Communitization and the Measured Message of Normal Behavior

Beatrice H. Barrett

We live in pressing times, we are pushed into judgments and formulations, the need overrides discretion, and expediency supplants research. Our guesses become theories, our narrow-mindness becomes dogma, our ignorance becomes curriculum, our complacency becomes conviction. The result: a series of "authoritative" pronouncements without benefit of practical knowledge. These pronouncements, if taken seriously, have profound effect on the pattern of education for the severely retarded child. (D'Amelio, 1971, pp. 4-5)

Now that normalization has become a guiding concept in human service, community placement in itself is considered a vast improvement over institutionalization: less regimented, therefore more dignifying; less barren, therefore more humane. However, communitization may be destined for the pitfalls of any massive relocation pursued without careful preparation and without full awareness of its potential impact on target population.

Although communitization is moving more slowly than anticipated (Blatt, Bogdan, Biklen, & Taylor, 1977; Roos, 1977), the objective of many institutions is community placement of as many of their residents as possible, as fast as possible. In some instances relocation is being "imposed" rather than "offered" (Wolfensberger, 1972). In more instances people are being moved into community settings without having been taught how to behave in them. The implicit assumption is that normal environments will somehow elicit normal behavior, despite overwhelming evidence that this is a false hope.

Normal environments fall far short of what severely handicapped persons require (Throne, 1975). The discrepancy between normal environments and appropriately adapted environments becomes more obvious in direct relation-ship to the escalating literature describing new habilitative developments designed to bridge the gap. The broadening scope and increasing complexity of activities recommended to implement effective community placement (Sontag, Smith, & Certo, 1977) convey a straight-forward message; if community environments are to serve severely handicapped persons better than institutional environments, they must undergo both extensive and intensive modifications spanning the range from child-rearing practices to architectural design and community protective by-laws.

Implicate in this message is recognition of a long-standing definition. People are called "retarded" or "handicapped" or "special needs" because they do not interact adequately with or learn optimally from a normal environment. Or, conversely, from a behavior-analytic point of view, the normal environment limits people with serve handicaps because it fails to provide the prosthetic or remedial assistance necessary for their optimal functioning (Lindsley, 1964).

Proliferation of specialized services will surely heighten the visibility of the severely handicapped, who have been out of view — contained within those special "purgatories" (Blatt & Kaplan, 1966) of grim but safely distant state institutions. The public will be seeing more and more people with peculiar gaits and anomalous faces and physiques and will be meeting increasing numbers of their professional and lay advocates. But heightened visibility may have salutary or tragic consequences for the handicapped, depending on the extent to which community environments can be modified to normalize their behavior.

Behavior-normalizing technology is emerging. Evidence of its success has been increasing exponentially. Techniques developed from the

2

experimental analysis of behavior and from research on military training have brought expanded instructional opportunities to people traditionally excluded from classroom as "untrainable" and therefore "hopeless" (Barrett, 1977; Birnbrauer, 1976). And research continues to develop, analyze, and refine methods for teaching people with increasingly severe behavior deficits. The success of these methods has made it feasible to mandate ever, normalization *ideology* is being emphasized Soeffring, 1974; Wolfensberger, 1972) at the expense of training in the technology of behavior normalization. As a result, advocate-habilitators are seldom prepared to teach the behaviors that community living requires.

Most experts in behavior-normalizing technology consider normal environments inappropriate for people defined by their inability to function adequately within them. A large body of evidence supports this position. Diverse as they may appear at first glance, behavior-analytic procedures that normalize both deviant and deficient behavior share a common property --- a property that distinguishes them as "special" in the habilitation of handicapped individuals. All such procedures employ successive and often extreme *modifications of the instructional environment.*

In the initial stages, these modifications are designed to produce instructional environments that even the most severely handicapped person can respond to and derive reinforcement from. Subsequent steps in the development of new behaviors consist of gradual revisions of the instructional environment. Each revision more closely approximates the "normal" environment, thereby requiring progression in the form, complexity, or fluency of a person's behavior.

Initial modifications may have to depart greatly from procedures used successfully with the non-handicapped. An example is the physical guidance or "putting through" required in early stages of movement formation. Another is the very finely tuned fading that may be necessary to produce visual discriminations that normal children learn almost instantly. Or the departure may be as simple as provision of more-frequent-than-normal praise for appropriate social, academic, or self-help behaviors. Severity of handicaps may be more functionally described by the "power" of the procedures necessary to normalize them than

by conventional classification (Gold, n.d.). In this case, "power" refers not only to the extent of departure from "normal," but also to the degree of sensitivity and skill necessary to design optimally instructional environments.

