

A Renaissance in Residential Behavior Analysis? A Historical Perspective and a Better Way to Help People with Challenging Behavior

Steve Holburn

New York State Institute for Basic Research in
Developmental Disabilities

After a slow start, the popularity of applied behavior analysis for people with severe behavior problems peaked in the 1970s and was then battered down by the effects of methodological behaviorism, the aversives controversy, overregulation, and the inherent limitations of congregate living. Despite the ethical, technical, and conceptual advancements in behavior analysis, many people with challenging behavior live in futile environments in which the behavior analyst can only tinker. A radically behavioristic approach has become available that has the power to change these conditions, to restore the reciprocity necessary for new learning, and to bring residential behavior analysts more in contact with the contingencies of helping and teaching. The approach is consistent with alternatives that behaviorists have suggested for years to improve the image and effectiveness of applied behavior analysis, although it will take the behaviorist far from the usual patterns of practice. Finally, the approach promotes its own survival by promoting access to interlocking organizational contingencies, but its antithetical nature presents many conceptual and practical challenges to agency adoption.

Key words: person-centered planning, residential behavior analysis, history, challenging behavior, organizational contingencies

This paper describes and promotes an approach for helping people with severe behavior problems that has received relatively little attention from the behavioral community. In tracing the behavior-analytic history that preceded it, I discuss some of the difficulties encountered by behavior analysts in the past 20 years in applying the tools of applied behavior analysis in keeping with the philosophy of behaviorism. The account includes some of the positive developments along the way, as well as the obstacles faced by behavior analysts in helping people with challenging behavior. The argument is made that person-centered

planning increases opportunities for applied behavior analysts to make dramatic differences in people's lives, and that it can restore power to residential behavior analysis after 20 years of professional constraint. I start at the beginnings of our field, wend through a series of valiant but dwindling efforts to practice our trade, and wind up with a plea for behavior analysts to support person-centered planning.

Behaviorism Was Slow to Catch On

The experimental analysis of human behavior is not a new idea, but a review of its history shows that it did not catch on quickly. Behaviorism itself can be said to be over 80 years old if Watson's 1913 seminal paper "Psychology As the Behaviorist Views It" is used as the benchmark. His subsequent exploration with Raynor (Watson & Raynor, 1920), in which 9-month-old Albert was conditioned to fear a rat, would have stood as the first clinical experimental analysis had Albert

Appreciation is extended to Beth Mount, who taught me how to do person-centered planning.

I thank Al Pfadt and Larry Black for furnishing many of the materials on which this paper is based. I also thank Al Pfadt, John Jacobson, and Ira Cohen for reviewing a draft of the manuscript.

Address correspondence to Steve Holburn, Institute for Basic Research, 1050 Forest Hill Rd., Staten Island, New York 10314.

not been removed prematurely from the hospital. The plan was to recondition responding by pairing food with feared objects, a notion that proved fruitful just a few years later by Jones (1924) in a demonstration with children. (An alternate plan was to recondition Albert by stimulating his sex organs in the presence of the feared objects.) Given the effectiveness of Jones' early desensitization procedure, it seems odd that, as Wolpe (1982) contends, applied classical conditioning methods were not prevalent until the 1950s.

By the early 1930s behaviorism had become the dominant intellectual force in psychology (Harzem, 1995). By that time, many types of behaviorism were thriving (Harzem & Miles, 1978), but operant principles were yet to be introduced. It was not until 1938, a full quarter century after Watson's 1913 paper, that the principles of operant conditioning were described in *The Behavior of Organisms* (Skinner, 1938). After this event, more than 10 years elapsed before operant conditioning principles were shown to work with people. The first published experimental analysis of operant techniques with a human being is credited to Fuller (1949), one of Skinner's graduate students, who shaped and then extinguished a single arm-raising response by an institutionalized adult with mental retardation.

The pioneering work of Fuller hardly produced a flurry of investigations of operant conditioning with people. Such applications appeared at a snail's pace, as chronicled in the psychological literature, although some early reports were not widely circulated. An example is the work of Lindsley, Skinner, and Soloman (1953, 1955) in their clinical laboratory demonstrations of procedures with psychiatric patients at Metropolitan State Hospital in Massachusetts. To be fair, it should be noted that the prevailing journals were not very interested in applied experimental analyses, and there were "a lot of other operant things happening when Fuller

was doing his study" (O. Lindsley, personal communication, January 24, 1996).

A review of a few of the applied "firsts" shows that operant applications were spotty in the decade following Fuller's article and then increased rapidly. The first applied behavior analysis with children appeared in 1956 (Azrin & Lindsley, 1956) in which cooperative responding of 20 children was developed, maintained, and eliminated. The first experimental application of extinction using parents as trainers occurred a few years later (Williams, 1959). In this study, a toddler's bedtime tantrums were discontinued when the parents contingently removed themselves from the room. Later, a more extensive parent-training procedure was employed by Hawkins, Peterson, Schweid, and Bijou (1966), using a reversal design for a toddler with tantrums and aggression. In this study, a mother appropriately applied consequences to tantrums, aggression, and desirable behavior; next, she inappropriately applied consequences to that behavior; and finally, she repeated the initial procedures. In the first reported application of operant principles in a special education classroom, Zimmerman and Zimmerman (1962) eliminated tantrums and increased academic responding of 2 11-year-old emotionally disturbed boys. Shortly thereafter, an entire classroom was organized to facilitate operant strategies through programmed instruction (Birnbauer, Bijou, Wolf, & Kidder, 1965). Systematic application of reinforcement principles also was shown to be effective in nursery schools with children who were disruptive (Homme, DeBaca, Divine, Steinhorst, & Rickert, 1963) and socially withdrawn (Allen, Hart, Buell, Harris, & Wolf, 1964).

To help people with more severe impairments, behaviorists had to conduct treatment in institutional environments. In one such study, Ayllon and Haughton (1962) demonstrated that inpatient adults with anorexia and psychosis could be retaught to feed themselves;

in another, Wolf, Birnbrauer, Williams, and Lawler (1965) extinguished operant vomiting by a preadolescent girl. A more extensive application of operant procedures was used for Dicky, a 3-year-old institutionalized boy with autism, whose extreme tantrums, self-injury, and eating problems were reduced, while wearing his glasses, appropriate verbal behavior, and going to sleep on time were increased (Wolf, Risley, & Mees, 1964). Perhaps the most dramatic effects of operant procedures with autistic children in institutions were demonstrated by Lovaas and his associates, in showing how extreme self-injury was affected by reinforcement, extinction, and punishment (Lovaas, Freitag, Gold, & Kasorla, 1965; Lovaas et al., 1966; Lovaas, Schaeffer, & Simmons, 1965; Lovaas & Simmons, 1969). For institutional residents whose behavior problems were less severe, behavioral treatment could be organized for a group of residents, and it could be administered more efficiently through token economy programs. Such systems were established on wards or in sections of institutions, as demonstrated at Anna State Hospital in Illinois (Ayllon & Azrin, 1965) and Parsons State Hospital in Kansas (Girardeau & Spradlin, 1964).

Early Warning Signs of Treatment Problems

Through the 1960s and 1970s, pilot projects and special programs based on operant conditioning principles began to permeate institutions across the country. The popularity of the operant movement peaked in 1972, the year that Skinner received the Humanist of the Year Award, and the year that the biosketches and photographs of 42 prominent operant behavior shapers appeared in *Psychology Today* (Goodall, 1972). The article chronicled the rise of applied behaviorism, highlighting much of the institutional work cited above. It was becoming clear that applied behavior analysis was an effec-

tive tool for modifying the most challenging of behaviors, but it was equally clear that there were other factors, usually outside of the control of the behavior modifier, that determined the success or failure of behavior modification programs. As summarized by Thompson and Grabowski (1972),

Some were successful, some went by the way-side. Failures were often due to problems with funding, staff, and administrative support, and sometimes to a lack of understanding of the fundamental principles by those initiating the programs. (p. 9)

Similar concerns had been raised by Hopkins (1970), and before long, a list of formidable obstacles to implementing behavior modification programs in institutions began to accumulate (Reppucci, 1977; Reppucci & Saunders, 1974). Such factors were indeed frustrating to the residential behavior analyst, but there was another obstacle, inherent in the application of behavior analysis itself, that seemed to limit the effects of using operant techniques for severe behavior problems. The problem was that the remarkable gains achieved under controlled conditions were not generalizing to other environments (Lovaas, Koegel, Simmons, & Long, 1973; Sharp & Wetzel, 1969), despite warnings that generality would not automatically occur (Baer, Wolf, & Risley, 1968).

Through the 1970s and 1980s, there was an explosion of published demonstrations in which challenging behavior was eliminated or reduced using the single-subject ABA paradigm. These demonstrations were primarily technique-driven intervention packages for specific topographies of severe problem behavior (Hayes, Rincover, & Solnick, 1980; Pierce & Epling, 1980), similar in application to the diagnosis-treatment paradigm used in the practice of medicine. A number of investigators demonstrated how positive behavior changes could generalize to other environments, as described in Horner, Dunlap, and Koegel (1988). By the mid-1970s, institutions across the country were experiencing an infusion

of federal Medicaid funding to improve the conditions, treatment, and teaching of people in institutions, the places where people with the most serious behavior problems tended to reside. To maintain Medicaid funding, staff in the institutions had to comply with regulations to insure the health, safety, and active treatment of the residents. Ironically, a strong countervailing force, the deinstitutionalization movement, which called for the elimination of institutions, was taking hold during this period. Unfortunately, tens of thousands of institutionalized people with mental retardation continued to have significant behavior problems (Cullari & Ferguson, 1981), despite the promise of applied operant conditioning procedures in large residential settings (Ullmann & Krasner, 1965).

Behaviorism in Question

Behaviorism has faced an uphill battle in meeting the challenges of severe problem behavior. The obstacles cited above by Thompson and Grabowski (1972), including funding, administrative support, and staff know-how, are for the most part still with us. Such problems are still significant because people with the most challenging behaviors still tend to live in institutionalized environments, more commonly referred to today as intensive interdisciplinary treatment settings. As clarified by Wetzel (1992), institutionalized residential environments are typically thought of as locales that are isolated from the community, but they also refer to ways of organizing and regulating behavior. In this respect, institutions can be thought of as places, sets of rules that govern practices, or both. Given this distinction, it is important to acknowledge that many residential programs during the behavioral high-water days *were* effective, and of course there are effective residential systems in operation today.

