai, Kohlenberg, Kanter, Kohlenberg, et al., 2009) improves on this by providing a wealth of clinical examples and a logical FAP interaction (pp. 155-157) that outlines a specific sequence of therapist behaviors that instantiates FAP's five rules and its hypothesized mechanism of change.

Recently, a trend in research is to focus specifically on mechanisms of change and their effects in different treatment packages, rather than on treatment packages as a whole (Follette, 1995; Rosen & Davison, 2003). In line with this trend, the purpose of this article is to present the logical FAP interaction in sufficient detail to guide therapist behavior and allow for empirical examinations of FAP's mechanism of change. Presenting such detail may be seen by some behavior analysts as moving FAP away from its fundamental behavior analytic principles, and making it likely that FAP may be guided by the prescription of rules rather than principles. However, it is the opinion of these authors that an overreliance on principles without attention to its effect

on dissemination may be what has stymied FAP research to date. Ultimately, this is an empirical question, and it is hoped that this article, by providing topographical instructions that have been lacking in the FAP literature, will lead to research that will help resolve the debate. We hope to return to this article in a few years to determine whether this alternative approach has been successful, as evidenced by data. This article will assume both some knowledge of FAP as it is typically described and a firm understanding of the principles of behavior change, and will include only a brief review of FAP's basic premises. It is intended to be a useful tool for both clinicians and researchers alike, specifically to aid training of new FAP clinicians and provide a framework for continued process research on FAP's mechanism of change.

The Five Rules of FAP

In FAP, target behavior to be responded to in session are referred to as *clinically relevant behavior* (CRB), including either problem behavior (CRB1) or improved behavior (CRB2). FAP provides therapeutic rules to maximize the possibility that CRB will occur in session, that therapist responses will weaken CRB1s and evoke and strengthen CRB2s, and that these in-session improvements will generalize to outside relationships (Kohlenberg & Tsai, 1991; Tsai, Kohlenberg, Kanter, & Waltz, 2009). The logical interaction presented herein describes a specific sequence of therapist behaviors that exemplify FAP's five rules and, as a result, its hypothesized mechanism of change. Each rule will be described briefly. This will be followed by the presentation of the interaction that illustrates how the rules can be applied in sequence in a single therapy session.

Rule 1: Watch for CRB

It is assumed that the therapy relationship and other therapy events (e.g., homework assignments, being late to session) will naturally evoke CRBs. Therefore, fundamental to FAP is the accurate detection of CRB when it occurs. Rule 1 largely specifies covert behavior on the part of the therapist, that of watching or observing. A specific observable Rule 1 technique, highlighted in the logical framework for FAP interactions below, is the provision of *out-to-in parallels.* In parallel interactions, the therapist is typically pointing out similarities between events from the client's daily life and events that are occurring in the therapy session. Out-to-in parallels are statements or questions that suggest parallels between daily-life events that the client has described to the therapist in the past and an in vivo interaction

occurring with the therapist right now. Client responses to these parallels can provide additional information for the therapist, in terms of case conceptualization and assessment of client's outside behavior, as well as identification of CRBs. Rule 1 requires a clear case conceptualization and functional assessment strategy. These are illustrated in Kanter, Weeks, et al. (2008) and will not be detailed here. Techniques to improve therapist awareness and sensitivity to CRB are included in Tsai, Kohlenberg, Kanter, and Waltz (2009, pp. 62-70).

Rule 2: Evoke CRBs

As Rule 1 involves noticing the CRBs that are naturally evoked by the therapy relationship, Rule 2 involves more strategic actions to purposefully evoke CRB in session. These strategies include structuring the therapy to be evocative by emphasizing the intensity and importance of the therapy relationship early in treatment, using strategic techniques from a variety of therapeutic approaches, and specifically prompting the client to engage in CRB2 in the moment. This last strategy, specific prompts to engage in CRB, is relevant to the logical FAP interaction and will be discussed in more detail below. In general, client displays of emotion are seen as markers for the presence or potential presence of CRB, so Rule 2 techniques often are emotion focused (Tsai, Kohlenberg, Kanter, & Waltz, 2009, pp. 70-83).

Rule 3: Naturally Reinforce CRB2s

The original FAP text focused on responding to CRB2s and did not address the issue of responding to CRB1s. A broader take on Rule 3, as in Tsai, Kohlenberg, Kanter, and Waltz (2009), defines Rule 3 as contingent responding to any CRB that occurs in session, and thus this is the pivotal rule that defines FAP's mechanism of action. Essentially, when CRB occurs, either observed in the natural interaction (Rule 1) or evoked through strategic therapist action (Rule 2), the therapeutic task is to identify the behavior as CRB1 or CRB2 and to respond accordingly to decrease CRB1s and increase CRB2s (Rule 3). Because FAP is a constructive approach (Goldiamond, 1974), the fundamental priority is to evoke and shape CRB2, building new repertoires of prosocial interpersonal behavior rather than focusing on reducing problem behavior or psychiatric symptoms. Because the emphasis in FAP is on *natural* reinforcement, Rule 3 requires that FAP therapists facilitate the development of genuine and intimate relationships with clients (maintaining appropriate professional boundaries with respect to intimacy, of course) and allow both

their natural reactions to clients in the moment as well as their awareness of the client's case conceptualization to guide their expressed responses to CRB. This rule will be expanded in detail below.

Rule 4: Observe the Potentially Reinforcing Effects of Therapist Behavior in Relation to Client CRBs

Reinforcement is defined functionally, as any event that leads to an increase in behavior, as opposed to topographically, as any specific kind or form of event. Thus, the only true way to know that a therapist's response was reinforcing to a client is by observing the client's behavior over time. If the client's behavior increases in frequency, then it can be said that a specific therapeutic response was reinforcing. Thus, for a FAP therapist to know if Rule 3 is effectively occurring, Rule 4 encourages the therapist to observe client behavioral changes over time with respect to attempts at reinforcement.

Similar to Rule 1, Rule 4 specifies largely covert therapist behavior, so identifying observable markers that the therapist is engaging in Rule 4 may be helpful for both research and supervision purposes. Furthermore, for some CRB, the client may not have many opportunities to engage in the response in vivo (e.g., initiating conversations, assertiveness); therefore, solely observing increasing frequency of CRB in vivo may not be the most accurate assessment. For these instances, in addition to observing changes in CRBs over time, therapists may also benefit from more proximal feedback from the client about the impact of therapist behavior on the client and may take encouraging feedback from the client as proxy indicators that reinforcement has occurred.