Just as normalization advocates often overlook behavior-normalizing technology, behaviorally oriented teachers often fail to incorporate more "normative" practices (Wolfensberger, 1972) into what should be a pedagogical continuum. If normalization of behavior is long-term goal, we should make maximum use of existing guides for developing increasingly normalizing technology. At the risk of using a controversial concept, I refer to community behavior *norms* --- descriptions of activities and performance standards typically found in community settings.

In varying degrees, community norms are implicit in most training endeavors. However, as instructional guides, they appear to be used in consistently. For this reason, community behavior norms bear re-examination and re-explication. If our goal is to help severely low-functioning individuals to become more competent and thus more acceptable to and better "blends" with their peers (Vincent & Broome, 1977), we should examine in greater detail the characteristics of typical behavior (Bricker, Ruder, & Vincent, 1976; Haring & Gentry, 1976; Haughton, 1972). In particular, what are some of the implications of community behavior norms for (1) selection of instructional outcomes, (2) modification of instructional procedures, and (3) choice of methods for evaluating progress toward behavioral normalization?

SELECTION OF INSTRUCTIONAL OUTCOMES

Instructional outcomes are the products of instruction --- the skills that the learner is expected to have as a result of instruction. Ideally, they should be quantifiable performances that occur under specified conditions and that meet specified criteria.

It seems obvious that the least restricted persons are those with the greatest variety of readily available skills for dealing with community life.

Yet the range of instructional outcomes selected for handicapped pupils is often unnecessarily (albeit unintentionally) restrictive. Decisions about what to teach more often than not reflect the instructor's methodological training. They also reflect the instructor's assumptions about the nature of retardation and his or her expectations of what retarded people can or should be able to do. In addition, educational options for low-functioning people continue to be limited by psychometric classification. This situation exists even in Massachusetts, where a 1972 act of legislature obliterated the political phenomenon of "mental retardation" (Jordan, 1973) and substituted another one --- "special needs."

Assumptions about what is "normal" for "retarded" people still underlie selection of instructional outcomes. As a result, we see emphasis on self-help skills without any consideration of the numerical skills, sight vocabulary, handwriting, or other forms of communication that are necessary for community living. Or, worse yet, we see "eliminative" education (Goldiamond, 1975) aimed solely at removing "undesirable" behavior from people with already abnormally barren repertories --- often divesting these people of their only means of interacting with their environment.

Other nonnormative variations emphasize cosmetic behavior control --- being "still, quirt, and docile" (Winett & Winkler, 1972), "on task," "in seat," "clean," and so forth. Community peers who regularly present such appearances might be called well-behaved, but unless they also display the social and academic skills expected for their age levels, they, too, risk being labeled "retarded."

Instruction limited to specialized skills has also become popular. Outcomes chosen for instruction include such sophisticated skills as telephoning, time-telling, making change, and reading price tags and restaurant menus. No doubt the "face" validity of these cosmetic instructional outcomes will improve the credibility of publicly sponsored educational programs by normalizing the "image" (Wolfensberger, 1972) of handicapped people. But ironically, instruction that imparts only a veneer of normality may set these people up for failure that would have been less likely without it. Community peers who regularly engage in these complicated activities have previously mastered a complex substructure of prerequisites and components as well as a host of related skills. A handicapped person who displays specialized competencies may provide persuasive evidence that expectancies should be changed. But the same person may become trapped by deficits that accumulate from failure to display related skills normally expected by and of age peers with comparable advanced skills. (A "special needs" savant?)

Diametric to the specialized skills approach is one that focuses only on elemental skills such as object sorting, identify matching, cross-modal matching, and object naming across various kinds of materials and with varied instructors, without any discernible sequential programming toward more commonly expected competencies. this task x materials orientation to curriculum content may appeal to those seeking a systematic approach to some form of generalization training with a very "basic skills" emphasis. Pursuit of these instructional objectives may yield a pool of subjects well pretrained for popular laboratory tasks and may, indeed, be a boon to the statistician. Unfortunately, such splinter skills appear to be unrelated to the cumulative skill development that underlies most normative notions of education.

