

SPECIAL MEMO

4/10/67

TO: ALL EMPLOYEES

FROM: MALCOLM J. FARRELL, M.D. SUPT.

DIRECTOR OF PSYCHOLOGICAL RESEARCH
EMPLOYEE'S POSITION

ON MAY 30, 1967, THE FERNALD SCHOOL IS GOING TO BE EVALUATED BY THE AMERICAN ASSOCIATION ON MENTAL DEFICIENCY. ONE ASPECT OF THIS EVALUATION IS TO DETERMINE THE PURPOSE OF THIS SCHOOL AS SEEN BY ALL FERNALD PERSONNEL.

ANSWER THE FOLLOWING QUESTIONS AND RETURN TO THE BALLOT BOX NEXT THURSDAY APRIL 20, WHEN YOU RECEIVE YOUR CHECK.

1. WHAT DO YOU THINK IS THE GENERAL PURPOSE OF THE FERNALD STATE SCHOOL?

I DO NOT SEE EVIDENCE OF A GENERAL RAISON D'ÊTRE; I.E., A GUIDING PURPOSE WHICH PERMEATES THE PHILOSOPHIES, POLICIES, AND OPERATING PROCEDURES OF ALL ECHELONS OF THE INSTITUTION'S STAFF.

2. WHAT IS THE SPECIFIC PURPOSE OF YOUR DEPARTMENT?

TO DEVELOP OBJECTIVE LABORATORY AND FIELD PROCEDURES FOR ANALYZING AND MODIFYING THE BEHAVIOR OF SEVERELY RETARDED CHILDREN TOWARD THE EVENTUAL GOAL OF BEING ABLE TO SPECIFY ASPECTS OF THE TRAINING ENVIRONMENT WHICH SUPPORT THE MOST COMPETENT BEHAVIORAL DEVELOPMENT OF EACH CHILD.

WALTER E. FERNALD STATE SCHOOL EVALUATION

1. Statement of Philosophy

A. What do you think is the general purpose of the Fernald State School?

I do not see evidence of a general purpose of the Fernald State School. While there are staff members within the institution who may say the purpose is to train each resident to his maximally competent behavioral level, the fact still remains that only a very small minority of staff are actively involved either in training or in empirically determining (rather than pre-guessing) what the behavioral limits of the Fernald residents actually are.

B. What is the specific purpose of your department?

The guiding principle of the Behavior Research Department may be stated as follows: the child knows best. Give him the tools to teach us! Until we have applied all that current behavior science and technology provide to explore the properties of his behavior and the extent to which he is modifiable (trainable) by his environment, we have no grounds for assuming what he is or is not capable of doing - irrespective of his genetic, metabolic, neurological, or psychiatric status.

The Behavior Research Department was created for the following specific purposes:

- 1) to develop procedures for fully objective measurement of training-relevant behaviors in individual children throughout the range of behavioral retardation, thereby permitting direct comparison of behavioral patterns of individual children irrespective of degree of retardation;
- 2) to locate and objectively describe specific behavioral abilities and deficits in individual children not heretofore described by conventional assessment procedures which are limited to only selected subgroups of the clinical population;
- 3) to determine empirically the immediate environmental conditions which enable each child to perform most efficiently - again, irrespective of his clinical subclassifications;
- 4) to apply findings from the above investigative endeavors to empirically test the behavioral limits of individual children - independently of their subclassifications by other procedures.
- 5) to provide training opportunities for interested staff and students in whatever investigative and behavior modification procedures we find useful in exploring the behavioral limits of individual children.

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2. Statement of Practices.

Toward the aforementioned objectives we are developing two interdependent research-demonstration-training programs: one devoted to laboratory procedures and the other to "field" procedures. Both are concurrently conducted by a core staff and concurrently funded by three primary sources: 1) a National Institute of Mental Health grant directed by the department head, 2) a P.L. 89-313 Title I grant co-directed by our nurse and our research teacher, and 3) the Walter E. Fernald State School.

Currently available evidence points to multiple causation of behavior development. Therefore the techniques we are attempting to develop for individual behavior analysis must span the range from automatically controlled laboratory procedures to those which can be used by a nurse, a teacher, or a psychiatric aide. These techniques will enable us to obtain, on a single graph, multiple properties of a given child's behavior over long periods of time both in the laboratory as well as in his ward and classroom environments.

Since the techniques are being developed not only to measure and modify the behavior of individual children, but also to permit comparison of one child with another, we have chosen very simple, easily observable and recordable behaviors which can be found in most children and adults throughout the range of behavioral retardation. In the laboratory these behaviors are automatically recorded, thereby avoiding observer error and bias. In the ward and classroom they are recorded on specially designed tally sheets. Because the behaviors selected for recording and modification are specific enough to be obviously present or absent and countable, the role of human observer-recorder reliability is minimized.