Thus, Rule 4 encourages diligence in observing the long-term frequency of the client's target behaviors and specifically asking clients how they felt about particular therapeutic consequences provided immediately following the relevant interchange. This feedback may be especially informative to the therapist in early stages of the therapeutic relationship as a sort of clinical reinforcer assessment, to determine what type of therapist responses are most amenable to the client. However, one must always keep in mind that the information being provided is solely self-report and ongoing data collection cannot be neglected. Immediate questions about therapeutic consequences are addressed below in the logical framework for FAP interactions.

Rule 5: Provide Functional Interpretations and Implement Generalization Strategies

The original FAP text (Kohlenberg & Tsai, 1991) provided Rule 5 to highlight that, when not directly responding to CRB, therapeutic talk in FAP should

still be as functional as possible by identifying antecedents and consequences to client target behavior. Such talk, theoretically, should enhance generalization of gains made in session. Statements of functional relations can be seen as "rules" (Hayes, 1989), which ideally specify all three terms of the three-term contingency (antecedent, response, and consequence), and FAP therapists aim to specify the relevant contingencies that govern improved behavior as completely as possible. This does not suggest that therapists are sending the clients into the world with rigid behavioral "prescriptions" to engage in X behaviors when and only when Y context is in place. Instead, the logical FAP interaction suggests using Rule 5 to teach clients how to recognize and interpret the salient antecedent contextual stimuli around them; learn how to respond accordingly, with intention; and then evaluate the effectiveness of their responses on their own by observing the consequences their environment provides. In time, such attempts at generalization may lead to the clients having greater abilities to assess on their own whether they have reached their interpersonal goals as well as how to adjust their behavior on a moment-to-moment level when interacting with others in their daily lives. Rules applying to behavior occurring in session are preferred to those that correspond to events occurring out of session; better still are rules that relate controlling variables occurring in the session to those occurring outside the session (*in-to-out parallels*). Such parallels are included in the logical FAP interaction.

More recently, Rule 5 has been expanded somewhat to acknowledge additional generalization strategies that are recommended in FAP (Tsai, Kolhlenberg, Kanter, & Waltz, 2009). Primarily, as FAP ultimately is a behavioral approach that requires behavior change, homework assignments for the client to engage in specific out-of-session behaviors are encouraged. From a FAP perspective, the best homework assignments are those that flow from a successful in-session interaction in which CRB2 occurred and were positively reinforced by the therapist. For example, when an intense interaction occurs between the client and therapist, such as the client asserting her needs for the first time and the therapist responding appropriately by supporting the assertion, the therapist may verbally illustrate contingencies that took place between the two of them in the moment to the client and then encourage the client to try that behavior at home with her significant other given the same antecedent contextual situation.

The Context of the Five Rules

To more fully understand the five rules and their instantiation in a logical FAP interaction, one must be aware of some other basic issues in FAP. These

issues are related to the type of therapeutic relationship in which they are used, the definition of treatment targets, and the functional process of reinforcement.

The therapeutic relationship. The application of the five rules and the logical framework for interactions discussed below occur in the context of an already formed psychotherapeutic relationship and ongoing therapeutic work. Establishing a FAP relationship is beyond the scope of this article, but a few words are in order (for a more complete analysis, see Follette et al., 1996; Tsai, Kohlenberg, Kanter, Kohlenberg, et al., 2009, pp. 71-74, 146-153). First, because FAP interactions can be intense for the client, it is important that the FAP relationship is indeed solid, that the client has provided informed consent to engage in the relationship-focused work, and that the client has responded positively to FAP's rationale. CRBs must have been defined collaboratively between the therapist and client based on the client's goals for therapy, and the therapist must work to create a context of safety and trust in the relationship (to the extent possible, as these may represent difficulties for the client that are conceptualized as CRB).

Defining treatment targets. FAP may be practiced as a stand-alone intervention or as an enhancement to other interventions. When used as an enhancement to other interventions, treatment targets are defined by that intervention. When used as a stand-alone intervention, treatment targets (CRBs and corresponding out-of-session goals) are defined idiographically and collaboratively, either through informal discussion and interviewing or with the use of FAP-specific assessments. Kanter, Tsai, and Kohlenberg (in press) provide guidelines for how to define treatment targets for a variety of clinical populations, including adolescents, sexual minorities, other ethnic and cultural minorities, sex offenders, individuals with severe mental illnesses, couples, and women. For our purposes, it is assumed that the therapist and client have collaboratively defined CRBs, and the therapist has an ongoing conceptualization of CRBs that is guiding his or her FAP treatment approach. In general, unless working with a more specific population, FAP treatment goals often focus on enhanced and improved intimate relationships, and CRBs involve issues of vulnerability, emotional expression, and trust in intimate relationships. Perhaps the prototypical CRB1 in FAP is avoidance of intimacy (in its many guises) and the associated CRB2 is approaching intimate situations.

Reinforcement. When contingently responding to CRB in FAP, it is important to understand how reinforcement is defined and used. First, a key factor in reinforcement, demonstrated by decades of research on both nonhuman animals as well as humans, is that the closer in time and space a reinforcer

is to the behavior it is intended to reinforce, the more effective it will be in furthering behavior change. Thus, the occurrence of CRB in FAP represents a golden and fleeting opportunity, and time is of the essence when responding. When CRB occurs, FAP therapists are encouraged to consider putting aside any content that was the previous focus of the interaction and quickly move into an in vivo interaction by consequating the CRB. Such a move into FAP process begins the logical FAP interaction.

Despite decades of research establishing the principle of reinforcement in the laboratory, the reinforcement-based approach of FAP remains relatively obscure. One possible reason for this is confusion about the nature of reinforcement in FAP. It may be difficult for clinicians to see the relevance of reinforcers used in basic research, such as food pellets or water, or those used in applied work, such as candy, play privileges, or token economies, to their work with adult, outpatient clients (Ferster, 1967, 1972a, 1972b). Many non-behaviorists incorrectly assume that these arbitrary, or contrived, responses are the only types of consequences prescribed by behavior analysts.