An example of an effective residential system is Achievement Place (Phillips, Phillips, Fixsen, & Wolf, 1971),

now called the Teaching Family Model. Achievement Place has provided an enduring model of successful residential treatment for troubled adolescents, as borne out by Friman et al. (1996) in a recent longitudinal comparison study. It is a token economy program in which a married couple lives with four to eight juvenile offenders. It features (a) self-government, in which the residents have a say about the rules and routines; (b) an emphasis on normalization; (c) continuous evaluation that includes residents evaluating the teaching couple; and (d) rigorous teaching of social skills (Friman et al., 1996). In contrast, people with mental retardation and severe behavior problems rarely live in family-like teaching environments that are sensitive to resident countercontrol. They tend to reside in larger settings characterized by distant decision making. Interestingly, however, at least one study has reported success in reducing severe behavior problems in a behavior treatment program within a large institution, despite its "unmotivated staff who lack behavioral sophistication, a low staff-to-client ratio, and a poor physical and management environment" (Slama & Bannerman, 1983, p. 171).

Excessive bureaucracy aside, behavior analysts have been dogged by problems inherent in the type of behaviorism espoused in treating people with severe problem behaviors. We had adopted methodological behaviorism (see Day, 1983, and Moore, 1981, for elaboration of the differences between methodological and radical behaviorism). When I entered the field in the 1970s, it was popular among behavior modifiers to ignore feelings and other mental states. One motto was "if you can't observe it, it doesn't exist," and reliable observation required consensual agreement. We proudly emphasized experimental control and carefully measured one or two target behaviors, usually as a function of a single-variable intervention like time-out or positive reinforcement, or more complex treatment packages like overcor-

rection. Another motto was "the simpler the better," because simpler techniques were easier to describe, implement, and reliably replicate. Our graphs were precise and convincing, and were certainly more scientific than the methods other clinicians were using to evaluate their interventions. We used a technical language that made sense to us, although it sounded like a foreign language to many parents and staff, and sometimes even to other treatment professionals. However, for many of us, our methods rarely produced durable gains in the residential environment because the interventions were usually superimposed briefly on the naturally occurring contingencies that generated and maintained the problem behavior (Cullari & Ferguson, 1981; Holland, 1978). In retrospect, although we may have been procedurally competent, we failed to fully appreciate the interlocking political contingencies prevailing in the setting (Reppucci, 1977; Reppucci & Saunders, 1974), and few of us had sufficient influence over them.

Largely as a result of our methodological approach, much of the professional community came to believe that behavior analysis was simplistic and narrow (e.g., Evans & Meyer, 1990). A common but paradoxical misrepresentation of behaviorism emerged, an example of which was provided by Lovett (1985) in drawing from his experience as an institutional psychologist: "Behaviorism has made gains in its understanding by breaking complicated behavior into small, observable units. I am interested in seeing how that behavior serves the person's sense of adaption to his or her environment" (p. 12). Lovett's broader interest is more behavioristic than he realizes (although unidirectional), but his criticism of the focus on experimental control and measurement is deserved to the extent that the emphasis on demonstrating a reliable functional relationship between a variable and a problem behavior overshadowed an analysis of the environment of which that behavior

was a function. A representative portrayal of behaviorism was recently provided by Bradley (1994), a policy analyst in the field of developmental disabilities, who described the fate of residential behavior analysis in the 1970s: "The practice of behaviorism became an end in itself, bound by rigid regimens and incapable of responding to root causes" (p. 17). Unfortunately, this sentiment probably reflects many professionals' views of behaviorism today.

No behaviorist will deny the importance of precision and control. Indeed, it was the techniques of operant conditioning that provided hope for thousands of people whose behavior was so uncontrolled and dangerous that containment in the back wards of institutions was thought to be the best form of care and protection. The point here is that the successes of the early behavior analysts put behaviorists on a roll in the field of developmental disabilities, and then the behaviorists (and behaviorism) seemed to lose impetus. Behaviorists in the 1970s and 1980s had to ask themselves many questions. If behaviorism had shown the way to help people with the most extreme behavior problems, why were these people still living in impoverished institutional environments? Why was there such a large rift between the successful procedures in the professional journals and what actually happened to most people with severe behavior problems? If the problem of generalization was not resolved, would these people live out their lives in confinement? How socially important was our behavior analysis (Baer et al., 1968)?

Behaviorists Trapped in Unfavorable Environments

A variety of contingencies recently converged on behavior analysts, limiting their abilities to help people with the most challenging behavior. These influences derive from the aversives controversy, overregulation, and the in-

herent limitations of large-group congregate care and treatment.

I believe the aversives controversy greatly weakened the public trust extended to behavior analysis. In particular, it hurt the image of behavioral practice with institutionalized people, already shouldering criticism about how it mechanistically controlled and fragmented people without regard to their feelings, and now it was charged with unnecessarily inflicting pain and discomfort on defenseless people. Skinner's clarifying statement that humanely promoted aversives as a last resort (Griffin, Paisey, Stark, & Emerson, 1988) was, at best, a pyrrhic victory. Words like *punishment*, *extinction*, *control*, and *aversive* did not help much either (Foxy, 1996; Schreibman, 1995). There were claims of indiscriminate uses of aversive procedures, which some behaviorists denied (Paisey, Whitney, & Hislop, 1990), but others acknowledged that some behaviorally trained professionals had committed highly questionable acts while implementing behavior programs (Thompson, Gardner, & Baumeister, 1988). When the emotional, ethical argument to ban aversives overtook even the most rational of clinical judgment, behaviorists seemed to be checkmated. As exemplified by Schrader and Gaylord-Ross (1990), aversive stimuli "drew a humanistic response of disdain" (p. 403), even when their use was successful for the most intractable cases of self-injury.

Of course, one result of the controversy was to reduce explicit aversive interventions, a consequence compatible with Skinner's life-long admonition against the aversive control pervading our society. Unfortunately, in the residential environment, as Skinner (1972) would have predicted, many aversive consequences simply continued less conspicuously with euphemistic labels such as *quiet time*, *touch control*, and *calming techniques*, typically taught to direct-care staff by behavior specialists and programmed in a hierarchy of restrictiveness (Mori & Masters, 1980).

As the debate raged on, an anticonsequence sentiment appeared. There was a call for behaviorists to liberate people with challenging behavior from oppressive consequences and instead offer tolerance, warmth, and bonding (McGee, 1988a, 1988b). Some programs even banned the use of explicit reinforcement. The controversy must have contributed to the subsequent popularity of antecedent analyses for challenging behavior, but it is more difficult to assess its effect on the rise of mentalistic treatments for challenging behavior, such as sensory integration (Ayres, 1978, 1979), gentle teaching (McGee, 1993; McGee & Menolascino, 1991), facilitated communication (Biklen, 1993; Crosley & McDonald, 1980), auditory integration (Berard, 1993), and biobehavioral state analysis (Guess & Carr, 1991; Guess et al., 1988).

Ironically, as the aversives controversy gradually eroded the support for residential behavioral intervention, the field seemed to accept the coercive practice of compliance enforcement instituted by the ICF-MR (intermediate care facilities for the mentally retarded) Medicaid program, under which violations in standards of health, safety, and active treatment were punished by warnings or actual removal of established funding. The adverse effects of this powerful contingency pervade many aspects of care and treatment of people in such programs (Holburn, 1990, 1992; Meinhold & Mulick, 1990; Shea, 1992), and in particular, the intrusions of bureaucratic rule following seemed to neutralize the role of the behavior analyst. In overregulated interdisciplinary treatment environments, the reciprocity inherent in the face-to-face interactions between the behavior specialist and client is replaced by a deferred and ponderous team-based feedback system of scheduled evaluations, plan development, and plan revision. Unfortunately, the requirements of interdisciplinary planning and paperwork to verify adherence to this cycle meant that the be-

havior analyst was less available to directly assist the person whose behavior needed to be modified, or to teach the staff members who were trying to assist the person. To maintain good record keeping between standards-compliance audits, agencies bridged the gap with their own internal audits and arranged in-service training workshops such as "Charting with a Jury in Mind" (Theiss, 1990).

The threat of losing funding and jobs (or even facing a jury) appears to have been more powerful than anticipated. The written plan of the behavior specialist became more scrutinized than its effects, and the documentation by the direct-care staff that the plan was carried out became more important than its actual implementation. Now the behavior specialist was directly participating in the contingencies of agency survival and losing contact with the direct contingencies of helping, teaching, and learning. The term *behavior police* emerged (Dana, 1993). As this was happening, another shift in the role of the team expert on challenging behavior was taking place. Glenn, Ellis, and Hutchison (1993) reported that the function of the residential behavior specialist was being constrained to primarily that of problem behavior reduction, in contrast to skill acquisition, resulting in the deployment of behavior specialists as deceleration professionals. The authors noted a diverging path of the field of applied behavior analysis and behavioral services in institutions: Most of the relevant research in the *Journal of Applied Behavior Analysis* for 25 years focused on behavior acquisition, but the professional behavior specialists reported focusing mainly on deceleration objectives. This deceleration emphasis was noted 15 years earlier by Holland (1978), who contended that behavior analysts were expected to rapidly suppress behavior that is deviant from the existing norms of the setting because they are essentially hired to maintain the status quo.

The ill-fated convergence of regula-

tory and institutional contingencies that (a) separated behaviorists from the subject matter of helping and (b) constricted their scope of application combined to promote the development of professionals with limited skills in carrying out an extremely narrow, if not unrealistic, behavior specialty. In other words, behaviorists were becoming competent in standards verification, and when removed from the person and charged with extracting negative behavior like a surgeon, many became ineffective in behavior analysis.

The effects of methodological behaviorism and the outcry to ban aversive control in congregate-care environments might have weakened the integrity of residential behavior analysis to the extent that few people in the professional community noticed the behavior specialists' conversion from behavior analyst to compliance analyst. The role of behavioral-standards enforcement seemed reasonable in the scheme of things, and it simplified matters: If we could get staff to carry out the behavior plans, the problem of implementation would be solved. Seductive as it was, the behavior-plan enforcement approach did not work very well because of the limitations imposed by the system of congregate care itself.

I have found that people with the most challenging behavior tend to be grouped closely together in environments that are replete in aversive qualities. These environments are often noisy, routinized, chaotic, boring, and even dangerous. Some of these features and their combinations are constant, but the salience of others seems random. Although the inhabitants do not control the contingencies that are responsible for these conditions, it can appear to an onlooker that the conditions are brought about by the disruptive behavior of those inhabitants. Of course, other people do constitute much of the controlling environment, but it is a different circle of people who create the physical aspects of the environments, determine the groupings,

and administer the programs. The occupants have little say over where they go, what they do, or with whom they spend their time. Much of the time is spent waiting. Ostensibly, the waiting is for programming to ameliorate behavior problems, to establish skills for living in the community, or to teach leisure skills, but in truth, very little new learning takes place in such settings. For example, Hile and Walbran (1991) found that in a facility for people with developmental disabilities that received generous ICF-MR Medicaid funding for active treatment, teaching occurred less than 2% of the time.