These approaches exemplify application of "retarded norms" --- not "normal norms" that the rest of the world recognizes. And, inconsistent though it may seem, they may be practiced by instructors who are firmly committed to some concept of normalization. Nevertheless, they all seem to operationalize some unrecognized assumptions. One such assumption may be that low-functioning people are *so* far removed from the average that attempts to progress toward more conventional educational practices will be waste of time. Recent redefinition of the psychometric range of retardation could bolster such an assumption (Grossman, 1973). Another may be that within this population, individual differences are so great as to preclude application of standard presequenced curriculum. A third may be that even outside the institution, currently low-functioning persons will never be required to use any of the skills normally considered basic in both elementary education and community life. Such assumptions and their instructional products contradict any concept of normalization.

Ill-defined though it may be, cumulative skill development is the community educational model. And there is no compelling evidence that the cumulative skill model is any less applicable to the instruction of severely handicapped people than it is to the instruction of their community peers. If instructional objectives are sequenced so that subordinate skills at each level facilitate acquisition of skills at the next higher level, the result is a hierarchical arrangement of the curriculum (Resnick, Wang, & Kaplan, 1973). If properly arranged, sequentially or simultaneously taught skills at a given level serve contributive or "enabling" functions in acquisition of the next skill or set of skills in the hierarchy (Gagne, 1974).

In order for cumulative skills to eventuate in more normal behaviors, the long-range instructional outcomes of a curriculum should be selected from those normally taught in community school systems. If this seems an unrealistic goal, check your own assumptions!

With the methodology of task analysis, we should be able to set as long-range instructional outcomes at least the rudimentary skills normally acquired in early elementary education. By task analyzing these outcomes into their component and contributive skills and working backward, we should be able to specify the prerequisites for the prerequisites until we reach the most element skills critical to final performance. If we go far enough, we should be able to include in our longitudinal curricula even the most developmentally primitive reflexes found in the lowest functioning individuals. If analyzed exhaustively and sequenced according to facilitative skill functions, the product of this undertaking would be a hierarchy of instructional objectives that starts with the subskills in any given pupil's behavior repertoire and eventuates in the skills usually included in early elementary curricula (Barrett, 1977). Each skill in the hierarchy would be described by the conditions for testing its presence in each individual's behavior repertoire.

Such a longitudinal approach (Brown, 1973; Williams, Brown, & Certo, 1975; Williams 7 Gotts, 1977) would decrease the likelihood of fragmented or misinterpreted skill profiles. Moreover, it should prevent deficits from accumulating, because the necessary component and prerequisite skills would be taught prior to instruction in the skills that depend on them. People reported to have learned to "tell time" would also have learned to show you which numeral is "four," to tell you what numeral you are pointing to --- whether vocally or by signing --- and, perhaps, even to set clocks correctly. People who match coins to price tags would also have acquired one-to-one correspondence, rational counting, and even equivalence. People who once engaged in atavistic behaviors to avoid or escape various activities would have been taught to indicate choice by saying or signing "No" or perhaps even by displaying anger if their "No" is not honored.

Standardized, validated, hierarchically arranged curricula that aim toward the goals of community skills are defensible in theory. They are also methodologically justifiable as operational referents for determining how far and in what ways handicapped people depart from and therefore need specialized instruction in approximating community behavior standards.

SELECTION OF INSTRUCTIONAL PROCEDURES

Normalization of behavior also requires progressive modification of instructional procedures commonly used in classrooms for low-functioning people. We may all agree that, for severely handicapped pupils, specialized instructional technology is necessary to teach a host of behaviors that normal preschool children already have. However, we should also be continually aware that persistence with some procedures may limit our pupils'' approximations of normality. Even the best analyzed and best sequenced hierarchy of instructional objectives will fail to produce more normal behavior if the methods used to reach those objectives are not themselves successively modified toward normality.

For example, many have questioned the kinds of consequences dispensed during instruction. Community peers don't get bits of food for correct responses. They do get token rewards --- but most frequently in the form of marks rather than plastic chips. And the back-up for tokens usually consists of parental, peer, or teacher praise, privileges, and access to leisure-time

activities including simply resting or appearing to "do nothing." The "keep 'em busy" practice in some special classrooms precludes "doing nothing." The "keep 'em busy" practice in some special classrooms precludes "doing nothing." Yet this is a highly prevalent "activity" among handicapped people. Perhaps some would learn to get marks for that purpose.

