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*Designing Positive Environments: A Strategy for
Behavior Change*

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The term "environment" has become thematic in the literature related to deinstitutionalization and community programming. Unfortunately, discussions related to environments have focused primarily on "brick and mortar" options (i.e., size, type, and location) and services, and many planning decisions are made based on the operational assumption that facilities of a given type in a given location are alike or of equal quality. Yet, as noted, Bachrach (1985) in her discussion of the least restrictive environment, "institution 1 is not institution 2; and community residence 1 is not community residence 2."

The essential difference which exists between any set of environments may have less to do with where they are than with what happens to the persons living within them. In some respects, a facility type which has traditionally been thought of as less restrictive may, in fact, be more restrictive when viewed from the perspective of internal characteristics and personal interaction patterns. The importance ascribed to natural environments as places to live and develop should not be altered. However, greater emphasis must be placed on the internal characteristics and events transpiring within environments that affect both the behavior and the lifestyle of the individuals in them.

Environmental Characteristics and Effects

Numerous researchers have reported on the effects of environmental conditions on the behavior of individuals (Rotegard, Bruininks, & Hill, 1981). For example, crowding has been associated with undesirable social contacts (Spencer, 1974), and levels of task demand have been associated with stereotypic behavior (Karsh, 1987). It follows that, if environmental factors can be identified which have either an adverse or positive effect on behavior, it should be possible to systematically manipulate environments to reduce problem behavior and

to enhance adaptive development. Most individuals would agree that the particular environments in which they reside, work, and play have a decided effect on their behavior. If an environment is perceived to be positive and promising, a person is likely to respond more positively; conversely, if an environment is perceived to be negative or threatening, a person is more likely to respond negatively or to avoid it. It is difficult to conceive of people wanting to be in spaces that are crowded, noisy, odoriferous, excessively hot or cold, or barren of stimulation. Yet, these are the precise conditions in which many persons with mental retardation find themselves, with the associated limitation of being powerless to change the circumstances and, in many cases, the inability to even communicate their dislikes.

Similarly, few individuals would respond well to repetitive demands (vs. requests); threats; close association for long periods of time with persons they dislike; repetitive, meaningless tasks; rigid scheduling; consistent waiting for events to occur; excessive amounts of "down-time"; the absence of the right to say "no"; forced (i.e., without choice) programs; or being ignored. In the presence of these and many other conditions, one might expect behavioral excesses. Individuals would be less likely to respond negatively in an environment where there was a choice of events, associations, and physical characteristics; where attention was consistently provided for desired behavior; where tasks were age-appropriate and instructions for engaging in them were available.

Many environments could be considered abusive and, if persons from society at large were placed within them, the environments, in themselves, would likely lead to extreme, negative reactions. Environmental abuse occurs in numerous forms which can be generally clustered into three classes: physical, interactive, and programmatic. Physical abuse includes such events as the infliction of pain (sometimes endorsed in the purported best

interest of a recipient), unnecessarily harsh physical guidance, placement in uncomfortable chairs or positions for prolonged periods of time, and the absence of desirable stimuli. Interactive abuse includes such events as harassment with shouts and threats, being ignored when attempting to socially interact, and receiving personal "put-downs" in the form of derogatory names. Programmatic abuse includes events such as being put on an unnecessarily aversive behavior-change program, being neglected in terms of needed services and developmental experiences, and being required to perform or being given repetitive daily tasks which have no present importance and no relationship to future opportunities. Any of these negative events could result in adverse reactions. Hence, environments may be the source of much of the problem behavior observed among persons with moderate to profound mental retardation.

The high prevalence of problem behaviors and their effects on individuals in this population have been documented and described (Hill, Bruininks, & Lakin, 1983; Morreau, 1985). Problem behavior has been associated with unsuccessful adjustment in the community (Hill, Bruininks, & Lakin, 1983), placement in institutions (Eyman & Borthwick, 1980; Eyman, Borthwick, & Miller, 1981), and readmission into institutions (Keys, Boroskin, & Ross, 1973; Landesman-Dwyer & Sulzbacher, 1981; Scheerenberger, 1976). In addition, some behavior problems likely result in less effective instruction on needed adaptive behaviors, staff withdrawal from or social rejection of recipients, and reduced effectiveness in teaching other recipients (i.e., greater time being spent on controlling the person with the behavior problem than instructing individuals exhibiting no problems).