Professionals who work in the clinical trenches of bureaucratically governed living environments refer to them as pathetic (Himadi, 1995). Administrative control governs nearly all aspects of a person's life, including the activities of eating, sleeping, and bathing. There is not much give-and-take in such environments. It is simply not possible for staff members to come under the influence of (or differentially respond to) the behavior of the *individual* when they are responsible for the health and safety of a sizable *group* of people who collectively exhibit a myriad of behavior problems. Under such conditions, extremely excessive behavior often results in consequences to everyone in the group, but smaller changes in behavior (desirable or undesirable) are usually of little consequence. When the capacity of the employee to establish reciprocal response patterns is restricted by competing system-centered contingencies, the reinforcers should be few and often noncontingent. Conditions seem to favor the selection of a kind of system-centered conformity, and eventually the repertoire likely appears dull and limited. Such conditions also probably potentiate automatic sensory reinforcement that might maintain unusual behavior like stereotypy and self-injury. Plainly speaking, an observer might say the person has no choices, nothing to do, is unmotivated, and has turned inward.

I hope it is clear to readers that the blame for the conditions described above is not being attributed to behavior analysts or to the procedures we employ. In fact, the behavior analyst working in an undesirable bureaucratic system can fall victim to the same contingencies that ultimately negatively influence the consumer (Reppucci & Saunders, 1974). It is the institutional structure and its contingencies that appear to have pigeon-holed applied behavior analysts into a narrow and unproductive corner of the residential care business. Behaviorists have had little or no control over the cultural contingencies in congregate settings that have prevented them from doing behavior analysis.

The situation in which the behavior analyst is required to address problem behavior without having access to important contingencies is depicted in Figure 1. In this representation, which is oversimplified to illustrate a fixed system of essentially unidirectional influences, the behavior analyst is confined to a minor role in the life of the person with challenging behavior. As a member of the traditional interdisciplinary or clinical team, the behavior analyst has little or no influence on the undesirable living conditions that affect the behavior of the client or on the organizational practices that affect those conditions. The unidirectional arrows in Figure 1 indicate nonreciprocal effects. An additional one-way arrow could have been drawn from the organizational issues rectangle to the team circle to signify that the actions of the behavior analyst are not really independent of the organizational culture, but are more like its product in a hierarchy of influences on the behavior of the client. Note that Figure 1 depicts a closed system of contingencies that is isolated from the greater community. (See Mattaini, 1996, for examples of diagramming interlocking cultural contingencies.)

Unfortunately, and not to add insult to injury, the roles to which some of us have become relegated actually pro-

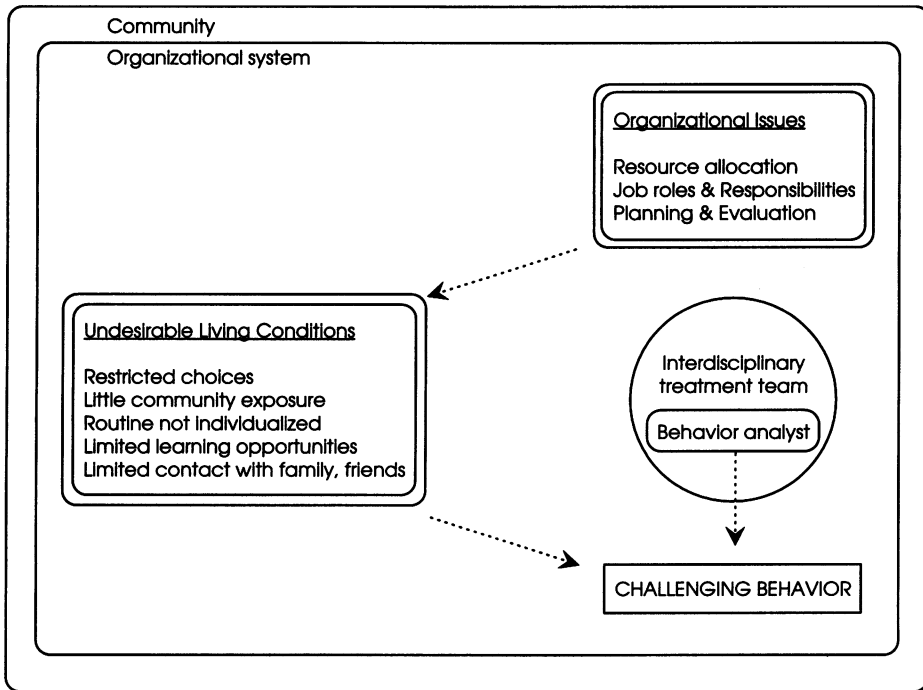


Figure 1. The role of the behavior analyst as a member of a traditional interdisciplinary team in a fixed residential system of unidirectional influences that affect challenging behavior.

vide functional support to the system that perpetuates those contingencies. As stated by Himadi (1995), who contends that behavior analysts have lost their power as effective agents of change in institutional systems, "Behavior analysts continue to work in situations in which managers and bureaucrats arrange the critical contingencies. The mandate for the applied behavior analyst to fix problematic behavior within an essentially oppressive system may only contribute to the maintenance of that system" (p. 161).

The compromised position of a residential behavior analyst is sometimes apparent in the written behavior plan. When the behavior analyst is required to address severe problem behavior but is unable to change crucial circumstances, the behavior plan typically will consist of either (a) weak and ineffective reinforcement contingencies (usually appended with descriptions of back-up physical interventions listed hierarchically in order of restrictive-

ness) or (b) a no-nonsense, get-tough procedure entailing stringent reinforcement or punishment contingencies or both (also with the usual back-up physical interventions). An example of (a) is a plan that calls for praise reinforcement every 45 min for the nonoccurrence of targeted problem behavior. In this case, the behavior analyst is just tinkering in the environment, accomplishing little benefit but producing no harm. If the behavior analyst uses (b), the get-tough approach, an intrusive process begins, and the behavior is met head on. The person must either be deprived of a potent reinforcer in an environment where reinforcement is usually scarce or experience an undesirable consequence (punishment) in an environment already saturated with unpleasant conditions. However, the arrangement of stringent contingencies in harsh and disruptive environments can worsen existing problems and even generate new ones. Such contingencies often contribute to a history of contra-

dictory consequences, and they can exacerbate an existing psychiatric or neurological disorder (Lowry, 1997). The reason behavior plans are appended with standard listings of physically restrictive interventions is that the plans do not work, and the plans do not work because it is impossible to establish effective contingencies in bad environments. Such are the environments in which many behavior analysts have become trapped.

We've Come a Long Way

The focus thus far has been to explain the diminishing impact of residential behavior analysis since it peaked in the 1970s, pointing the finger of blame at methodological behaviorism, the aversives controversy, overregulation, and the inherent limitations of congregate-care living. The account might seem so dismal that readers surmise a failure to appreciate the improvements in behavioral practice. On the contrary, the ethical, technological, and conceptual advancements that have occurred are impressive. We have come a long way since the early work of Watson and Raynor (1920), most noticeably in the *ethical* sense. Today, we would not intentionally condition an infant to fear a rat, nor would we plan to recondition the infant by showing feared objects "and simultaneously stimulating the erogenous zones" (p. 13). We are also more cautious in withdrawing treatment. For example, in the Fuller (1949) study, arm raising was extinguished to demonstrate experimental control, although this was the first time the astonished caretakers could ever recall this "vegetative organism" learning anything. Likewise, Hawkins et al. (1966) demonstrated experimental control by teaching a mother to reinforce inappropriate behavior and ignore appropriate behavior. Today, such procedures are unnecessary and considered to be counterhabilitative.

Behavior analysts are more careful now to protect the rights of consumers,

particularly those with the least countercontrol. All behavior analysts know that the humanistic least drastic means and least restrictive alternative principles now help guide the selection of consequences and function as general rules designed to insure that people are not made unnecessarily uncomfortable. Seasoned behavior analysts watched how this application of unpleasant consequences, in the order of least to most unpleasant, replaced the converse principle that punishment should be intense and immediate, a procedural tactic shown to shorten the punishment period and obviate habituation. This axiom of applied punishment arose from the Azrin and Holtz (1966) study, but its relevance waned as the field's attention was turned to alternative approaches to challenging behavior. Intense and immediate punishment is rarely programmed in the field of developmental disabilities today; in fact, the word *punishment* itself has become a bad word in our field (Foxy, 1996). In any respect, the decline in the use of aversive procedures is an important achievement.

Perhaps the greatest recent *technological* advancement in applied behavior analysis, or at least the most popular, is the development of pretreatment functional analysis techniques and instruments that have become available to the behavior specialist. Now we have a variety of ways to assess the occasioning circumstances and consequences related to severe problem behavior, and thus we can implement more positive approaches (Carr, 1977; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; O'Neill, Horner, Albin, Storey, & Sprague, 1990; Repp, Felce, & Barton, 1988; Sturmey, 1991; Touchette, MacDonald, & Langer, 1985; Van Houten & Rolider, 1991). The use of such information in designing a treatment strategy is considered positive or nonaversive if we can manipulate the identified variables controlling the challenging behavior, and especially if we also can establish and maintain competing response classes.

The functional assessment approach has become the zeitgeist in behavior analysis of severe problem behavior.

One important *conceptual* innovation that can contribute to the analysis of problem behavior is Michael's (1982) distinction between establishing operations and discriminative stimuli. Briefly, discriminative stimuli are conditions that increase the probability of responding that produces reinforcement because those stimuli were associated with such responding in the past. Establishing operations are prior events or conditions that alter the effectiveness of certain consequences, and in doing so, they automatically alter the function of more immediate stimuli associated with responding. They also evoke behavior that preceded those consequences in the past. Less technically, establishing operations motivate us because they change what we want, whereas discriminative stimuli tell us when we can "go for it." When we want something, we repeat the way we got it before, and only then do circumstances that guide us toward what we want have meaning for us.