In FAP, however, natural consequences are preferred (Ferster, 1967). Examples of natural reinforcers include prosocial behaviors that are naturally related to improved social relationships and attention, expressions of caring and concern by one person in a relationship that are naturally related to reciprocal expressions by the other person, and appropriate, assertive requests by one person that are naturally related to the asserted request being met by the other. In fact, arbitrary or contrived consequences may not be reinforcing in the therapy relationship and natural reinforcers, as consequences that are potentially available both in therapy and the client's daily life are likely to generalize from therapy to daily life.

Thus, FAP therapists are discouraged in the application of arbitrary consequences to shape CRB and should instead provide natural reinforcers such as expressions of caring, telling the client how the therapist feels about him/her in the moment, and nonverbal displays of interpersonal connection, including tearing up when they disclose an emotionally charged memory or increased eye contact. Of course, these should be behaviors that are in line with the therapist's personality and within their range of acceptable disclosures to client. Although beyond the scope of this article, therapist training, supervision, and ongoing self-development are called for in FAP to increase the likelihood that these are high strength responses available in the therapist's repertoire (Tsai, Callaghan, Kohlenberg, Follette, & Darrow, 2008). Put less technically, therapeutic courage, through willingness to expand one's own interpersonal repertoire, and love, through willingness to provide positive and caring

Table 1. Outline of Logical Interaction With FAP's Five Rules

Rule	Step
Rule 1	1. Therapist provides an out-to-in parallel
	2. Client confirms accuracy of the parallel
Rule 2	3. Therapist evokes a CRB
	4. Client engages in CRB1
Rule 3	5. Therapist contingently responds to a CRB1
	6. Client engages in CRB2
	7. Therapist contingently responds to CRB2
	8. Client engages in more CRB2
Rule 4	9. Therapist asks about the effect of the response on the client.
	10. Client engages in more CRB2
Rule 5	11. Therapist provides an in-to-out parallel and a homework assignment based on the interaction
	12. Client reports willingness to try homework out of session.

Note: FAP = functional analytic psychotherapy; CRB = clinically relevant behavior.

contingent feedback, are essential and prerequisite abilities for the logical FAP interaction (Tsai, Kohlenberg, Kanter, Kohlenberg, et al., 2009).

The Logical Framework for FAP Interactions

The logical framework for FAP interactions assumes that the therapist and client are engaged in ongoing therapeutic work, which could take a variety of forms, and that treatment targets and CRBs have been defined in the context of that work. When a logical interaction begins, the conversation is focused on daily-life treatment targets. A key feature of the interaction is that FAP's five rules are instantiated completely in order (see Table 1 for a summary of the interaction). In fact, one can essentially represent the five rules condensed into a single sequence. This is not simply a convenient organization of the rules for training purposes but is in fact how the rules were intended and how effective FAP interactions often play out, as they represent a natural progression from (Rule1) identification of functional similarities between daily life and in-session behaviors, (Rule 2) subsequent generalization of a daily-life behavior into the therapy relationship, (Rule 3) therapeutic application of consequences to live instances of the problem to shape in-session improvements, (Rule 4) therapist assessment of how the interaction affected the client in the moment, and (Rule 5) generalization of the improved in-session behavior back to daily life.

The entire interaction may be condensed into a tight exchange or may play out gradually over the course of a session, with elaborations and irrelevant exchanges intermixed into the interaction. In addition, several interactive loops are possible. Rule 3 loops involving both problematic and improved client behavior often occur. In a problematic loop, the client repeatedly engages in CRB1 (typically avoidance) and the therapist repeatedly contingently responds to it, often by preventing the client from engaging in the CRB1 again by prompting alternative behavior. In an improved loop, a CRB2 is followed by a positively reinforcing therapist response, repeats, and is followed by more therapist positive reinforcement. In this way, CRB2 can be quickly strengthened in session, and the therapeutic interaction becomes increasingly positive and improved. There is also no requirement that the entire interaction take place over a single session. Given FAP's emphasis on immediate reinforcement, however, it does seem logical that Rules 2 and 3 occur immediately in sequence. FAP suggests that it may be beneficial, however, for there to be some delay between Rules 3 and 4. This is discussed below.

By design, this presentation of a framework for logical FAP interactions condenses the extensive theoretical and basic research literature underlying FAP into a single, digestible whole. Out of necessity, some important aspects of FAP will be simplified. For example, some knowledge of FAP as it is typically described will be assumed given that its basic premises have only been reviewed briefly. Furthermore, emphasis will be placed on specific examples instantiating the five rules rather than extensive theoretical exposition of the functional principles underlying them. As a result, it is important to guard against excessive reliance on the topography of the examples to define the rules; the specific examples are simply intended to illustrate the rules.

Rule 1: Therapist Observes CRB

Ongoing assessment. The therapist monitors the impact of the client's behavior on the therapist. This noticing repertoire is essential to identifying potential CRB exemplars that are part of the collaborative case conceptualization. The therapist also needs to anticipate how potential CRB may impact others in the client's daily life. Observing CRB does not always imply covert behavior on behalf of the therapist but may also involve overt behaviors such as in-session work (see below) or broadening/narrowing of the case conceptualization after the session.

Therapist provides an out-to-in parallel. As stated previously, an out-to-in parallel is a situation in which the therapist is pointing out the similarities between events that occur in the client's daily life that mirror interactions currently occurring in the therapy session. Awareness of these interactions

can serve as an overt form of ongoing assessment. The interaction may be initiated by a daily-life discussion, with the therapist using an out-to-in parallel to compare daily-life material to in-session events, bringing the daily-life material in vivo. Essentially, whenever the therapist notices or is speculating about possible CRB (Rule 1), he or she may try an out-to-in parallel comparing out-of-session behavior to in-session behavior. Specific examples include the following[2]:

A. You seem kind of uncomfortable right now. Do you feel like you have to protect yourself with me too?
B. You are so giggly and animated right now, playing with your hair, fiddling with your shoes. Is this the same flirty behavior, right now, that you are saying gets you into trouble with those guys who are interested in you?
C. We've been talking about how when the conversation with your wife gets to a certain level, you just want to shut down and avoid the whole thing. I am wondering if there are conversations with me where you feel the same thing. Does that ever happen in here? Is that happening right now?
D. You've told me that you sometimes have trouble putting words to your emotions. It seems like that is happening as we are talking. What do you think?