Contrived consequences are often necessary in the early stages of instruction. But they can become yet another stigma of and restriction on the handicapped student unless additional training is undertaken to build the reinforcing function of more normally available events. Such training would require the same sensitive programming as techniques used to condition the reinforcing function of other response-produced events (e.g., tokens, teacher of peer approval) that originally failed to strengthen behavior that is supported by commonly available consequences, the closer the approximation to community reward systems.

Compared with the irregular scheduling of consequences in the "real" world, reinforcement of every correct response is artificial. We must constantly remind ourselves that behavior is not sustained by the schedule that works best in early acquisition (Ferster & Skinner, 1957; Lindsley, 1964); that intermittent scheduling must be intentionally programmed for all behavior that we expect to see maintained outside the prosthetic environment of acquisition. To ensure that our pupils are minimally restricted, our instructional procedures should be extended to incorporate schedules increasingly like those that sustain the behavior of community peers.

Instructional formats also deserve some examination for their relative normality and their normalizing effects. Once again, the notion of least restrictive alternatives is applicable. Unfortunately, many instructional formats that proliferate under various "behavioral" guises seem to be unnecessarily inflexible.

Despite the heterogeneity that characterizes community classroom pupils, the effort to achieve homogeneously handicapped groups still enjoys undue popularity. This notion seems to have originated from concern that less capable students would develop "failure sets" from participating with more capable people. By now we should realize that a teacher can arrange contingencies to prevent that from happening. Furthermore, if a teacher uses the imitative skills that exist or are being taught, less competent pupils, instead of experiencing "failure," may acquire more normal forms of behavior through imitation of their more competent peer models (Brown, Nietupski, & Hamre-Nietupski, 1976).

One of our residents with Down's syndrome --- an astute observer of others --- acquired one-to-one correspondence and rudimentary equivalence simply by repeatedly seeing his more competent peers counting their pennies to exchange for dimes. So, clearly, even *unprogrammed* modeling provided by heterogeneous groups can be an instructional aid that also provides a more community-like instructional environment.

Another related practice is exclusive reliance on individual tutorials, often in cubicles. Isolation may be necessary to facilitate training of various attending behaviors. However, without individual instruction in group settings and, eventually, group instruction, pupils are prevented from acquiring behaviors commonly expected of their community peers. Retarded pupils should be taught to take turns, to attend to and consequate one another's behavior, to work independently in the presence of others, to cooperate as well as compete with one another --- in short, to learn from one another. Appropriately designed contingencies make these realistic and normative goals.

How often have behavioral conditioning procedures been called dehumanizing, rigid, automatic, robot-producing, or behavior-controlling, rather than behavior-developing? How often do we hear teachers complaining about inflexible scripts that are boring to follow? How often do we see pupils who do nothing until they are told to do something? Isn't this one of the characteristics we hope to change? Surely such dependence is not characteristic of their community peers.

Exclusive use of teacher-controlled, teacher-presented trials reflects the assumption that low-functioning people will always be totally dependent on their instructors. . This will surely be so if teacher presentation is coupled with rigid adherence to priming or prompting (Skinner, 1968) without provisions for shifting control of

responding from teacher to instructional materials. Opportunities for self-presentation and independence skill practice with multiple-stimulus formats such as worksheets should be available to handicapped people. Procedures and formats that foster continued dependence on teachers are highly restrictive and may be only a short step above custodial care. They are also antithetical to the normalizing function of good programming.

Self-presentation, self-pacing, and fading of unnecessary prompts are basic procedures of programming instruction. They operationalize what Skinner meant by "freeing" the student (Skinner, 1968). While primes, prompts, and other forms of teacher control may be necessary during early acquisition, continued use of "acquisition crutches" (Lindsley, 1964) prevents development of independent responding. Until we provide transition to free-response formats, we will not have offered handicapped people the full advantages of programming technology. Nor will we ever know how closely they can approximate normal behavior patterns.

In short, if we wish to produce greater flexibility in the behavior repertoires of our pupils, we must first become more flexible in our own ways of arranging their instructional environments. Again, the patterns of community peers should be our guides.

CHOICE OF METHODS FOR EVALUATING PROGRESS

Expanding our instructional objectives and elasticizing our instructional procedures may create more normal or even less restrictive appearances in many classrooms. Lattices of longitudinal curricula with well-developed rationales and communicable lesson plans may provide recorded evidence that, indeed, a more normalizing education is being provided. Standards may be met and funding may be assured because everything looks technologically sophisticated, consistent, and credible.