The distinction between establishing operations and discriminative stimuli is relevant if it can help us to understand the mysterious causes underlying problem behavior, so often relegated to mentalistic explanations like cognitive processing deficits or reified descriptions like explosive personality disorder (Holburn, 1994). Practitioners might be able locate and alter many types of antecedent variables that evoke problem behavior, even variables that are remotely antecedent to the behavior. Gardner, Karan, and Cole (1984) furnished a rare example of the promise of such analysis in a study that showed how temporally distant events (e.g., weekend family visits) increased the likelihood that certain immediate stimuli (e.g., being teased by peers) would give rise to aggression. The effects of events that remotely precede contingencies of the moment have been noted earlier (Bijou & Baer, 1961; Kantor, 1959), and there has

been a recent challenge to the field to analyze their role in the variability of severe behavior problems of people with developmental disabilities (Emerson, 1993; Halle & Spradlin, 1993; Horner, Vaughn, Day, & Ard, 1996).

But We're Still Tinkering

It is a paradox that so many people with severely challenging behavior do not benefit from advancements in applied behavior analysis. I believe this discrepancy is due to the inability of most practicing behavior analysts to affect the most important variables in the life of the client. For example, consider a hypothetical case in which a functional communication approach might eliminate self-injury under certain conditions. Suppose we teach Bill to press a button that says, "I want to be alone in my bedroom for a while," a response that is functionally equivalent to self-injury during dinner in the group home, which tends to be chaotic and unpleasant. This approach might well replace or reduce self-injury under these conditions, but if Bill's living environment is laden with aversive conditions that frequently occasion a variety of his challenging behaviors, we should teach Bill to say "Get me out of this place!"

The functional communication approach is not being disparaged here, but its application for many people with serious problem behavior is tantamount to tinkering. Likewise, one must question the significance of identifying establishing operations of, say, disturbed sleep or spending the afternoon waiting and bored if these conditions cannot be controlled. Such circumstances do not negate the importance of understanding establishing operations, but the utility of an analysis that discovers their role in motivating challenging behavior is limited unless they can be modified.

Incidentally, Michael (1982) noted how the term *establishing* implies "increasing," but the term also refers to decreasing behavior, and thus should

TABLE 1

Proposed alternatives to improve the image and effectiveness of residential applied behavior analysis

Obstacles to residential behavior analysis	Proposed alternatives to improve residential behavior analysis
Many people living together in inflexible environments	Smaller, responsive living arrangements
Generalization of skills to community	Teach skills in the community
Rule adherence to maintain program funding	Fewer, simpler rules; more contingency contact
Methodological behaviorism	Develop consensus for behavior plan that addresses quality of life
Technical jargon	Common language of community
Role of deceleration professional and compliance analyst	Behavior analysis of lifestyle, organizational contingencies, and alternate skill acquisition

be considered to include “abolishing” effects as well. In this respect, Bill’s waiting all afternoon with nothing to do could momentarily establish aversive properties to being alone in his bedroom, so that now, as dinner’s chaos and commotion unfold, his pressing the bedroom button is not likely. Simultaneously, the afternoon waiting could have potentiated attention as a reinforcer during dinner, thereby increasing the likelihood of problem behavior that generates attention. Pressing the bedroom button is still functionally equivalent to escape-motivated challenging behavior, but the function of the challenging behavior has been altered. The behavior is now attention seeking, and the staff member whose attention is being sought is concentrating on fixing dinner and quelling other disturbances. Waiting with nothing to do, a nearly invisible culprit, has made the dinner chaos tolerable, attention seeking likely, and the bedroom aversive. Unfortunately, such conditions and their unplanned effects and countereffects are common in residential treatment environments, but behavior analysts are usually called upon to arrange decelerative contingencies for these effects, which can mislead and confuse the identification of more root sources of challenging behavior. Until we can arrange for more suitable living conditions, we can only tinker.

A New and Radically Behavioristic Approach for Helping People with Challenging Behaviors

Table 1 summarizes some of the obstacles faced by behavior analysts that have been discussed thus far, and it proposes alternatives for improving the image and effectiveness of residential behavior analysts. In reviewing the suggested remedies, many readers will see nothing new; in fact, some residential behavior analysts have held similar aspirations for so long that these alternatives might sound like common knowledge. What *is* new for behavior analysts is the opportunity to become involved in a group process whose goals are nearly identical to those suggested remedies. I have become involved with such an approach in helping people with severe problem behavior, although the approach has not yet been adopted by mainstream behavior analysis. It is rooted in the normalization principle (Wolfensberger, 1972), aligned with the new paradigm in developmental disabilities (Bradley, 1994), and contrasts sharply with conventional clinical problem-solving strategies (Pfadt & Holburn, 1996). The approach has various names, including *personal futures planning* (Mount, 1992b, 1994) and *lifestyle planning* (O’Brien, 1987a, 1987b). The most commonly used phrase is *person-*

centered planning, an umbrella term that seems to represent all of the technical variations on a similar theme.

Only a few behavior-analytic investigators have written about their experiences with person-centered planning and its effects (Horner, Close, et al., 1996; Juracek et al., 1994; Kincaid, 1996; Risley, 1996), although for the most part, its philosophy and practices are consistent with radical behaviorism. Ironically, the criticisms of behaviorism helped to promote person-centered planning, but those are criticisms about the methodological behavioristic approaches referred to earlier. Person-centered planning does not contain anything new per se, but its particular combination of principles and processes is unique, and it offers life-changing possibilities for people with challenging behavior. For behavior analysts, I believe it offers an opportunity for a fresh and significant turn. What follows is a brief overview of person-centered planning for people with challenging behavior and an explanation of how it can strengthen the impact of residential behavior analysts.

Person-centered planning is a way to bring together the most important people in the life of a person, including that person, to help plan a new lifestyle in accordance with the person's interests, talents, and preferences. Participation is voluntary; the venture will not succeed if imposed. The planning group, often referred to as a "circle of friends" or a "support network," ideally is a diverse group, not comprised of entirely human-services workers. Of course, if the focus person has challenging behavior, a behavior specialist should be involved, and other professionals should be invited if their expertise is germane to the supports and services that will be needed to assist the person in the new situation. Some members should have direct contact with people in authority. There should be a person on the team who has a strong personal relationship with the focus person and who acts as a kind of superadvocate. It is also beneficial if a

few members are familiar with the local community, and who are themselves involved in community organizations and associations.

The team makes a commitment to convene well into the future to plan, adjust its response, and give mutual support and reinforcement. It does not resemble the traditional clinical planning process with its hierarchy of authority, nor is technical language prominent. Professionals tend to listen, while family members, friends, and others who spend the most time with the person have the loudest voice. The process identifies and builds on the person's strengths and capacities; it focuses on the deficits and problems that are outside of the individual—in the home, day program, school, and community. Inner problems, like neurological deficits, are not denied, but they are understood in the context of the environment. Feelings are understood as the products of life experience.

A skilled facilitator orchestrates the process, guiding the group with a few core principles or goals, usually called values, which include community inclusion, personal autonomy, making a social contribution, and developing and maintaining relationships (especially with family). These are the familiar values of the new paradigm in developmental disabilities, and they coincide with the suggestions in Table 1 for improving the image and effectiveness of residential behavior analysis. During the first few meetings, a *personal profile* is developed. The facilitator records or maps what is said on large sheets of paper that everyone can see, often with color-coded themes and a sprinkling of graphic representations (little drawn pictures called ideographs) so that everyone can understand. The maps remain on the wall during the meetings, and they are often strategically redisplayed in subsequent meetings. They help the group to identify what is known about the person's history, important people and places, what the person enjoys doing and dislikes doing, the choices currently avail-

able, the daily routine, behavioral issues, and so forth. The facilitator gleans the "folklore" of the person, information that would not usually appear in the official record. During this information-gathering phase, it is valuable to have the contributions of people who have known the focus person for many years.

Common themes emerge from the mapping, and new information about the person, which no one person could have known alone, becomes available to all participants. The maps graphically clarify historical and current contingencies by enumerating important antecedents and consequences. Participants develop a new understanding of the person. There is a tendency to infer feelings and become empathetic; some people gain insight about the client's behavior problems. Occasionally, an obvious solution emerges. The facilitator uses the maps to guide the group in crafting a *common vision* of a desirable future situation, encouraging as much input as possible from the focus person.

Acknowledging its opportunities and obstacles, the group brainstorms strategies to make this ideal situation (or a realistic variant of it) happen, and members volunteer for specific tasks. Various roles might entail insuring experiences in the community, negotiating with administrative staff, developing a budget, or simply providing transportation for a family member to attend meetings. Momentum develops as the group first attacks a few immediately pressing issues that are relatively easy to resolve. More significant matters require greater planning and negotiation with people outside of the planning team. At follow-along meetings, the group reflects on what has happened, reinforces accomplishments, and develops additional action steps to keep the process moving forward. New issues emerge as the person's life begins to change. The group remains focused on an individualized lifestyle that fits the person, and it periodically reviews its commitment to the above

values. Person-centered planning is an on-going problem-solving process that usually runs up against system obstacles. As such, the group can be the source of organizational changes needed to insure a good fit between the person and the system of support. Accordingly, person-centered planning promotes the establishment of "higher level" projects that facilitate its philosophy and goals through organizational change.