For the interaction to proceed, the client confirms the accuracy of the out-to-in parallel or at least does not disagree assertively. Client responses include the following:

A. It is not as bad, but still a little bit.
B. Totally . . . I just can't help it. It's not as if I really want to flirt with you, it is just what I do when I get nervous.
C. I don't know . . . I'm not really sure. Maybe.
D. That's right. I just don't know what I am feeling.

Some other examples that might occur later in the therapeutic relationship may be called *in-to-in parallels*, in which the therapist compares current in-session behavior to previous in-session interactions. In this manner, a therapist can recall similar instances when she knew the client was engaging in CRB and ask how similar the current moment is to that previous interaction.

Rule 2: Therapist Evokes CRB

After the client confirms the accuracy of the parallel or at least demonstrates openness to continuing, the therapist attempts to evoke CRB directly (Rule 2). Continuing the examples above, such attempts to evoke include the following:

A. Instead of protecting yourself, can you, right now, open yourself up a little bit and allow us to have a more real relationship? What can you say or do right now that would facilitate us being more real with each other?

B. Can you relax into our interaction right now and let go of the flirtiness? Behind the flirtiness, you are nervous. Can we let your nervousness into our relationship directly?

C. How about we try to have a conversation that you would otherwise avoid, but you recognize it is important for us to have? What are you not telling me that is important, but hard, to say?

D. OK. Let's see if we can figure it out together. If you were a character on TV, how would the audience guess you were feeling right now?

In this interaction, Rules 1 and 2 are quite similar because, functionally, the key issue is that CRB occurs (the next step), and these therapist behaviors are both attempts to identify and evoke CRB. For Rule 2, FAP does not always require deliberate effort on the part of the therapist because CRBs may occur naturally.

Rule 3: Therapist Responds to CRB

In the logical interaction, the client typically first engages in CRB1 and the therapist responds to it and prompts CRB2. CRB2s are then contingently responded to by the therapist. Ideally, CRB1 will occur less and less frequently over time and sessions will be dominated by CRB2s of increasing effectiveness and skill.

Client engages in CRB1. In FAP, especially early in therapy, CRB1s in response to attempts to evoke are common. The FAP therapist never purposely tries to evoke CRB1, as he or she is always hoping for CRB2, but the therapist is prepared for CRB1 to occur. Continuing the above examples, client CRB1s may include the following:

A. I can't think of anything to say or do.
B. Are you kidding [laughing]? Why would I want to do that?
C. Well there is something but I'd really rather not talk about it. I don't see how you could be helpful anyway.
D. [Pauses] I'm trying hard, but I don't think I can do it.

Therapist contingently responds to the CRB1. Although not the only response, a logical FAP response to a CRB1 is to comment on it, block it, and prompt an alternative (CRB2). At this point in the interaction, it is imperative for the therapist to keep in mind the nature of their relationship with the client, and be sensitive that the tone of the response is empathic and caring; although responding to CRB1 implies punishment, punishment does not have to sound punishing to have the desired effect on behavior. Some client–therapist dyads can comfortably interact with sarcasm or irreverence, and others cannot—the key is awareness of what fits within the therapists' personal repertoire and what is idiographically most effective for the client. When the therapist and client have mutually agreed on the case conceptualization and are thus aware of the behaviors to be targeted, simply gently and empathically pointing out to the client that a CRB1 has occurred may function as punishment. Continuing the above examples, therapist responses may include the following:

A. Well, that was pretty quick, wasn't it? I'm just thinking that this is in line with your goal in here of wanting to make your relationships more meaningful. I know it is a little scary, but I'm wondering if you can think for a minute about what you could do right now with me that would do that. What can you do differently?
B. I can see you are still laughing. It is so hard to be real, isn't it? To let the guard down for a second. I would really like to get past it with you.
C. I don't know if I can be helpful either, but I'd sure like to hear what you have to say. This is hard, I know, take your time with it.
D. Let's break it down then. Which seems like a better description of what you are feeling: sadness or fear?

In FAP sessions, loops in which the client continues to avoid and the therapist continues to block and prompt alternate behavior are common. FAP therapists become somewhat dogged and persistent in their focus on evoking CRB2 and not getting derailed by client distractions and avoidance. For example, in Example B, notice how the therapist chose to ignore the client's question ("Why would I want to do that?"), instead focusing directly on the CRB1 and continuing to prompt CRB2. Essentially an "extinction battle" is

occurring between the client's and the therapist's behaviors, in that there is a functional pull for the therapist's behavior of trying to evoke CRB2 to be extinguished through lack of reinforcement by the client, and there is a functional pull for the client's CRB1 to be extinguished through lack of reinforcement by the therapist. FAP therapists need to be more "extinction resistant" than their clients in these situations, but only if there is a strong probability that the client will engage in a CRB2 before the end of the interaction. If not, then the session can take on a negative, punishing tone and the therapeutic relationship can suffer (for a data-based example of this point, see "Dan" in Kanter et al., 2006).

Client engages in CRB2. Client CRB2 may include the following:

A. [After a minute of silence] I see what you are saying, and I want to, but I really don't know what to do. I feel so stupid.
B. Yes, it really is hard [starts crying].
C. OK. Actually it is nothing, really, not that important, but I've started to smoke more pot again and I feel ashamed about it.
D. I think it's worse than sadness. It's like there's a pile of dirt on top of me. I guess "despair" is a good way to describe it.

In each instance, the therapist recognized CRB2 as part of a complex response. In Example A, the client seemed to search for a CRB2 response, then genuinely, rather than defensively, stated, "I really don't know what to do," and then, somewhat accidentally, stated, "I feel so stupid," which was, in fact, the desired response, as it was a move toward vulnerability and genuineness in the relationship with the therapist. In Example B, crying was a natural alternative to laughing. Although emotional expression can have a myriad of functions, crying often is an indicator of "letting one's guard down" or other important improvements. This does not mean that FAP therapists try for client dysregulation during sessions but simply that awareness of a client's particular emotional expressions is important. In Example C, the client minimizes the disclosure but makes the disclosure anyway. Later in therapy, when client self-disclosure of shameful or other difficult topics is more common, minimizing the disclosure might be seen as CRB1, but in the current example, when previously the client had made no such disclosures, the occurrence of the CRB2 even in this form is a sufficient improvement, and reinforcing the improvement is a priority over responding to the CRB1.