But how much more normally are the pupils behaving? Are we really narrowing the gap between them and their community peers? Or is it possible that we have applied yet another layer of

cosmetics to convince ourselves that we have fulfilled our moral obligation to the handicapped? Do we really want to know? If so, how can we tell?

The best way to evaluate changes is to ask the pupils themselves. Since neither their verbal behavior nor ours can accurately describe the effects of instructional methods, we must adopt another medium of communication. That medium is measurement--a universal language. If appropriately calibrated for sensitivity to their behavior, measurement permits us to understand nonspeaking people (Barrett, 1977).

If we adopt measurement as a communication tool and behavior normalization as a long-range goal, there is readily available a variety of community performance standards against which we should compare our pupils' progress. After all, normal performance is, by definition, measured performance. It is measured performance described by norms.

While the label "norms" may conjure up bell-shaped curves, IQ tests, and a host of other controversial concepts, I am not suggesting that we revert to the global, nonprescriptive measures that have historically justified exclusion of our pupils from their rightful education. But to make comparisons that will help us set more normalizing aims, we must measure the same skills and subskills in normal children that we are trying to teach to handicapped children (Haughton, 1972; Walker & Hops, 1976). Furthermore, to ensure a communication system common to both normal and handicapped behavior, we must adopt the parameters of measurement typically applied in assessment of normal behavior.

Community behavior norms do guide the training of handicapped persons to the extent that we implicitly or even explicitly compare our pupils' accuracy with that of normal schoolchildren. But the comparison may be too restricted in scope to achieve a normalizing effect. Take, for example, the prevalent use of an 80 to 90% accuracy criterion for handicapped people. To what extent does this restrict their successful communitization of their community peers perform the same skills at 100% accuracy? If we so limit our information about our pupils, how likely is it that our

moment-to-moment decisions are producing cumulative deficits in the process of instruction? If the skills being taught are to become enabling skills in the acquisition of superordinate skills, they must at the very least be taught to normal accuracy. Lowering the "normal" criterion to accommodate the errors of the handicapped not only prevents their attainment of mastery but also perpetuates the expectancy of limitation that we are trying to dispel.

But suppose we require consistent 100% accuracy as a criterion in cumulative skills development, and suppose we also incorporate in our curricula the practice periods, retention checks, and reviews found in conventional school curricula. Is accurate performance sufficient to achieve the degree of behavior normalization we seek for handicapped people?

If we look more closely at the measures used in community schools, we find that accuracy is only one dimension of normally measured behavior. Percentage correct is a highly restrictive measure that yields relatively little information from a pupil. Whether it be derived from a person's performance in one setting with one teacher and one set of cues and materials or from many variations of these environmental variables, a major dimension of behavior is disregarded if we rely solely on percentage correct. That disregarded dimension is time. How long does it take to teach Jimmy to feed himself? to brush his teeth? Once taught, how long does Jimmy take to perform these complicated behavior chains? And how consistently does he perform them? Has he really mastered these skills that normal children perform easily and rapidly every day? These questions cannot be answered from percentage on components completed accurately nor from percentage of time Jimmy engages in these activities appropriately. We are restricting Jimmy's communication to us by limiting the measured dimensions of his behavior.

Why do we limit our own effectiveness by persisting with such fragmentary information when we invest so much energy in trying to train the handicapped?

In the community, time is one of our most precious commodities. The clock and the calendar provide a base for evaluating instructional effectiveness. If a pupil can't keep up the pace, reme-

dial procedures are called for. And pupil records are cumulative through time. Progress is judged by Jimmy's cumulative skill development during units of time called *terms* or *semesters*. In community living, time restrictions are everywhere.

And if we ask how well our most accurate pupils will be able to function in community environments, we are forced to consider such temporal measures as duration and rate of responding. Jimmy must be able to count money at supermarket-acceptable speeds. He must be able to speak, read, or sign fluently enough for comprehension. A trial-by-trial teaching format locks the child's performance into a rate determined by the teacher. On the other hand, self-presenting lets the *child's* rate emerge. Self-presenting also provides a format that facilitates fading of teacher prompts that slow the child down. As teacher prompts are gradually faded, the child is freed from the ceiling imposed by teacher-presented trials. Furthermore, removing the teacher-determined ceiling on the child's speed of accurate performance permits us to include the time dimension in the pupil's communication to us. Steps to independence from teacher prompting become quite clear if we measure the rate of prompts as well as the rate of behaviors executed without prompts. The pupil's growing independence is *measured directly* and *described functionally* by the increasing graphic distance between the rate of prompted behavior and the rate of unprompted behavior over time.