Attempts to clarify the nature and/or sources of problem behavior have focused primarily on establishing the relationship between such factors as age, sex, level of retardation, type of facility, and the relative density and types of behavior problems. Such studies, while valuable for planning, place what may be excessive emphasis on the characteristics and behaviors of recipients and, inadvertently, presume that problem behavior is a product of the person. In fact, a behavior problem may be a natural response to essentially unnatural environmental conditions. Focusing exclusively on the remediation of behavior problems may reduce

consideration of preventive programs which could be achieved by altering the environmental factors affecting behavior.

Positive interactions and programming could be applied to systematically reduce behavior problems. The concept "positive programming" may immediately stimulate thoughts of eliminating obvious aversive behavior management practices and instituting positive reinforcement systems to enhance desired behavior. Such a universal change would, in itself, be of great benefit to persons with disabilities. However, positive programming must extend well beyond the alteration of aversive control procedures.

Problems in Existing Procedures

Current programs in many settings are limited by a number of factors:

1. Programs are often instituted to alter one behavior of each individual rather than considering the common problem behaviors exhibited by a large number of recipients. In his study of 500 persons with mental retardation in a public residential facility, Ho (1985) found that many of the same problem behaviors were common to a large number of recipients and that, on the average, recipients exhibited 23 minor to extreme maladaptive behaviors, 6 disruptive behaviors, and 3 destructive behaviors: 32 behaviors which could potentially elicit negative social reactions from others. Considering the number of programs which are not successfully implemented and the frequency with which habilitation plans to reduce specific problem behaviors are modified, the lifetime of a person with mental retardation could be spent participating (sometimes reluctantly, often times unknowingly) in behavioral programs to facilitate his or her adjustment. Would it not be possible, instead, to increase systematically the adaptive behaviors of many recipients simultaneously (i.e., holistic programming) in the same way that maladaptive behavior was inadvertently increased across a large number of persons in the past (e.g., the "institutional shuffle")?
2. The priorities for behavior change may be inappropriate. As observed by Ho (1985), staff members selected target behaviors

based on a hierarchy descending from destructive to disruptive to maladaptive response. However, **in** some cases, the selection was **directed toward those** behaviors which **caused the greatest inconvenience for staff or disturbance to their routine.**

The concept of social validity has provided a **guideline for the** selection of target behaviors. **Altering a** statement by Baer, Wolf, and Risley (1968), **behaviors** should be dealt with that are **socially important**, rather than convenient for **staff**. However, the criteria for establishing social importance have not been clearly defined. One of the initial steps toward developing a positive program would be to relate behavior-change programs for both individuals and groups to life goals. Specifically, the following goals might be established:

- a. To increase the likelihood of the individual succeeding in a less restrictive environment,
 - b. To increase independent functioning and opportunities for independence,
 - c. To increase participation in a range of developmental or life options,
 - d. To increase personal control and decision making, and
 - e. To increase natural behavior.
3. The probability of *consistent*, day-to-day implementation of unique behavioral programs in a nonclinical setting may be negligible. Behavior analysis has provided professionals with a powerful set of procedures by which to assist people in changing behaviors. However, the precision of application in natural contexts may be limited by a number of factors:
- a. *Staff to recipient ratios.* Can a moderately complex single-individual program be systematically conducted when the ratio of staff to recipients is 1:5 or even 1:3?
 - b. *Changes in staff or substitutes.* With each turnover in staff (a major problem facing all types of residential facilities), will the program be conducted in the same way? Will a pause or delay occur in programming? Do substitutes acquire sufficient information and understanding prior to working with a recipient to systematically maintain a program for him or her?
 - c. *Shift, activity, or environmental changes.* Is a program directed toward reduction of a problem behavior likely to be implemented by different staff in different settings? Are staff in all settings aware of the programs developed for individual recipients?
 - d. *The presence of disruptive or destructive recipients.* Can a staff member attend to a developmental program when another recipient is about to injure himself/herself or others or when one or more other recipients are creating a major disturbance in the environment?
 - e. *Staff perception or awareness of behaviors selected for change.* Like everyone else, staff working with persons with mental retardation may adapt to particular behaviors and, failing to observe their occurrence, not implement the specific program. Can staff remain aware of the specific behaviors selected for change and the programs which have been established for altering them?
 - f. *Increased responsibilities being given to staff.* Staff are not only responsible for providing direct care and programs for recipients, but they are also the primary implementors of behavioral programs. In a recently observed situation in a developmental center, staff were required to follow up on an arranged contingency and to record the frequency and duration of a response. In addition, they were asked to record the antecedent events, uncontrolled consequences, and the intensity and topography of the response. While supposedly lending empiricism to recording, the time and decisions required to complete these events must be considered as an environmental intrusion. That is, the staff must either take time away from the recipient with whom they are working to record his or her behavior; disregard other behaviors, and, possibly other recipients; or record the data intermittently (i.e., when they can). Are the effects of new requirements assessed in terms of their impact on staff and the personal interactions between the