Therapist contingently responds to the CRB2. Herein, we provide some specification for how therapists should respond to CRB2 but, given the centrality of this step to FAP's hypothesized mechanism of change, several caveats are in order. First, Tsai, Kohlenberg, Kanter, and Waltz (2009) emphasize

therapist training to establish the therapeutic relationship to create a context that will make it more likely that the therapist will naturally respond positively to client improvements. We believe this training is important, but describing it is beyond the scope of this article. Second, Follette and Bonow (2009) caution against a therapist trying to follow the example rather than do what comes naturally:

> While it is tempting to give specific examples of how to respond, we are cautious to give multiple examples where different response topographies could all function similarly. It is then up to the therapist to determine which is most natural for her. At the same time, the answer implies that one doesn't know precisely what to do until the therapist tries something and observes the result . . . There is no clear way to specify how a therapist should evoke or contingently respond to a particular client action. (p. 144)

Thus, although we do provide several specific examples of responding to CRB2s, as well as examples of behaviors for all of the above rules, we encourage readers not to follow them to the letter, but instead use them as inspiration for the development of individualized, natural responses consistent with one's own repertoire, strengths, and limitations, and in line with a thorough conceptualization of the client. Furthermore, we encourage continued therapist development as per Tsai et al. (2008).

Several themes of responding to CRB2 in FAP seem to recur. First, in general, therapist responses to CRB2 will amplify the therapist's natural, positive emotional reaction to the client's behavior. Often, therapists have subtle private emotional reactions to client behavior, and in this case, the therapist may express what otherwise would not be noticed by most clients. The assumption is that producing positive emotional reactions in others is reinforcing to the client; thus, the therapist makes his reaction clearly visible to the client to ensure that the client comes in contact with the reinforcing contingency.

Second, when client problems are related to passivity and lack of assertiveness, CRB2 includes any attempts by the client to make requests or impositions on the therapist. The therapist response in this case is to provide the client with what he or she is requesting. In some cases, this may be simple, such as changing an appointment time, adding something to the session agenda, or opening a window. In other cases, the response will be more challenging for the therapist. For example, a client CRB2 could include a request that would require the therapist to deviate from a Behavioral Activation(BA) or CT treatment protocol, or to engage in a behavior that would push up against therapist limits (e.g., to call a doctor for the client about a prescription

or take a phone call from the client while on vacation). This is an instance in which the therapist's natural genuine response may, in fact, be to say no, and it illustrates the importance of awareness of the function of client behavior and the client's case conceptualization in addition to the therapist's natural inclination. How therapists respond in each of these instances is, of course, up to the individual therapist. FAP encourages therapist flexibility in responding to maximize the possibility that CRB2 will be reinforced naturally.

Third, when client CRB2s involve disclosures that make the client feel more vulnerable but would foster increased intimacy in a relationship (e.g., crying for the first time in front of someone, talking about fear or sadness instead of anger and frustration, discussing childhood abuse), a natural therapist response is to also self-disclose and increase his or her own sense of vulnerability. Again, how therapists respond in these instances is up to the therapist, but natural, strategic, and limited therapist self-disclosure while attending to the client's case conceptualization is encouraged in FAP in these situations.

To continue the above examples, specific therapist reinforcing responses may be as follows:

A. When you say you feel stupid, I want you to know that I know it is hard for you to just say that, and it really makes me feel closer to you. We all feel stupid at times, including me, and sharing that with me just makes you human to me and reminds me that we're all in this together.
B. [Lets the client cry for a while]. Wow, I really see your pain right now in a way that helps me understand more clearly what this means to you.
C. Smoking pot? Let's certainly talk about that; what do you need from me to help with your shame? Personally, I feel there is nothing shameful about it; to me, the issue is whether the pot is interfering with your functioning and how I can be helpful here.
D. That sounds like you do have a way of describing it. It really helped me understand what you are going through. I could tell something was bothering you, but I didn't quite know what to think.

Rule 4: Therapist Observes the Effects of His or Her Behavior With Respect to CRBs

Client engages in more CRB2. As stated above, Rule 4 observations by the therapist may largely be covert in session and involve the therapist noticing that more CRB2 occurs in response to Rule 3. Essentially, Rule 4 involves

observing FAP's mechanism of action *in action*. This means postsession notes should reflect this observation. When Rule 3 is successful, it should result in more CRB2, and to the extent this happens, we may conclude that the interaction as a whole was a success and that FAP's mechanism was used. In practice, loops may occur in which the CRB2 is quickly strengthened in the context of the exchange, and this looping may last for some time. During this time, a deepening of the intimacy of the relationship may be felt by both parties. These sequences represent the actual moments in which FAP's mechanism is being applied and improved behavior is being shaped. Ideally, they should end naturally, with time remaining in the session for the sequence to be processed with the remaining steps, but the processing of the interaction is secondary to the actual occurrence of the interaction. Examples of immediate CRB2s include the following:

A. Gosh, I wish it wasn't so hard to just admit that I feel stupid. I know it is good to let my guard down and let people in, but it is just so hard for me.
B. When you say, "I really feel your pain," it both soothes me and I also catch myself wanting to close up again. It is so funny to me that I can switch so easily.
C. I don't think it is interfering with my functioning; I don't do it too often. But I know I do it to escape and shut down when I don't want to deal with her, or anything.
D. I didn't know either. But, now that I've said it, I really think "despair" is the right word. I was becoming so overwhelmed as we were talking.

Although in the next step of the logical interaction provided herein the therapist explicitly asks about the effect of the response, covert observation of client responding both immediately after the therapist response and over the long term is more important. For example, to the extent that the therapist observes and consciously participates in the loop in which several CRB2s occur in succession, Rule 4 has occurred because the therapist has observed that the rate of CRB2s has increased after the attempt at reinforcement.

Therapist asks about the effect of the response on the client. It may also be helpful for the therapist to augment this observation with explicit feedback from the client. For example, in example B above, the client provided some unsolicited feedback as part of a CRB2 response, "it soothes me," which the therapist would take as a positive indication. In the context of the logical

interaction, a therapist asking the client for feedback about the interaction is the only immediate and observable indicator that the therapist is paying attention to Rule 4, as other methods of following Rule 4 are covert, and for this reason it is included here despite these caveats. In terms of the flow of the session, Rule 4 attempts to obtain explicit feedback that occur only after CRB2-Rule 3 loops have reached their natural conclusion; otherwise, the therapist could inadvertently, prematurely cut off a reinforcing loop. A formal way for the therapist to ask about Rule 4 would be to ask, "Do you think my response to you right now is making it more or less likely that you will engage in your response again?" Actual examples are typically less formal and include the following:

A. You've said you feel stupid right now. I'm wondering how I'm doing in response—am I making it easier for you to share this, or harder?
B. How is it to cry in front of me right now? Tell me more about what you mean by "it soothes me."
C. What was it like to tell me about your pot smoking? Did you feel I responded in a helpful way?
D. How does it feel to have a name for what you were feeling? Is it more overwhelming to realize that you were despairing?