Now We Can Help

First and perhaps foremost, this process entails identifying and changing the relevant circumstances in the life of the person; this is the first opportunity I have had in my career as a behavior analyst to make such an impact. This is not tinkering. It is a way to reconstruct the world the person lives in, including the home, the day activities, the people in that world, and so forth, all in accordance with personal preferences and capabilities. As Risley (1996) says, we are "getting a life for people" (p. 429). These radical changes, even if they are made solely to enhance the person's quality of life, can result in immediate reductions in challenging behavior, largely in part by the sweeping modifications in establishing operations and occasioning stimuli. Entire classes of stimuli associated with problem behavior that were embedded in old sequences are now absent, and the new stimuli present when going to preferred places, doing interesting things, and spending time with family and friends are likely to elicit and occasion feelings and behavior that are incompatible with aggression, property destruction, and self-injury. Note that the initial improvements in behavior occur without implementing rigorous contingency plans or without taking direct aim at the challenging behavior. Of course, such broad changes, by themselves, will not resolve all behavior problems, but they are likely to constitute an environment in which direct contingency manage-

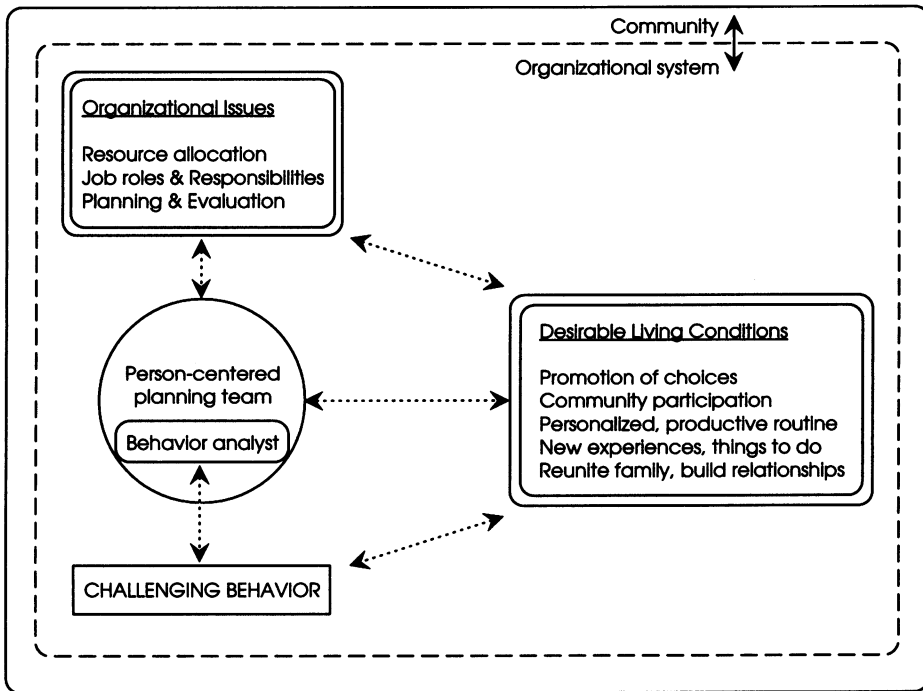


Figure 2. The role of the behavior analyst on the person-centered planning team and the resulting interlocking contingencies that affect challenging behavior.

ment and other technical interventions can actually be effective.

As represented earlier in Figure 1, the kind of impact described here is not within the purview of the behavior analyst who operates on the conventional interdisciplinary team. However, as a member of a group whose goals confront a variety of molar variables associated with challenging behavior, the behavior analyst acquires more power as an agent of change. Figure 2 represents such a role. Here, as a member of the person-centered planning team, the behavior analyst has access to important contingencies that affect challenging behavior directly and indirectly. As shown in the figure, the team influences conditions on the right side of the diagram (the values inherent in person-centered planning), and it is also connected to the system of organizational contingencies that can support the arrangement of those conditions. The team is better able to plan such conditions with the expertise of

the behavior analyst, who in turn can establish a more reciprocal relationship with the person in doing things that foster those conditions (instead of focusing on deceleration plans or compliance activities). Note that the relationships among all sets of contingencies in Figure 2 are reciprocal, as designated by the two-way arrows, including the relationship between the system and the greater community. Depending on the vantage point, the system has been opened up to the community, or the community has penetrated the system.

The tenacious adherence to community inclusion fortuitously strengthens the capability of the residential behavior analyst. Some consumers have been waiting most of their adult life while we try to correct, modify, and otherwise prepare them to live or work in a less restrictive setting, but a formidable obstacle in this readiness model has been the failure of skills learned in the treatment setting to occur in the

larger community environment. Person-centered planning sidesteps much of the generalization problem by arranging the services and supports necessary to sustain the person in the target environment. As stated by O'Brien (1987a), "The greatest barriers to community living are not inside people with severe handicaps or in the nature of community life but in the way necessary resources are organized" (p. 175). This does not mean that intervention is unnecessary; this *is* the intervention. More traditional behavior-analytic applications will likely be needed as well, and they occur in the target environment. Moreover, the behavior analysis of challenging behavior is particularly significant if it can help to sustain a productive and satisfying lifestyle.

The emphasis on community can help the residential behavior analyst in another way. It offers resolution to a common conundrum for a person with challenging behavior who is trapped in an environment that contributes to the challenging behavior. Escape to a less restrictive environment offering a better quality of life is usually contingent on improved behavior that is not likely to improve without changes in quality of life. Altering these significant molar variables at the outset, instead of requiring behavior change as a prerequisite, seems more consistent with the philosophy and practice of behaviorism.

The wider latitude of the behavior analyst on the person-centered planning team counters the role of deceleration professional. The pressure to come up with a plan to deal with behavior excesses is deferred by discussion about creating opportunities and building capacities. The role of the behavioral-standards compliance specialist is replaced by the role of the behavioral engineer who establishes new routines and repertoires in more stimulating environments. Overinstructed regulatory practices are replaced with unique ways of applying the principles of person-centered planning (its rules),

which can bring us back in contact with the natural contingencies of helping and teaching. Taking aim at broad rules designed to achieve inclusion, respect, competence, and happiness, which are usually already stated in an agency's mission statement, is consistent with research suggesting that performance can be improved by eliminating rule microspecificity and reinforcing more general rules like "keep your eye on the ball" (Hayes, Brownstein, Haas, & Greenway, 1986).

One particularly behavioristic rule of person-centered planning is that people should make more choices for themselves; if applied rigorously, this rule can bring the person with challenging behavior in contact with new sets of contingencies. Allowing the person the freedom to make choices and teaching the person to do so can be translated behaviorally as countercontrol in a restrictive environment and shaping new behavior, respectively. In contrast to traditional congregate-care living environments, a supportive community can be a fertile, yielding environment that enables the reciprocity necessary for new learning. If we can teach the person to recognize and exert more control over the circumstances that help to achieve personal goals and aspirations, we are fostering self-determination.

A feature of person-centered planning that gives it wide appeal is its language. It uses plain English (Lindsley, 1991). System-centered terms, such as *residential program*, *vocational service*, and *recreation therapy*, are replaced with the person-centered equivalents of *home*, *job*, and *fun*, respectively. True, this language can be vague, but it hits home; everyone understands it. Its words and phrases participate in stimulus equivalence classes that are inconsistent with system-centered talking and thinking, making it easier to convey that people with challenging behavior enjoy the same basic reinforcers and benefit from the same basic conditions as everyone else.

Hearing the Voice of the Person

An axiom of person-centered planning is that the demands of the system often speak louder than the people it serves (Mount, 1990). But how can people who have been conditioned by the culpable system be brought to listen more to the voice of the person? First, the conditions of the person-centered planning meeting itself should be arranged to facilitate talking about the person as a whole person, rather than a client with deficits and behavior problems. It is advised to meet at a place in the community, perhaps at family member's home or another location devoid of system distractions and other stimuli that are likely to evoke "system responses." The atmosphere of the meeting is informal and social; food is often shared, and members get to know each other. The focus person and those who know the person best are encouraged to sit up front and contribute the most. Professionals are encouraged to talk less than usual, at least during the first few meetings. The facilitator must be a keen listener and draw out information from everyone in the group. Participants' verbal behavior is recorded and appears collectively as the maps for all to examine.

As the maps accumulate and themes about the person become apparent, a common understanding emerges. Participants observe how what they say becomes part of the vision for the person, and how their voices shape the plan or the contingency arrangements that will bring the vision to fruition. Metaphorically, participants become stakeholders who are invested in the process; they become empowered. The group as a unit becomes a single, amplified voice for the person. The individual has become a member of a group of people who agree on their objectives and means. Acting as a member of that group, the individual is more powerful in tacting and manding reinforcers for the focus person than if he or she was acting alone.

The voice of the person culminates

in a vision or a story about the future: "If we consider the life of the focus person to be a story deserving to be told, then it is our job to recapture the story, and transform the story from one place to the next" (Mount, 1992a, p. 1). The planning team is well positioned to recapture the story if, as held by White and Epstein (1990), alternate stories incorporate previously neglected but crucial aspects of a person's life experiences. The person-centered planning team has uncovered hidden capacities, preferences, and talents that have gone unreinforced in environments that have functioned mainly to protect the person. The job of the group is to design an environment that will select the behavior of the person in the story.

Of course, no matter how plausible the vision, the group cannot deal with the actual future of the person. The scenario is a verbal construction, based on the history of the person. In the absence of direct contingency contact with future events, the vision of the future is at least a verbal antecedent and is probably better conceptualized as a rule (Hayes & Wilson, 1993). If the vision is a rule, it is specifying (more like estimating or imagining) contingencies of the future, and the correspondence between the rule and the uncontacted contingencies of the future (the accuracy of the rule) must be related to the degree to which the group has understood the person's history, preferences, capacities, and so forth. If the planning team has done its job, the degree to which the story sounds fictional is proportional to the degree to which important life aspects have been neglected, rather than the grandiosity of the group, as it might appear to an outsider who knows only the dominant story of the person in the system.

Personal and Organizational Change

Person-centered planning is so environmentalistic in strategy that it is easy to overlook phrases like "unlocking inner strengths" or "developing

capacities within," and the less conspicuous mentalistic vernacular that prevails in our culture. The following passage by Mount and Patterson (1986) illustrates the underlying environmental approach of person-centered planning, as it gently guides the group away from the traditional focus on repairing the person:

The process shifts the focus of the work group from working to change the person, to working to change the organization. Staff begin to change themselves, the environment, the routines of the focus person, and the processes of the organization. Learning to make these changes is prerequisite to the possibility of change in the focus person. (p. 8)

How do staff begin to change themselves? The contingencies responsible for such change lie primarily in the verbal behavior of the group. Staff members are encouraged to discover new ways of *seeing* people (Mount 1992b, 1994), and they are reinforced for saying so. They might *think* differently about the focus person when uncovering forgotten talent or hearing small success stories about the focus person. They might *feel* differently about the person after developing the personal profile (mapping the history and current conditions of a person with significant behavior problems can bring forth sadness, anger, even guilt). Staff members may become more humble by allowing themselves to take direction from individuals and their families. They may come to *know* the person differently through interactions in new contexts (different locations, people, routines), as new repertoires are established. These changes are often described as transforming, but they can be disruptive. The verbal community of the person-centered planning team can generate distinct verbal and nonverbal repertoires that appear to be opposed to other existing repertoires, and the employee may become aware of conflicting selves (see Skinner, 1974).

How can we change the processes of the organization? The developers of person-centered planning acknowledge

that when individual person-centered planning endeavors are detached from efforts to change the organizational culture, they will likely become unproductive and ritualistic (Mount, 1994; O'Brien, 1987a). Accordingly, a number of methods to gain access to interlocking organizational contingencies are employed. Recall that an individual's planning team should consist of a few members who have direct contact with people in authority. The contact can be formal or informal, and the people in authority can be agency-based administrative personnel or people external to the agency. Such connections can be immediately useful to an individual planning team, and they can strengthen more organized methods of influencing the organizational culture.