staff and recipients? Does more data necessarily mean better data?

Limitations of Single-Person Programs

Considering the large number of problem behaviors exhibited by some recipients and the preceding potential limitations on programming, one-behavior, one-person programs that are inconsistently administered may, in many cases, be futile. This is not to suggest that single-person behavioral programs are not needed. Single-individual programs may be the only recourse, as well as the optimal strategy, in a great number of situations, and many programs have been and continue to be administered both efficiently and effectively with great benefits to recipients.

The need for more positive, behaviorally sound procedures for use with individuals is clearly evinced by the frequency with which even the moderately aversive technique of time-out is either requested by staff or initiated as a procedure in individual programs. Yet, withdrawal of an event or removal from a place in order to change behavior presumes that the event, the place, or the operating contingencies are perceived to be positive by the recipient. One of the questions which is all too infrequently asked is: "Would I, as a recipient, want to be here doing this?" If the answer is no, perhaps undesired behavior is being systematically reinforced by time-out procedures.

Similarly, DRO programs have been observed which are intended to reduce negative physical contacts among recipients. While a number of other behaviors are reinforced, the "O" frequently stands for sitting or "doing nothing." Such programs are antithetical to the needs of persons with mental retardation if the intent is for them to be active participants in life options.

Finally, behavioral treatment hierarchies have been arranged which, for many recipients, have a predetermined aversive outcome. If verbal reprimand fails to suppress an undesired response, the individual is placed in observational time-out. If the individual leaves the setting or continues with the behavior, he or she is placed in seclusion time-out. If the individual leaves this setting or emits more extensive problem behavior, the staff members hold him or her down. The likelihood of some individuals

being forcibly restrained by staff may be predictable at the onset of the verbal reprimand.

In addition to problems associated with the selection and consistent administration of appropriate programs for individuals, factors exist *within* programs which may render them ineffective. Two of the major underpinnings of behavior analysis are the recording of behavioral data with continuous analysis and the arrangement of personal reinforcers for individual recipients. Yet, how often are reliability checks conducted on the data gathered? Are reliability analyses included in the planning process? Are data being collected and systematically reviewed to determine if changes are occurring in the recipients' behaviors? Or, are the data gathered, summarized, and analyzed later to determine if changes have occurred? Is it possible that much data are gathered for reporting purposes rather than for ongoing monitoring of changes in behavior, for determining program effects, and for altering programs where needed?

The absence of personalized reinforcers may be the single most common problem in behavioral programming. Systematic procedures appear to be applied to the development of individual programs. That is, a specific behavior has been operationally defined and measured, a "reinforcer" has been selected, and a contingency for its delivery has been established. Rarely is the question asked, "How was the reinforcement value of the event established?" The M&M of the past and the "sticker" of contemporary public education (both presumed reinforcers) have transferred to verbal praise and similar generic events in many programs for persons with mental retardation. Without a personal reinforcer, the potential for change may be lost.