Research continues to develop methods that increase instructional efficiency by fading prompts and thereby reducing the time required to bring handicapped people to criterion accuracy. And appropriate use of acquired skills in varieties of settings with varying materials, cues, and people has become the subject of analysis (Stokes, Baer, & Jackson, 1974), demonstration (Barrett & McCormack, 1973), and pedagogical concern (Certo, Brown, Belmore, & Crowner, 1977; Williams et al., 1975). But even if they perform accurately and appropriately in the range of situations commonly encountered in community life, people may still be called "retarded" if their performance is too slow.

How fast is fast enough? At present there is no empirical evidence to answer that question. Commonly available norm-referenced tests with time limits may furnish some clues. However, because the instructional objectives for handicapped people are more finely task analyzed than those appropriate for most nonhandicapped people, it is not likely that the subskills of concern will be represented in instruments standardized on a "normal" population. Therefore, the fluency aims for this group must be developed from another source. In this as in other comparisons, useful guides are obtained from nonhandicapped people (Haughton, 1972; Starlin & Starlin, 1973; Willis, 1974) performing the same skills and subskills that are being taught to currently low-functioning people.

In the absence of a standard curriculum, an exact description of the behaviors being taught may vary from teacher to teacher and from pupil to pupil. But that should not be an obstacle. Whatever skills *are* being taught may be used to probe the speed at which competent nonhandicapped people perform them under the same conditions used for assessing proficiency among handicapped pupils (Haring & Gentry, 1976; Lovitt, 1976; White & Haring, 1976).

For example, suppose we are teaching some of the component and enabling skills involved in basic reading, writing, and arithmetic. Our handicapped pupils have been taught to perform consistently at 100% accuracy and have made a successful transition to formats permitting unprompted accurate repetition of these skills within specified time limits. Having normalized our pupils' accuracy and permitted them opportunities to speed up their performance, as their community peers do, we now question whether, in so doing, we have normalized their fluency. Using the exact formats provided our pupils, we have some community schoolchildren and adults perform the same skills within the same short probe periods, say, 30 seconds.

For example, Figure 1 presents exploratory results from four of our state school pupils as they compare with an equal number of young non-handicapped public school pupils and adults. Rate (frequency) ranges are based on the highest of four rates attained by each individual on successive probes.

Note that, even through the groups are very small, there is a lawful relationship among the rates of the three groups across all 16 skills. The state school pupils performed at consistently lower rates than much younger public school pupils and they, in turn, performed at consistently lower rates than the adults. Note also that , of the 16 skills probed, only five show any overlap in the range of fastest performances obtained from state school residents and those shown by younger public school pupils. Yet all were performing these tasks at 100% accuracy. Furthermore, the state school residents were theoretically at an advantage because they had practiced these tasks prior to the probes that yielded these data. This example shows us how incompletely we have performed our own task of normalizing our pupils' accurately performed behavior.
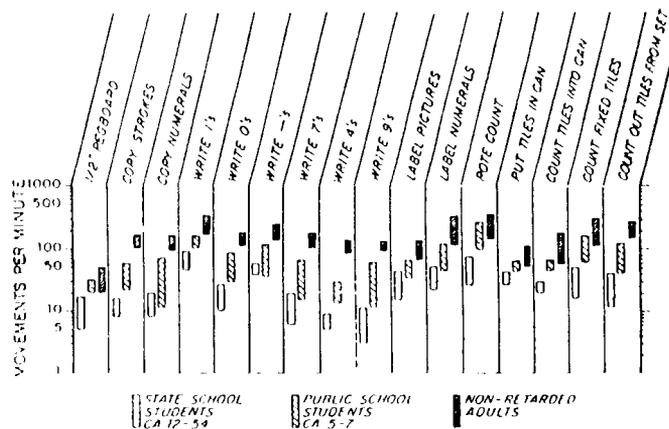

Figure 1 *Frequency comparisons on some components and prerequisites of elementary skills (Based on an unpublished pilot study conducted by Frances George and Deborah Pease)*

9

By adopting one additional dimension in our measurement system, we increased the opportunities for our pupils to communicate with us. Then, by comparing their performances with those of their community peers, we were made aware that both our methods and our objectives must be expanded in the direction of normality if we are to provide our pupils increasingly normalizing habilitative options. Use of a single additional parameter of "normal" performance - rate - necessitates revisions in instructional methods and in curricular formats to permit multiple opportunities for pupil response limited only by specified time intervals. With a quantitative description of the "normal range" on the subskills chosen for comparison, we now have a first approximation of the "normal" criteria that should be applied in evaluating our pupils' progress.