More measured endeavors to affect organizational decisions consist of larger scale group activities with such names as listening groups, organizational forums, agency feedback discussions, and development projects (Mount 1992b, 1994). Each of these groups varies in their scale and specific objectives, but they share common features: (a) They involve people with disabilities, facilitators of person-centered planning teams, key agency personnel, and sometimes family and other interested citizens; (b) they are learning experiences in which participants talk about their accomplishments and their obstacles to achieving the visions of some people served by the agency; and (c) they employ collaborative problem-solving methods to find ways in which the organization can support the design and maintenance of individualized lifestyles.

Another way that the goals of person-centered planning can interlock with organizational contingencies is by merging the rules of person-centered planning with those of the agency. If the organization's mission statement already coincides with the values of person-centered planning, the mission statement can be brought to the fore and reviewed. It can be the focal point in a organizational forum designed to

illuminate discrepancies between those rules and the prevailing agency contingencies. If an agency's mission statement is outdated, an opportunity to design a new one arises. This exercise might spawn agency discussion groups that address the degree to which the new mission corresponds to the agency's existing resource allocation, job roles, and long-range planning. In the case in which an agency is bogged down with excessive funding-based regulations, ideas may develop that address alternative creative funding (Knobbe, Carey, Rhodes, & Horner, 1995; Risley, 1996), or unique ways to satisfy regulators and support individualized lifestyles at the same time.

The Conversion Will Not Be Easy

The concepts presented in this paper are not really new to residential behavior analysis (see Saunders & Spradlin, 1991) or to the field as a whole (see Morris, 1993); but in the past 20 years, competing interests have derailed residential behavior analysis so much so that, at times, it hardly seems environmentalistic, despite the respectable advances that have occurred in our field. Person-centered planning might provide the opportunity for residential behavior analysts to reestablish their capacity to make socially important improvements in the lives of people with severe problem behavior, particularly if behavior analysts assume the role of facilitator of the process.

The limitations and caveats of person-centered planning are significant. I have found that team members invariably embrace the precepts and friendly meeting format, but encouraging people to do new things outside of their traditional roles for an extended period has required a great deal of time, cooperation, and nourishment. As noted by Risley (1996), designing a person-centered plan is far easier than implementing it, and Mount (1992b) cautions facilitators that maintaining commitment over time is the most difficult aspect of person-centered planning. I

have found that a good deal of bridging with smaller accomplishments is required to sustain the group until the larger, more deferred changes occur.

Some changes, like arranging for something as simple as a daily hot lunch, can occur quickly, but moving to a home in the community or getting a real job can take a year or two. It is reinforcing to observe the group's power in penetrating the bureaucracy and being the catalyst for changes in organizational functioning and responsiveness, but maintaining the group's survival through the inevitable droughts of inaction can be difficult. Likewise, the methodology of facilitating person-centered planning is more technically complex than it seems. It is not easy to listen, construct maps, and keep the group focused on the values of person-centered planning, all at the same time. There are many other ingredients to the process as well, and if too much of the "package" is compromised, the outcome will not conform to the group's vision of a desirable future. In addition, the amount of time and energy initially required to get things moving for a few people can seem unfair to staff members in a service system that might be struggling to provide the bare essentials of health and safety. Conversely, if too many people undergo person-centered planning at the same time, the system can be overwhelmed.

Although traditional service systems may be undesirable in many respects, they usually offer the employee a stable job role, a sense of order, and the promise that things will get better, which can be more appealing than the disorder created by person-centered planning (Mount, 1990). For residential behavior analysts, much of this is new territory, and most of us were not hired to arrange the metacontingencies of organizational culture and quality of life. In agencies struggling to adopt person-centered planning, there can be confusion about how the interdisciplinary team and person-centered planning team interact. Overzealous promotion

can create the impression among employees that they are doing a poor job or that person-centered planning is a simplistic panacea. More looming concerns pertain to the survival of a person-centered culture that appears to be antithetical to the dominant system from which it needs support.

Despite such obstacles, a person-centered planning subculture that operates within the larger culture of the system can survive and perpetuate its practices if it induces its members to work for its survival (see Skinner, 1953, 1972). This is exactly what person-centered planning espouses. It does not twist the arms of administrators or other agency personnel. It invites them to join a renaissance in helping people with developmental disabilities. It attempts to remove the barriers between the organization and the community in a way that brings the standards of the community to bear on the culture of the organization. It reminds us that the organization is itself a subculture of the greater community. More specifically, the organizational-change practices discussed earlier are designed to promote the expansion of person-centered planning. In addition, a number of renewal practices are spelled out for facilitators and others to maintain the interest and commitment of members of individual person-centered planning teams (Mount, 1992b). A sampling of these renewal activities include the following: Recognize the contributions of each group member; find ways to celebrate the accomplishments of the group as a whole; vary the format of the meetings; periodically invite new people to meetings to explore fresh ideas; find a person to serve as a mentor or adviser to the group; assist members in writing proposals to get resources that will facilitate the plan; and assist members in going to meetings and conferences to talk about their accomplishments and hear about others' successes. As a social group, the celebration of birthdays, holidays, and other events is fitting.

Perhaps the most important question

to readers of *The Behavior Analyst* is "Does person-centered planning really work?" The answer is more complicated than the wording of the question implies. Measuring the effects of person-centered planning is no simple matter. For one thing, it can be conceptually confusing because person-centered planning entails planning *and* doing. In assessing the fidelity of the process, one encounters what we usually consider to be outcome variables. For example, two aspects of person-centered planning entail getting the person involved in the community and honoring personal preferences. If these elements are absent, person-centered planning is not occurring. This implies that if person-centered planning is occurring, good things are automatically happening. To avoid a teleological argument, one could assume that person-centered planning *is* equivalent to doing good things for people, and so a better question might be "What is the extent to which you are doing person-centered planning?"

Another challenge in measuring the effects of person-centered planning pertains to the inability to predict a priori what types of changes will occur (D. Kincaid, personal communication, July 1, 1997). The arrangement of lifestyle variables can have multiple and profound effects, some of which are not well represented on a graph or in a table. Consequently, stories of successes are typically offered as proof of its effectiveness. However, it is certainly possible to establish person-centered planning teams and evaluate what happens to people as a result. Accordingly, I am currently involved in a longitudinal research project in tracking the progress of 20 people with challenging behavior who are living in New York institutions and are receiving person-centered planning. There is a matched-contrast group of 20 people with challenging behavior who are receiving traditional planning services. Every 6 months, team members complete a battery of instruments that assesses (a) fidelity of the planning process; (b) qual-

ity of life; (c) types, frequency, and integration of activities; and (d) categorical life changes. Problem behavior is not a primary measurement focus, although the results of behavior plans will be compared. Preliminary data from the battery are encouraging, but more interesting are the stories that are developing, many of which are about success and a few of which are not.

In addition, I am involved in a more comprehensive analysis of a single person with autism who has undergone person-centered planning for the past 3½ years. Results from the instruments in the above battery, behavior data, and video analysis show remarkable gains in quality of life, competencies, and improvements in challenging behavior. Again, the effects are best relayed as a narrative story. In this story, the person was reunited with his family, moved to the community, learned some productive routines, and expanded and improved his relationships. He still has some behavior problems, but they are fewer and less problematic than before.

Summary and Conclusion

For at least two decades, behavior analysts have been asking the question "What is wrong with behavior analysis?" In the area of residential behavior analysis, the answer to that question has to do with a number of contingencies that converged and collectively disempowered the behavior analyst, after some very promising demonstrations by behaviorists in the 1950s and 1960s. Some influences, notably the effects of methodological behaviorism and the aversives controversy, seemed to have a negative impact on the entire field of behavior analysis, whereas the effects of overregulation and bureaucratic institutions have been particularly stifling for residential behavior analysts. In 1985, an article in a newsletter of the American Association on Mental Deficiency entitled "Behaviorism: The Nazi Model" (Helmrath, 1985) seemed to epitomize an image of the residential behavior analyst as an enforcer of pre-

cise rules and severe methods to control others in a concentration-camp-like environment. However, contrary to the notion that applied behaviorism works best in the most controlled environments, many residential behavior analysts have not been able to effectively apply the conceptual and technological advancements in the field because they have not had access to the cultural contingencies that regulate significant aspects of consumers' lives.

A new approach, person-centered planning, has become available to the behavior analyst. This approach promotes the establishment of more favorable environments in which the person can enjoy life's reinforcers, and that are amenable to technical applications of behavior analysis. Person-centered planning is a molar intervention powered by the values of the new paradigm in developmental disabilities, and, as such, it counters traditional system-centered approaches. Its philosophy and practices appear to correspond with the tenets of radical behaviorism, and they coincide with alternatives that behavior analysts have been advocating for years to improve the image and effectiveness of behavior analysis. However, person-centered planning is a complex process that requires a great deal of nourishment, role flexibility, and even advocacy, the sum of which take the behaviorist far from the typical patterns of practice. These challenges might sound formidable, but they are certainly less formidable than the obstacles encountered by the early behavior analysts and surely are more interesting than some of the duties required of many behavior analysts today. By participating in a process of redesigning environments for people with challenging behavior, we are not only returning to our philosophical roots, we are arranging conditions under which we will develop more constructive and satisfying repertoires.