An Environmental Approach

The purpose of the present paper is not to paint a dismal picture; rather, the intent is to point out a number of shortcomings in what is commonly accepted as appropriate practice, to suggest that scientific methods are being used and misused without scientific verification, and to recommend consideration of environmental analysis and modification as an additional strategy for behavioral change. The full potential of behavior analysis for responding to the needs of persons with mental retardation

may never be realized if: professionals do not systematically assess the environment as a factor in both eliciting and maintaining problem behavior; only individual programs are developed for managing problem behaviors; consistency in programs is not assured; procedural deficiencies are not eliminated; and the day-to-day interaction patterns between recipients and staff are not viewed from both a personal and a behavioral management perspective. It is irrational to assume that the formal behavioral program in the habilitation plan is the only process by which to affect behavior and for which staff should be responsible. Every personal interaction and environmental characteristic and event has the potential to affect behavior. Everyone carries a repertoire that was systematically shaped by a person who may never have heard of behavior analysis and who may never have planned strategies for teaching skills. Behavior changes such as eating with a spoon occurred as a result of someone in a natural environment systematically shaping the behavior through personal interaction, reinforcement, and modeling. The conditions under which such permanent, desired behavioral changes occurred across the majority of individuals may provide the guidelines for reappraising environments and for enhancing development of individuals on a continuous as well as programmatic basis. When developing an environmental approach to personal development and reduction of behavior problems, the following steps might be considered:

1. Augment the definition of least restrictive environment with the criterion of "the place where people interact most normally and naturally." Simply stated, perhaps programs should be designed in which people do less *to* people without their consent, do less *for* people who could do things for themselves, and do more *with* people to enhance their daily lives.
2. Assess the aversive physical, interpersonal, or programmatic properties of environments which might be eliciting undesired behavior and systematically eliminate them (e.g., crowding, waiting, down-time).
3. Analyze environments and crisis reports to identify possible sources of problem behavior and alter the conditions. When the condition is a naturally occurring phenomenon which the individual will experience in other settings, reintroduce it with appropriate reinforcement of desired behavior after the problem behavior is reduced.

4. Assess the potential positive features which could be incorporated into the physical, interpersonal, and programmatic dimensions of the environment and, where possible, incorporate them noncontingently (e.g., one-to-one social interactions, music, privacy, schedule choices).
5. Arrange environments which call for (i.e., elicit) or facilitate appropriate, adaptive responses. Considering that natural contexts may call for more natural responses, environments can be arranged and instruction can be directed toward eliciting specific behaviors or classes of behavior which can be applied in many life settings. Just as most individuals have established different behavioral sets for classroom versus cocktail parties, persons with mental retardation can acquire behavioral repertoires associated with specific natural environments.
6. Analyze the choices recipients can potentially make and increase the number of choices available to them (e.g., clothes to wear, food to eat, tasks to perform).
7. Attend, as a staff, to specific desired behavior of all recipients at a given time (e.g., helping others, eating appropriately, grooming well).
8. Ignore, as a staff, specific problem behaviors which are not destructive or disruptive, which are not likely to be imitated by others, which are not self-stimulating, which are not peer reinforced, and which are likely intended to derive attention (e.g., whining, unfounded complaints).
9. Conduct systematic analyses to determine potential reinforcers for individual recipients and arrange programs based upon them.
10. Consider staff behavior from the standpoint of modeling and alter those behaviors which are inappropriate for imitation (e.g., threatening persons, smoking, dressing sloppily, physically directing people).
11. Reappraise tasks in terms of their present relevance to the individual, their potential for future use, and the probability of future reinforcement for doing them.

The design of positive environments to facilitate behavior change has numerous potential advantages including the reduction of many incidental aversive stimuli to which recipients might be reacting with aggression or avoidance; more natural, humanistic interactions with recipients; reduction of inappropriate modeling

of behavior; simultaneous development of desired behaviors with a large number of recipients; and procedures which can be operationally incorporated into daily life without extensive training. The concept does not represent a radical change in principles. Rather, it is a change in focus. Emphasis is first placed on changing the world to which an individual is responding and learning to respond,

rather than on changing the individual to respond to an oftentimes aversive and unnatural world. Managing an environment may, in many situations, be far easier, more effective, and more humanistic than managing persons.

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