CONCLUDING COMMENTS

"Retardation" is more than a label. It is more than a sociopolitical arena. It is a behavioral reality. Until we can fully normalize our pupils' performance, the reality of retardation will persist regardless of what labels are substituted and what geographic locations the labeled people behave in. An our effectiveness will be inversely related to the restrictions we place on the measured communication to us.

Clearly, normalizing the behavior of severely handicapped people is a very different and more complicated undertaking than simply changing their habitat. Yet it cannot be accomplished without successive environmental normalization as an integral process in behavioral habilitation. Moreover, if we adopt the common language of measured "normal" performance standards as instructional guides, we see the need for considerable methodologic development to provide the skill-supportive instructional environments that will enable our pupils to perform as normally as possible.

No matter how strong the legal and political pressures, we must evaluate our environmental changes in terms of their effects on the behavior of the people to be habilitated. Only our pupils can tell us what environments are more favorable for them. And we must give them as many options as possible for communicating with us. If

we permit their measured interactions with various environments to determine the adequacy of our environmental designs, we will avoid the inconsistencies that accrue from approaches that disregard their critical evaluative feedback.

It is the thesis of this article that:
1) Communitization of the severely handicapped is being undertaken without adequate evidence of its effects on the people for whom benefits are being sought; 2) Until their measured behavior supersedes our assumptions, inconsistencies between principles and application will continue to undermine our mission enhancing their future well-being; 3) The medium of communication best suited to articulate and amplify their response to our interventions is the universal language of measurement; 4) Only by posing relevant questions of the seeking answers from the measured behavior of our clients and their community peers can we begin to reconcile their needs and our assumptions.

With measured progress toward the goal of behavioral normalization and with the measured message of *normal* behavior as a guide, we will be better able to determine where we have been, where we are going, and how far we have to go.

References

Barrett, B. H. Behavior analysis. In J. Wortis (Ed.), *Mental retardation and developmental disabilities* (Vol. 9) Brunner/Mazel, 1977

Barrett, B. H., & McCormack, J. E., Jr. Varied-teacher tutorials: A tactic for generating credible skills in several retarded people. *Mental Retardation*, 1973, 11(6) 14-19.

Birnbrauer, J.S. Mental Retardation. In H. Leitenberg (Ed.), *Handbook of behavior modification and behavior therapy.* Englewood Cliffs, N.J.: Prentice-Hall, 1976.

Blatt, B., Bogdan, R., Biklen, D., & Taylor, S. From institution to community: A conversion model. In E. Sontag, J. Smith, & N. Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va.: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Blatt, B., & Kaplan, F. *Christmas in purgatory.* Boston: Allyn & Bacon, 1966.

Bricker, D., Ruder, K.F., & Vincent, L. An intervention strategy for language-deficient children. In N.G. Haring & R.L. Schiefelbusch (Eds.), *Teaching special children.* New York: McGraw-Hill, 1976.

Brown, L. Instructional programs for trainable-level retarded students. In L. Mann & D.A. Sabatino (Eds.), *The first review of special education* (Vol. 2). Philadelphia: Journal of Special Education Press, 1973.

Brown, L., Nietupski, J., & Hamre-Nietupski, S. The criterion of ultimate functioning and public school services for severely handicapped students. In M.A. Thomas (Ed.), Hey! *Don't forget about me!* Reston, Va.: The Council for Exceptional Children, 1976.

Certo, N., Brown, L., Belmore, K., & Crowner, T. A review of secondary-level educational service delivery models for severely handicapped students in the Madison Public Schools. In E. Sontag, J. Smith, & N. Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va: Division on Mental Retardation, The Council For Exceptional Children, 1977.

D'Amelio, D. *Severely retarded children: Wider horizons.* Columbus, Ohio: Charles E. Merrill, 1971.

Ferster, C.B., & Skinner, B.F. Schedules of reinforcement. New York: Appleton-Century-Crofts, 1957.

Gagne, R.M. Task analysis--Its relation to content analysis. *Educational Psychologist,* 1974, 11, 11=18.