REFERENCES

- Allen, K. E., Hart, B. M., Buell, J. S., Harris, F. R., & Wolf, M. M. (1964). Effects of social

- reinforcement on isolate behavior of a nursery school child. *Child Development*, 35, 511–518.
- Ayllon, T., & Azrin, N. H. (1965). *The token economy*. New York: Appleton-Century-Crofts.
- Ayllon, T., & Haughton, E. (1962). Control of the behavior of schizophrenics by food. *Journal of the Experimental Analysis of Behavior*, 5, 343–352.
- Ayres, A. J. (1978). Learning disabilities and the vestibular system. *Journal of Learning Disabilities*, 11, 18–29.
- Ayres, A. J. (1979). *Sensory integration and the child*. Los Angeles: Western Psychological Services.
- Azrin, N. H., & Holtz, W. C. (1966). Punishment. In W. K. Honig (Ed.), *Operant behavior: Areas of research at application* (pp. 380–447). New York: Appleton.
- Azrin, N. H., & Lindsley, O. R. (1956). The reinforcement of cooperation between children. *Journal of Abnormal and Social Psychology*, 52, 100–102.
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1, 91–97.
- Berard, G. (1993). *Hearing equals behavior*. New Canaan, CT: Keats.
- Bijou, S. W., & Baer, D. M. (1961). *Child development 1: A systematic and empirical theory*. Englewood Cliffs, NJ: Prentice Hall.
- Biklen, D. (1993). *Communication unbound: How facilitated communication is challenging traditional views of autism and ability/disability*. New York: Teachers College Press.
- Birnbrauer, J. S., Bijou, S. W., Wolf, M. M., & Kidder, J. D. (1965). Programmed instruction in the classroom. In L. P. Ullmann & L. Krasner (Eds.), *Case studies in behavior modification* (pp. 358–363). New York: Holt, Rinehart, & Winston.
- Bradley, V. J. (1994). Evolution of a new service paradigm. In V. Bradley, J. W. Ashbaugh, & B. C. Blaney (Eds.), *Creating individual supports for people with developmental disabilities: A mandate for change at many levels* (pp. 11–32). Baltimore: Paul Brookes.
- Carr, E. G. (1977). The motivation of self-injurious behavior: A review of some hypotheses. *Psychological Bulletin*, 84, 800–816.
- Crosley, R., & McDonald, A. (1980). *Annie's coming out*. New York: Penguin Press.
- Cullari, S., & Ferguson, D. G. (1981). Individual behavior change: Problems with programming in institutions for mentally retarded persons. *Mental Retardation*, 19, 267–270.
- Dana, L. (1993, January). *Humanistic applied behavior analysis*. Paper presented at the Young Adult Institute conference, New York.
- Day, W. (1983). On the difference between radical and methodological behaviorism. *Behaviorism*, 11, 89–102.
- Emerson, E. (1993). Challenging behaviours and severe learning disabilities: Recent developments in behavioural analysis and intervention. *Behavioral and Cognitive Psychotherapy*, 21, 171–198.
- Evans, I. M., & Meyer, L. H. (1990). Toward a science in support of meaningful outcomes: A response to Horner et al. *Journal of the Association for Persons with Severe Handicaps*, 15, 133–135.
- Fox, R. M. (1996). Translating the covenant: The behavior analyst as ambassador and translator. *The Behavior Analyst*, 19, 147–161.
- Friman, P. C., Osgood, D. W., Smith, G., Shanahan, D., Thompson, R. W., Larzelere, R., & Daly, D. L. (1996). A longitudinal evaluation of prevalent negative beliefs about residential placement for troubled adolescents. *Journal of Abnormal Child Psychology*, 24(3), 299–324.
- Fuller, P. R. (1949). Operant conditioning of a vegetative human organism. *American Journal of Psychology*, 62, 587–590.
- Gardner, W. I., Karan, O. C., & Cole, C. L. (1984). Assessment of setting events influencing functional capacities of mentally retarded adults with behavioral difficulties. In A. S. Halpern & M. J. Fuhrer (Eds.), *Functional assessment in rehabilitation* (pp. 171–185). Baltimore: Paul Brookes.
- Girardeau, F. L., & Spradlin, J. F. (1964). Token rewards in a cottage program. *Mental Retardation*, 7, 40–43.
- Glenn, S. S., Ellis, J., & Hutchinson, E. (1993). Applied behavior analysis and behavioral services in institutions for mentally retarded persons: Diverging paths? *Behavior and Social Issues*, 3, 1–16.
- Goodall, K. (1972, November). Shapers at work. *Psychology Today*, pp. 53–63.
- Griffin, J. C., Paisley, T. J., Stark, M. T., & Emerson, J. H. (1988). Skinner's position on aversive treatment. *American Journal on Mental Deficiency*, 93, 104–105.
- Guess, D., & Carr, E. (1991). Emergence and maintenance of stereotypy and self-injury. *American Journal of Mental Retardation*, 96, 299–319.
- Guess, D., Mulligan-Ault, M., Roberts, S., Struth, J., Seigel-Causey, E., Thompson, B., Bronicki, G. J., & Guy, B. (1988). Implications of biobehavioral states for the education and treatment of students with the most profoundly handicapping conditions. *Journal of the Association for Persons with Severe Handicaps*, 13, 163–174.
- Halle, J. W., & Spradlin, J. E. (1993). Identifying stimulus control of challenging behavior: Extending the analysis. In J. Reichle & D. P. Wacker (Eds.), *Communicative alternatives to challenging behavior: Integrating functional assessment and intervention strategies* (pp. 83–109). Baltimore: Paul Brookes.
- Harzem, P. (1995). Searching in ruins for truth: The life and works of John B. Watson—a review of *Modern Perspectives on John B. Watson and Classical Behaviorism*. *The Behavior Analyst*, 18, 377–384.
- Harzem, P., & Miles, T. R. (1978). *Conceptual*

- issues in operant psychology. Chichester, England: Wiley.
- Hawkins, R. P., Peterson, R. F., Schweid, E., & Bijou, S. W. (1966). Behavior therapy in the home: Amelioration of problem parent-child relations with the parent in a therapeutic role. *Journal of Experimental Child Psychology*, 4, 99–107.
- Hayes, S. C., Brownstein, A. J., Haas, J. R., & Greenway, D. E. (1986). Instructions, multiple schedules, and extinction: Distinguishing rule-governed behavior from schedule-controlled behavior. *Journal of the Experimental Analysis of Behavior*, 46, 137–147.
- Hayes, S. C., Rincover, A., & Solnick, J. V. (1980). The technical drift of applied behavior analysis. *Journal of Applied Behavior Analysis*, 13, 275–285.
- Hayes, S. C., & Wilson, K. G. (1993). Some applied implications of a contemporary behavior-analytic account of verbal events. *The Behavior Analyst*, 16, 283–301.
- Helmrath, P. S. (1985, December). Behaviorism: The Nazi model. *AAMD Region X Reporter*, 8, 1.
- Hile, M. G., & Walbran, H. B. (1991). Observing staff-resident interactions: What staff do, what residents receive. *Mental Retardation*, 29, 35–41.
- Himadi, B. (1995). Discussion: Reflections from the clinical trenches. *Behavioral Interventions*, 10, 161–172.
- Holburn, C. S. (1990). Rules: The new institutions. *Mental Retardation*, 28, 89–94.
- Holburn, C. S. (1992). Rhetoric and realities in today's ICF/MR: Control out of control. *Mental Retardation*, 30, 133–141.
- Holburn, C. S. (1994). *Mentalism awareness: Confronting the misattributions of severe problem behavior in developmental disabilities*. Association for Behavior Analysis (Casette BA-453 No. 402). Chicago: Teach'em.
- Holland, J. G. (1978). Behaviorism: Part of the problem or part of the solution? *Journal of Applied Behavior Analysis*, 11, 163–174.
- Homme, L. E., DeBaca, P. C., Divine, J. V., Steinhorst, R., & Rickert, E. J. (1963). Use of the Premack principle in controlling the behavior of school children. *Journal of the Experimental Analysis of Behavior*, 6, 544.
- Hopkins, B. L. (1970). The first twenty years are the hardest. In R. Ulrich, T. Stachnick, & J. Mabry (Eds.), *Control of human behavior: From cure to prevention* (Vol. 2, pp. 358–365). Glenview, IL: Scott, Foresman.
- Horner, R. H., Close, D. W., Fredericks, H. D., O'Neill, R. E., Albin, R. W., Sprague, J. R., Kennedy, C. H., Flannery, K. B., & Heathfield, L. T. (1996). Supported living for people with severe problem behaviors: A demonstration. In D. H. Lehr & F. Brown (Eds.), *People with disabilities who challenge the system* (pp. 209–240). Baltimore: Paul Brookes.
- Horner, R. H., Dunlap, G., & Koegel, R. L. (Eds.). (1988). *Generalization and maintenance: Life-style changes in applied settings*. Baltimore: Paul Brookes.
- Horner, R. H., Vaughn, B. J., Day, H. M., & Ard, W. R. (1996). The relationship between setting events and problem behavior. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Community, school, family and social inclusion through positive behavioral support* (pp. 381–402). Baltimore: Paul Brookes.
- Iwata, B. A., Dorsey, M. F., Slifer, K. J., Bauman, K. E., & Richman, G. S. (1982). Toward a functional analysis of self-injury. *Analysis and Intervention in Developmental Disabilities*, 2, 3–20.
- Jones, M. C. (1924). Elimination of children's fears. *Journal of Experimental Psychology*, 7, 82–85.
- Juracek, D. B., Sherman, J. A., Norman, K. R., Wilson, S., McAdam, D. B., Klatt, K. P., Mott, P. V., Sheldon, J. B., & Strouse, M. C. (1994, June). *Defining, measuring, and obtaining a high quality of life for individuals with severe and multiple disabilities living in the community*. Paper presented at the meeting of the Association for Behavior Analysis, Washington, DC.
- Kantor, J. R. (1959). *Interbehavioral psychology*. Granville, OH: Principia Press.
- Kincaid, D. (1996). Person-centered planning. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Community, school, family and social inclusion through positive behavioral support* (pp. 429–465). Baltimore: Paul Brookes.
- Knobbe, C. A., Carey, S. P., Rhodes, C., & Horner, R. H. (1995). A comparison of benefits and costs of community residential and institutional services for eleven adults with severe mental retardation who exhibit challenging behaviors. *American Journal of Mental Retardation*, 99, 533–541.
- Lindsley, O. R. (1991). From technical jargon to plain English for application. *Journal of Applied Behavior Analysis*, 24, 449–458.
- Lindsley, O. R., Skinner, B. F., & Soloman, H. C. (1953). *Study of psychotic behavior*. Studies in Behavior Therapy, Harvard Medical School, Department of Psychiatry, Metropolitan State Hospital, Waltham, MA, Office of Naval Research Contract N5-ori-07662, Status Report IV, 1 June 1953–31 December 1953.
- Lindsley, O. R., Skinner, B. F., & Soloman, H. C. (1955). *Study of psychotic behavior*. Behavior Research Laboratory, Harvard Medical School, Department of Psychiatry, Metropolitan State Hospital, Waltham, MA, Office of Naval Research Contract N5-ori-07662, Status Report IV, 1 January 1955–31 August 1955.
- Lovaas, O. I., Freitag, G., Gold, V. J., & Kasorla, I. C. (1965). Experimental studies in childhood schizophrenia: Analysis of self-destructive behavior. *Journal of Experimental Child Psychology*, 2, 67–84.
- Lovaas, O. I., Freitag, G., Kinder, M. I., Rubenstein, B. D., Schaeffer, B., & Simmons, J. W. (1966). Establishment of social reinforcers in two schizophrenic children on the basis