Client indicates that the therapist response was reinforcing. In cases when explicit feedback is solicited, it is important for the therapist to be aware that a client's positive response to an interaction is neither a necessary nor a sufficient indicator that reinforcement has occurred. It is, however, useful information to the therapist that contributes to an ongoing assessment of reinforcement processes. Examples of positive responses include the following:

A. No, easier.
B. Well, I feel sort of a relief, like it is so hard to be real, but at the same time, it is so hard to always be performing and worrying about how others are seeing me, trying to impress them, that not doing that for a minute is, like, I don't know . . . I'm exhausted.
C. Actually, it was easier than I thought. I don't know why I thought it would be such a big deal.
D. No. I'm actually glad we talked about this. There are so many times when I don't know how I feel. It's nice to be able to put a name to things. It makes them less overwhelming.

Rule 5: Provide Functional Interpretations and Implement Generalization Strategies

Therapist provides an in-to-out parallel and homework assignment based on the interaction. Rule 5 involves the therapist summarizing the previous interaction, ideally in behavioral (antecedent, response, consequences) terms and suggesting a related homework assignment. The goal is to make the contingency as salient as possible to the client and encourage the client to try the new behavior in his or her natural environment. In simple behavioral terms, it is a generalization strategy. Rule 5 is not required in FAP, because it is expected that the improved behavior will generalize naturally back into the client's environment in the same manner that the problem behavior generalized from that environment into therapy. Examples include the following:

A. Can I summarize what seems to have happened right now? You started off feeling a little uncomfortable, protecting yourself, and I pushed you a little bit to open up and be more real. You couldn't think of anything to do and told me that you felt stupid, which actually was being more real, wasn't it? We talked about that for a few minutes, and it turned out, if I am reading you correctly, you saying that actually made things easier between us, somehow brought us a little closer together, and it got easier for you to stay with that. Essentially, telling me you felt stupid actually made things easier for you—isn't that interesting? Are there others in your life with whom you think this might be effective?

B. This has been so cool for me—you are so different now than you were at the beginning of this session . . . you started out really with that flirty stuff, and then you just . . . dropped it, and all of this pain came out. It was amazing to me, and now you feel soothed and safe and tired and closer to me. And my question to you is, can you do this with others—can you be real with them too? Can we talk for a few minutes about how you take this on the road this week?

C. Well, the key to me is that, when you feel this way with your wife, can you also stop avoiding and just let her know what's going on for you? You did such a good job today getting past this immediate avoidance response with me, can you start trying it with her, too?

D. I can imagine why. What happened right now seems to happen a lot both with me and with others such as your husband. You have trouble describing how you are feeling, so you and everyone else have trouble figuring out what to do, and you get stuck. It was really nice

that we were able to work through your initial difficulty in describing what you were feeling. Do you think you could try doing something like what we did today with your husband the next time you get stuck?

Client reports willingness to try homework outside of session. Like Rule 4, which provided a proxy indicator that a CRB2 was reinforced, the client may provide a proxy indicator that the improved behavior will be emitted outside session and hopefully generalize. Examples include the following:

A. Well, I really want to try.
B. This weekend, I am planning to go out with my friends again, and I don't really want to cry in front of anyone, but I do think I can try to be a little less, like, I always have to be the center of attention and performing and all that. It really gets tiring after a while.
C. You know, I bet it will be easier with her, too. I just get so caught up in everything, but she has made it clear to me that she really wants to talk . . . I know, I know I need to do this.
D. Yes. I really want things to go better between us. I think he would really like it if I tried harder to give him an idea of how I am feeling.

These proxy indicators should correlate with the primary outcome of interest, which is improved behavior out of session following the logical interaction.

Practical Applications

As implied above, the presented logical framework for FAP interactions has two primary purposes. The first is the successful dissemination of the principles of FAP, particularly in training settings. The second is the progression of research on FAP. There are several issues to consider when attempting to use the logical framework for these purposes.

Dissemination and Training

The potential benefits of the logical framework for dissemination and training efforts should be apparent; it provides a concise explication of the principles of FAP with examples that are easy for clinicians to understand. Although the present authors are confident in the contribution the logical framework can and will make, the utility of the logical framework for this

purpose is ultimately an empirical question. Some proponents of FAP may feel that a comprehensive training in all aspects of FAP, including how to conduct a FAP case conceptualization, how to develop the intense therapeutic relationship found in FAP, improving awareness and sensitivity to CRB as they occur in session, and training in methods of responding to those CRBs as they occur, may be necessary for it to be appropriately implemented by new therapists.

Does one need a fully developed FAP case conceptualization, or is it enough to consider out-to-in parallels in addition to the standard formulation used with the empirically supported intervention the therapist is already using? Is a unique and intense FAP therapeutic relationship necessary, or can one rely on the typical rapport developed through common therapeutic factors and focus more on in-session events as part of that already established relationship? Is additional training necessary for therapists to improve awareness and sensitivity to CRB, or is it enough to instruct therapists to increase their attention to the possibility of CRB occurring? Finally, do therapists need specific instructions, practice, and training in methods of responding in vivo to client improvements, or are standard attempts at providing response-contingent social reinforcement adequate? At this point it is not known whether all, none, or some of these are necessary, and the concerns are mostly conceptual at this point and may, in fact, be part of the problem in FAP's progress as a developing treatment.

This article allows a first step toward testing what is necessary and what is sufficient to be able to implement FAP through the introduction to the logical interaction. Perhaps this framework is enough for clinicians to grasp the general FAP concepts, in addition to their own individual study of previous FAP writings; with the intention of avoiding rigid implementation and, instead, relying on awareness of functionality, FAP techniques can disseminate more quickly. Individuals who rely on this framework are thus responsible for determining whether it provides trainees with sufficient knowledge of and ability to flexibly conduct FAP. One possible way to test the utility of the logical framework would be to develop FAP training assessments.