Gold, M. Definition. Unpublished manuscript, n.d.

Goldiamond, I. Alternative sets as a framework for behavioral formulations and research. *Behaviorism,* 1975, 3, 49-86.

Grossman, H.J. (Ed.). *Manual on terminology and classification in mental retardation.* Washington, DC: American Association on Mental Deficiency, 1973.

Haring, N.G., & Gentry, N.D. Direct and individualized instructional procedures. In N.G. Haring & R.L. Schiefelbusch (Eds.), *Teaching special children.* New York: McGraw-Hill, 1976.

Haughton, E. Aims--Growing and sharing. In J.B. Jordan & L.S. Robbins (Eds.), *Lets try doing something else kind of thing.* Arlington, Va.: The Council for Exceptional Children, 1972.

Jordan, J.B. On the educability of intelligence and related issues: A conversation with Burton Blatt. *Education and Training of the Mentally Retarded,* 1973, 8, 219-229.

Kunzelmann, H.P. (Ed.). *Precision teaching.* Seattle: Special Child Publications, 1970.

Larsen, L.A. Community services necessary to program effectively for the severely/profoundly handicapped. In E. Sontag, J. Smith, & N. Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va.: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Lindsley, O.R. Direct measurement and prosthesis of retarded behavior. *Journal of Education,* 1964, 147, 62-81.

Lovitt, T.C. Applied behavior analysis techniques and curriculum research: Implications for instruction. In N.G. Haring & R.L. Schiefelbusch (Eds.), *Teaching special children.* New York: McGraw-Hill, 1976.

Resnick, L.B., Wang, M.C., & Kaplan, J. Task analysis in curriculum design: A hierarchically sequenced introductory mathematics curriculum. *Journal of Applied Behavior Analysis,* 1973, 6, 679-710.

Roos, P. A parent's view of what public education should accomplish. In E. Sontag, J. Smith, & Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Skinner, B.F. A review of teaching. In B.F. Skinner, *The technology of teaching.* New York: Appleton-Century-Crofts, 1968.

Soeffring, M.Y. Normalization of services for the mentally retarded: An interview with Wolf Wolfensberger. *Education and Training of the Mentally Retarded,* 1974, 9, 202-208.

Sontag, E., Smith, J., & Certo, N., (Eds.). *Educational programming for the severely and profoundly handicapped.* Reston, Va.: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Starlin, C., & Starlin, A. *Guides to decision making in oral reading.* Bemidji, Minn.: Unique Curriculums Unlimited, 1973.

Stokes, T.F., Baer, D.M., & Jackson, R.L. Programming of a greeting response in four retarded children. *Journal of Applied Behavior Analysis,* 1974, 7, 599-610.

Throne, J.M. The normalization principle: Right ends, wrong means. *Mental Retardation,* 1975, 13(5), 23-25.

Vincent, L.J., & Broome, K. A public school service delivery model for handicapped children between birth and five years of age. In E. Sontag, J. Smith, & N. Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va.: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Walker, H.M., & Hops, H. Use of normative peer data as a standard for evaluating classroom treatment effects. *Journal of Applied Behavior Analysis,* 1976, 9, 159-168.

White, O.R., & Haring, N.G. *Exceptional teaching.* Columbus, Ohio: Charles E. Merrill, 1976.

Williams, W., Brown, L., & Certo, N. Components of instructional programs for severely handicapped students. In L. Brown, T. Crowner, W. Williams, & R. York (Eds.), *Madison's alternative for zero exclusion: A book of readings* (Vol. 5). Madison: Madison Public Schools, 1975.

Williams, W., & Gotts, E.A. Selected considerations on developing curriculum for severely handicapped students. In E. Sontag, J. Smith, & N. Certo (Eds.), *Educational programming for the severely and profoundly handicapped.* Reston, Va.: Division on Mental Retardation, The Council for Exceptional Children, 1977.

Willis, B. Project report IV of State of Washington's child service demonstration programs Seattle-Spokane-Tacoma for precise educational remediation for managers of specific learning disabilities programs. Tacoma, Intermediate School District No. 111, July 1, 1974.

Winett, R.A., & Winkler, R.C. Current behavior modification in the classroom: Be still, be quiet, be docile. *Journal of Applied Behavior Analysis,* 1972, 5, 499-504.

Wolfensberger, W. *The principle of normalization in human services.* Toronto, Can.: National Institute of Mental Retardation, 1972.