- of food. *Journal of Experimental Child Psychology*, 4, 109–125.
- Lovaas, O. I., Koegel, R. L., Simmons, J. Q., & Long, J. S. (1973). Some generalization and follow-up measures of autistic children in behavior therapy. *Journal of Applied Behavior Analysis*, 6, 131–165.
- Lovaas, O. I., Schaeffer, B., & Simmons, J. Q. (1965). Building social behavior in autistic children by use of electric shock. *Journal of Experimental Research in Personality*, 1, 99–109.
- Lovaas, O. I., & Simmons, J. Q. (1969). Manipulation of self-destruction in three retarded children. *Journal of Applied Behavior Analysis*, 2, 143–157.
- Lovett, H. (1985). *Cognitive counseling and persons with special needs: Adapting behavioral approaches to the social context*. New York: Praeger.
- Lowry, M. A. (1997). Unmasking mood disorders: Recognizing and measuring symptomatic behaviors. *The Habilitative Mental Healthcare Newsletter*, 16, 1–6.
- Mattaini, M. A. (1996). Envisioning cultural practices. *The Behavior Analyst*, 19, 257–272.
- McGee, J. (1988a). Ethical issues of aversive techniques: A response to Thompson, Gardner, and Baumeister. In J. A. Stark, F. J. Menolascino, M. H. Albarelli, & V. C. Grey (Eds.), *Mental retardation and mental health* (pp. 218–228). New York: Springer-Verlag.
- McGee, J. (1988b). Issues related to applied behavior analysis. In J. A. Stark, F. J. Menolascino, M. H. Albarelli, & V. C. Grey (Eds.), *Mental retardation and mental health* (pp. 203–212). New York: Springer-Verlag.
- McGee, J. (1993). Gentle teaching for persons with mental retardation: The expression of a psychology of interdependence. In R. F. Fletcher & A. Dosen (Eds.), *Mental health aspects of mental retardation: Progress in assessment and treatment* (pp. 350–376). New York: Macmillan.
- McGee, J., & Menolascino, F. J. (1991). *Beyond gentle teaching: A nonviolent way to help those in need*. New York: Plenum Press.
- Meinhold, P. M., & Mulick, J. A. (1990). Counterhabilitative contingencies in institutions for people with mental retardation: Ecological and regulatory influences. *Mental Retardation*, 28, 67–75.
- Michael, J. (1982). Distinguishing between discriminative and motivational functions of stimuli. *Journal of the Experimental Analysis of Behavior*, 37, 149–155.
- Moore, J. (1981). On mentalism, methodological behaviorism, and radical behaviorism. *Behaviorism*, 9, 55–77.
- Mori, A. A., & Masters, L. F. (1980). *Teaching the severely mentally retarded*. Germantown, MD: Aspen.
- Morris, E. K. (1993). Invited response: Revise and resubmit. *Journal of the Association for Persons with Severe Handicaps*, 18, 243–248.
- Mount, B. (1990). *Imperfect change: Embracing the tensions of person-centered work*. Manchester, CT: Communitas.
- Mount, B. (1992a). *Mapping transitions: A workbook for helping people move*. New York: Graphic Futures.
- Mount, B. (1992b). *Personal futures planning: A sourcebook of values, ideals, and methods to encourage person-centered development*. New York: Graphic Futures.
- Mount, B. (1994). Benefits and limitations of personal futures planning. In V. J. Bradley, J. W. Ashbaugh, & B. C. Blaney (Eds.), *Creating individual supports for people with developmental disabilities: A mandate for change at many levels* (pp. 97–108). Baltimore: Paul Brookes.
- Mount, B., & Patterson, J. (1986). *Update of the positive futures project: Initial outcomes and implications*. Program and Staff Development Unit: Connecticut Department of Mental Retardation.
- O'Brien, J. (1987a). Embracing ignorance, error, and fallibility: Competencies for leadership of effective services. In S. J. Taylor, D. Biklin, & J. Knoll (Eds.), *Community integration for people with severe disabilities* (pp. 85–108). New York: Teachers College Press.
- O'Brien, J. (1987b). A guide to life-style planning: Using the Activities Catalogue to integrate services and natural support systems. In G. T. Bellamy & B. Wilcox (Eds.), *A comprehensive guide to the Activities Catalogue: An alternative curriculum for youth and adults with severe disabilities* (pp. 175–189). Baltimore: Paul Brookes.
- O'Neill, R. E., Horner, R. H., Albin, R. W., Storey, K., & Sprague, J. R. (1990). *Functional analysis of problem behavior: A practical assessment guide*. Sycamore, IL: Sycamore.
- Paisey, T. J., Whitney, R. B., & Hislop, P. M. (1990). Client characteristics and treatment selection: Legitimate influences and misleading inferences. In A. C. Repp & N. N. Singh (Eds.), *Perspectives on the use of nonaversive and aversive interventions for persons with developmental disabilities* (pp. 175–197). Sycamore, IL: Sycamore.
- Pfadt, A., & Holburn, C. S. (1996). Community-based support services update. *The Habilitative Mental Healthcare Newsletter*, 15, 8–11.
- Phillips, E. L., Phillips, E. A., Fixsen, D. L., & Wolf, M. M. (1971). Achievement Place: Modification of the behaviors of pre-delinquent boys within a token economy. *Journal of Applied Behavior Analysis*, 4, 45–59.
- Pierce, W. D., & Epling, W. F. (1980). What happened to the analysis in applied behavior analysis? *The Behavior Analyst*, 3, 1–9.
- Repp, A. C., Felce, D., & Barton, L. E. (1988). Basing treatment of stereotypic and self-injurious behaviors on hypotheses of their causes. *Journal of Applied Behavior Analysis*, 21, 281–289.
- Reppucci, N. D. (1977). Implementation issues

- for the behavior modifier as institutional change agent. *Behavior Therapy*, 8, 594–605.
- Reppucci, N. D., & Saunders, J. T. (1974). The social psychology of behavior modification: Problems of implementation in natural settings. *American Psychologist*, 29, 649–660.
- Risley, T. (1996). Get a life! Positive behavioral intervention for challenging behavior through life arrangement and life coaching. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Community, school, family and social inclusion through positive behavioral support* (pp. 425–437). Baltimore: Paul Brookes.
- Saunders, R. R., & Spradlin, J. E. (1991). A supported routines approach to active treatment for enhancing independence, competence, and self-worth. *Behavioral Residential Treatment*, 6, 11–37.
- Schrader, C., & Gaylord-Ross, R. L. (1990). The eclipse of aversive technology: A tridactic approach to assessment and treatment. In A. C. Repp & N. N. Singh (Eds.), *Perspectives on the use of nonaversive and aversive interventions for persons with developmental disabilities* (pp. 403–417). Sycamore, IL: Sycamore.
- Schreibman, L. (1995, November). *Been there, done that, now what?: New directions in the behavioral treatment of developmental disorders*. Keynote address given at the New York State Association for Behavior Analysis fifth annual conference, Ronkonkoma, NY.
- Shea, J. R. (1992). From standards to compliance, to good service, to quality lives: Is this how it works? *Mental Retardation*, 30, 143–149.
- Skinner, B. F. (1938). *The behavior of organisms*. New York: Appleton-Century-Crofts.
- Skinner, B. F. (1953). *Science and human behavior*. New York: Macmillan.
- Skinner, B. F. (1972). *Beyond freedom and dignity*. New York: Knopf.
- Skinner, B. F. (1974). *About behaviorism*. New York: Knopf.
- Slama, K., & Bannerman, D. J. (1983). Implementing and maintaining a behavioral treatment system in an institutional setting. *Analysis and Intervention in Developmental Disabilities*, 3, 171–191.
- Sturmey, P. (1991). Assessing challenging behavior using semi-structured behavioral interviews: A case transcript. *Mental Handicap*, 19, 56–90.
- Tharp, R. G., & Wetzel, R. J. (1969). *Behavior modification in the natural environment*. New York: Academic.
- Theiss, M. A. (1990). *Charting with a jury in mind*. Albany, NY: Work Force Planning and Development, Office of Mental Retardation and Developmental Disabilities.
- Thompson, T., Gardner, W. I., & Baumeister, A. A. (1988). Ethical interventions for persons with retardation, autism, and related developmental disorders. In J. A. Stark, F. J. Menolascino, M. H. Albarelli, & V. C. Grey (Eds.), *Mental retardation and mental health* (pp. 213–217). New York: Springer-Verlag.
- Thompson, T., & Grabowski, J. (1972). *Behavior modification of the mentally retarded*. New York: Oxford University Press.
- Touchette, P. E., MacDonald, R. F., & Langer, S. N. (1985). A scatter plot for identifying stimulus control of problem behavior. *Journal of Applied Behavior Analysis*, 18, 343–351.
- Ullmann, L. P., & Krasner, L. (1965). *Case studies in behavior modification*. New York: Holt, Rinehart, & Winston.
- Van Houten, R., & Rolider, A. (1991). Applied behavior analysis. In J. L. Matson & J. A. Mulkick (Eds.), *Handbook of mental retardation* (2nd ed., pp. 569–585). New York: Pergamon.
- Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20, 158–157.
- Watson, J. B., & Raynor, P. (1920). Conditioned emotional reactions. *Journal of Experimental Psychology*, 3, 1–4.
- Wetzel, R. J. (1992). Behavior analysis of residential program development. *Research in Developmental Disabilities*, 13, 73–79.
- White, M., & Epstein, D. (1990). *Narrative means to therapeutic ends*. New York: Norton.
- Williams, C. D. (1959). The elimination of tantrum behavior by extinction procedures. *Journal of Abnormal and Social Psychology*, 59, 269.
- Wolf, M. M., Birnbrauer, J. S., Williams, T., & Lawler, J. (1965). A note on the apparent extinction of the vomiting behavior of a retarded child. In L. P. Ullmann & L. Krasner (Eds.), *Case studies in behavior modification* (pp. 364–366). New York: Holt, Rinehart, & Winston.
- Wolf, M. M., Risley, T., & Mees, H. (1964). Application of operant conditioning procedures to the behavior problems of an autistic child. *Behavior Research and Therapy*, 1, 305–312.
- Wolfensberger, W. (1972). *The principle of normalization in human services*. Toronto: National Institute on Mental Retardation.
- Wolpe, J. (1982). *The practice of behavior therapy*. New York: Pergamon Press.
- Zimmerman, E. H., & Zimmerman, J. (1962). The alteration of behavior in a special education classroom situation. *Journal of the Experimental Analysis of Behavior*, 5, 59–60.