These assessments could take many forms. The simplest form would be written or verbal tests of an individual's knowledge of FAP and its underlying theory. Although potentially useful, such tests would not fully examine an individual's ability to use FAP. More appropriate assessments would focus on a therapist's actual behavior in therapeutic contexts. For example, trainees can be asked to respond to video-taped behavior of a hypothetical or real client after being given the appropriate contextual information (e.g., a clinical vignette describing the client, including his or her therapy targets and progress

in therapy thus far; Follette, Darrow, & Bonow, 2007; Follette et al., 2006). The trainee would be required to explain the rationale for his or her response using FAP principles. This type of exercise would allow for the assessment of both the trainee's fluency in FAP principles and his or her ability to functionally apply them in the moment in a natural manner. More extensive assessments of a trainee's actual performance can also be imagined. For example, the trainee (or anyone else to whom FAP has been disseminated) can video record his or her FAP sessions with a particular client. The sessions could then be watched and coded by experienced FAP therapists to determine a trainee's level of FAP adherence (i.e., engaging in attempts to contingently respond to CRBs) and competence (i.e., successful shaping of a more functional interpersonal repertoire in a client).

The Functional Analytic Psychotherapy Rating Scale (FAPRS; Callaghan & Follette, 2008; Callaghan, Ruckstuhl, & Busch, 2005), a coding system shown to be both reliable and valid (Busch et al., 2009; Callaghan, Follette, Ruckstuhl, & Linnerooth, 2008), can be used for such purposes. The FAPRS focuses on coding topographical "turns" of client and therapist verbal behavior. That is, a client's turn begins as he or she begins to speak and ends when the therapist begins to respond (which begins the therapist's subsequent turn). The most important contribution of FAPRS to the evaluation of a FAP therapist's adherence and competence is that it provides sequential client–therapist process data that specifically identify the frequency of client CRBs and the ways in which a therapist responds to those CRBs appropriately. This allows for statistical tests (e.g., lag sequential analysis; Bakeman, Gottman, & Mordechai, 1997) that determine whether therapists appropriately respond to CRB2s (i.e., treatment adherence/competence) and that measure overall changes in in-session behavior (i.e., the ratio of CRB2s to CRB1s).

Ideally, FAP therapists who are adherent and competent should also generate positive outcomes in client out-of-session behavior. Thus, as with all other types of therapy, the true assessment of dissemination and training efforts should eventually focus on successful therapeutic outcomes. These issues are obviously directly related to FAP research.

Research

FAP clearly and thoroughly defines its mechanism of change. In short, therapist contingent responding to client CRB within the context of a strong therapeutic relationship leads to the development of a more effective interpersonal repertoire of the client. This repertoire generalizes to environments outside of therapy, allowing the client to more effectively interact with others

and ultimately leading to a decrease in the client's psychological suffering and an increase in his or her quality of life. The logical FAP interaction adds precision to this definition (a) in behavioral terms, (b) as occurring during the therapy session, and (c) at the level of the client–therapist turn-by-turn interaction. Thus, specific hypotheses can be generated about the nature of the turn-by-turn interaction in successful FAP cases that can both test FAP's mechanism and direct clinical practice. Here we outline eight hypotheses generated by this interaction. These research hypotheses generally focus on the quintessential mechanism of FAP, therapist contingent responding to CRB. Therefore, they must be confirmed to support any claims that FAP's mechanism of action was instantiated.

Hypothesis 1. CRB1s should be followed by therapist Rule 3 behavior intended to decrease their frequency (referred to as *TCRB1s*), and CRB2s should be followed by therapist Rule 3 behavior intended to increase their frequency (TCRB2s). This is a direct examination of whether therapist contingent responding is occurring during FAP sessions. If the appropriate TCRBs do not follow CRBs, then a therapist is not contingently responding to a client and could not be providing consequences sufficient to change behavior. It is currently unknown what rate of contingent responding is necessary to meaningfully change in-session behavior. As mentioned above, the FAPRS coding system allows for the turn-by-turn documentation of therapist responding. Thus, by examining lags in this sequential data, one can produce a rate of contingent responding. For example, Busch et al. (2009) reported that during a successful FAP intervention, 67% of CRB1s and 69% of CRB2s were followed by an effective shaping response in at least one of the following three therapist turns.

This hypothesis can be tested through visual inspection of the graphical representation of session codes by time or the statistical tests of lag sequential analysis.

Hypothesis 2. CRB2s should follow TCRB2s. This is a test of the efficacy of a therapist's attempts to shape client behavior through contingent responding. If CRB2s do not follow TCRB2s, then it can be concluded that the functional process of reinforcement did not occur. This hypothesis can be tested in a manner similar to Hypothesis 1 (i.e., visual inspection of the data and statistical tests).

Hypothesis 3. CRB1s, if they occur at all, should occur earlier in therapist–client interactions, and the occurrence of CRB2s should increase with therapist–client interaction. This is a broader test of whether a therapist is successfully shaping client behavior. If the frequency of CRB2s (especially relative to the frequency of CRB1s) is not increasing across time, then a therapist is not

reinforcing CRB2s. This hypothesis can be tested within individual sessions by plotting session codes in sequence and visually inspecting the data. It can also be tested across multiple sessions by statistically comparing the frequency of specific CRBs during different periods of therapy (e.g., an earlier therapy session vs. a later therapy session).

Hypothesis 4. Client improvements outside of therapy should occur following sessions in which Hypotheses 1, 2, and 3 were confirmed. This is a test of generalization of in-session positive behavior change. If a client's behavior outside of session does not change, his or her more adaptive interpersonal repertoire is not generalizing to his or her daily environment. Tools measuring behavior outside of session (e.g., self-report questionnaires, diary cards) can be used to track client progress, and the data provided by these measures can be used to test this hypothesis (with tests appropriate to the type of data collected).

A brief examination of these hypotheses reveals that they are very limited in scope. Follette and Bonow (2009) provide a detailed discussion of the difficulty in doing FAP research and, in doing so, indicate why this might be the case. At the same time they also identify many issues related to FAP research that should be addressed and explored. Although many of these issues are beyond the scope of this article (e.g., identifying the optimal rate of contingent responding), a number of them are very pertinent. For example, Follette and Bonow call for researchers to identify and test strategies for efficient generalization of in-session gains. They also highlight the inherent difficulty in manualizing FAP for research purposes. These are some of the very issues that are addressed by the present description of the logical framework for FAP interactions and the five rules on which they are based.

Analyzing the above hypotheses using the five rules of FAP reveals that they are exclusively focused on Rule 3 (contingent responding to CRBs) and Rule 4 (observing the effects of therapist responding). Although Rule 3 is proposed to be the primary mechanism of change in FAP, it can easily be argued that FAP's mechanism may extend beyond simply shaping successive approximations of desired behavior by direct contingent responding. When interacting with verbal clients (the typical consumer of FAP and other psychotherapies), therapists have much more efficient ways of interacting with them. Therapists can influence a client's behavior by providing functional "rules" (Hayes, 1989) that guide behavior. For example, a therapist can give a client direct feedback about how his or her behavior could change to be more effective (e.g., "When you raise your voice like that, it makes you sound like you don't care what I think"). Likewise, a therapist can assign specific homework behaviors for the client to support generalization of in-session gains. More

importantly, though, a therapist can help a client identify the functional relationships between his or her behavior and environmental events (as described by Rule 5). Highlighting parallels helps a client notice the functional classes of behavior in which he or she engages and, in doing so, teaches the client to analyze his or her behavior while interacting with others so it can be adjusted in the moment.

Placing some focus on the three rules of FAP (Rules 1, 2, and 5) that have not been emphasized before will allow researchers to more fully explore all of the processes of FAP. Although these processes are not considered essential to FAP (i.e., they extend beyond contingent responding), they certainly can be used to encourage and solidify client improvement. For example, making efforts to directly promote generalization (Rule 5) would result in an increased rate of client improvement outside of session. The following are examples of some hypotheses that could be explored in future research. As all of these hypotheses could be used to directly inform clinical practice, the goal of testing them would be to identify ways in which FAP can be used in a more efficient and effective manner.

Hypothesis 5. Drawing out-to-in or in-to-in parallels (Rule 1) should lead to the emission of CRBs (i.e., increase the likelihood of evoking CRB; Rule 2). Testing this hypothesis would help determine the utility of drawing parallels while a therapist is watching for the occurrence of CRBs. If drawing parallels is naturally evocative, the practice of drawing parallels should be encouraged.

Hypothesis 6. When clients report that a TCRB2 is punishing (in response to therapist attempts to ask about the impact of attempts at reinforcement; Rule 4), this should predict decreases in the frequency of the CRB. Testing this hypothesis would explore the potential benefits of eliciting client feedback. If a client's negative feedback can actually predict that the therapist's response will function as a punisher (i.e., function as a predictor for actual changes in behavior), access to such feedback would allow for a therapist to correct any inadvertent punishment processes. Similar to this, a client's positive feedback may be predictive of a reinforcing effect of a therapist's responding.

Hypothesis 7. Therapist assignment of homework (Rule 5) should predict client positive performance outside of session, assuming the client completes the homework assigned. Testing this hypothesis would examine the utility of having clients complete homework assignments, especially those based on successful FAP in vivo interactions. If completion of homework assignments encourages generalization, then the assignment of homework should become a regular FAP practice. Furthermore, the completion of homework

may be critical to testing the assumption that the client's daily environment supports the behavior changes made in session.

Hypothesis 8. Drawing parallels (Rules 1 and 5) should predict client improvement outside of session. Testing this hypothesis would determine the necessity of drawing parallels. Specific subhypotheses could examine the relative utilities of the differing types of parallels (e.g., out-to-in vs. in-to-in). This would guide a therapist's use of drawing parallels.

In general, these hypotheses could be analyzed using methods similar to those discussed above under Hypotheses 1 to 4 (e.g., visual inspection of the data, statistical tests such as lag sequential analysis).[3] In most cases, these tests would require slight modifications to the FAPRS system to include codes for specific therapist and client behaviors (e.g., client provides negative feedback to therapist). Astute readers will recognize that these hypotheses (and the specific codes that would be necessary to test them) are derived from the examples provided by the framework for logical FAP interactions. The five rules, when described in broad terms of behavioral principles, would be impossible to test in this manner. For example, it is unclear how one could assess whether a therapist is engaging in activities that are typically covert (e.g., watching for the occurrence of CRB, assessing the functional impact of the therapist's responding). This demonstrates the utility of the specific examples provided throughout this article. In addition to aiding dissemination and training of FAP, they suggest topographical behaviors that can be measured to explore FAP processes more thoroughly.

This realization occasions one concluding caution. As mentioned above, FAP is a complex, functional idiographic approach to psychotherapy. Because of this, those interested in FAP have had difficulty disseminating and researching it. It is hoped that this article provides one possible solution to this difficulty. In particular, it has relied on topographical descriptions and rules to exemplify the functional processes that compose FAP, and by zeroing in on that which is conquerable in the scope of one manuscript (that being the logical interaction) and setting aside conceptual concerns for the time being. Although this topographical approach has many merits, there is a danger. Conceptualizing FAP in this manner could lead to excessive attachment to topographical descriptions regarding how to conduct FAP (e.g., that a FAP therapist should always draw parallels, that a FAP therapist should always assess the impact of his or her responding). However, those are, again, conceptual concerns, and as they are primarily related to empirical matters, it seems unwarranted to decide them a priori. With the logical interaction framework, research can be done to test not only the hypotheses mentioned above but also the additive effects of other FAP techniques. This article has attempted

to prevent excessive reliance on topographically defined rules by frequently encouraging the consideration of the functional principles underlying the specific examples. Those interested in FAP would do well to heed this encouragement as they continue to explore and promote the therapy.

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Notes

1. The radical behavioral approach has also identified a functional process of punishment. Punishers more directly weaken behavior. Behavioral psychologists, including Skinner (1953), have consistently warned against the possible negative effects of punishment. In line with this position, functional analytic psychotherapy generally focuses on the use of positive reinforcement to shape client behavior.
2. Note that the specific examples (A, B, C, D) used in this article consistently represent four unique clients (A, B, C, and D) each with their own case conceptualization. Readers interested in an extended example of a logical functional analytic psychotherapy interaction are encouraged to read each of the examples for a single client (e.g., A) while ignoring the other text.
3. The final two hypotheses (7 and 8) would likely require some more advanced methodological approaches. A discussion of possible methods is beyond the scope of this article and is not provided here.

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