Both the laboratory and field recording techniques employ the most sensitive measures of human behavior - rate and duration. Since all measures are temporally based, we have built in a uniformity of behavior evaluation methods which permits direct comparisons across environments in which a given child behaves.

Our laboratory procedures have amply demonstrated automatically quantifiable behavioral individuality which transcends clinical diagnostic groups. Since they require no verbal behavior from a child, and since they are capable of sustaining a child's behavioral interactions with a controlled environment over months and years, they have enabled us to assess the effects of discrete environmental manipulations on a given child's behavioral efficiency in very basic discrimination problems. We are now able to apply these behavioral conditioning procedures to children and adults from all levels of retardation except the totally nonambulatory. That group is our next problem.

By manipulating the antecedents and/or consequences of a child's behavior and analyzing the effects of such variations on the child's ongoing and continuously measured behavior, we are able to quantify a child's behavior modifiability (trainability) under specific conditions. In this way, we have located children within the conventionally "unteachable" ("untrainable") range whose behavior modifiability equals or surpasses that of many children

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2. Statement of Practices (Continued)

considered educable by conventional assessment procedures. Thus, we have begun to find that, by providing an appropriate environment for measuring and modifying a child's behavior, we have given him the tools to show us what he can do - irrespective of his clinical label.

Severe and profound behavioral retardation - the "hopeless" group - furnishes our most challenging prospects. Our current focus of endeavor is twofold: to provide extra-laboratory environments and procedures which will 1) permit validation studies of laboratory findings on individual children and 2) permit manipulation of extra-laboratory environmental variables to assess their modifiability of both laboratory and "field" behavioral pattern of selected children.

During the past year we have provided both individual and small group training in a classroom environment for 25 of the 45 severely and profoundly retarded children in one of the Fernald buildings. Behavioral records of their progress under a pilot program of differential reinforcement enabled us to rank the trainability of these untestable children and demonstrated their sensitivity to variations in their training environments. Their progress was ample evidence that they should not remain in a purely custodial environment.

Behavioral regressions were also charted. As a result of temporary cessation of training and fairly complete reversion to pre-training custodial care by the building's attendant staff, behavioral losses were recorded both in the laboratory and in the ward. Because traditional ward care counter-conditions many behaviors generated through differential reinforcement of more appropriate behaviors, and because of inadequacies in both building space and staff at this time, it was decided that the 24 hour consistency necessary for detailed behavior recording and maintenance of training procedures could be achieved only by concentration on a limited number of children with an actively training-oriented staff.

We have recently begun developing a small ward environment for six of the most "unmanageable" severely retarded children being studied in the laboratory. Techniques for selecting and recording specific behaviors to be accelerated or decelerated in individual children are being developed prior to training in order to provide pre-modification baselines. Behavioral information is being recorded round-the-clock to determine diurnal variations and to obtain a broad sample of each child's current behavioral repertoire. Each child's behavior profile is plotted daily. Starting this week, selected behaviors in each child will become the focus for differential reinforcement procedures which will accelerate and sustain desired behaviors while decelerating the hitherto "unmanageable" behaviors.

As these children acquire self-help skills on the ward, the behavioral requirements in their environment will be broadened by exposure to a programed classroom where simple verbal, motor, and social skills will become the behavioral targets. Here also the recording and conditioning procedures will parallel those used on the ward and in the laboratory. Programed

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2. Statement of Practices (Continued)

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2. Statement of Practices (Continued)

learning procedures will be developed to teach very practical behaviors needed by each child to move into progressively demanding environments. By manipulating the behavioral requirements and consequences programmed for each child, we hope to test empirically the limits of his behavioral competencies.

In the process of developing the above program, we have had a number of students both in the laboratory, the classroom, and the ward ranging from predoctoral fellows in both School Psychology (Boston University) and Psychology (Harvard) to undergraduate Special Education students (Northeastern). Our ward-classroom-laboratory program is an accepted field training unit for Northeastern University. Work done by these students ranges from doctoral laboratory experiments to classroom experiments to ward training. If the total program proves successful, we hope to make its fruits available to whatever Fernald personnel may consider it worth while.

Behavior Research Department

May, 1967

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2. Statement of Practices (Continued)

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Behavior Research Department

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3. Staff Meetings (continued)

for data collection and to organize a program of activities and specific training techniques for the children selected for these programs.

As our behavior modification program develops and acquires a stable staff with defined areas of responsibility, we plan to hold more inclusive total program staff meetings in order to facilitate necessary information exchange between the laboratory and training personnel. These will likely occur weekly beginning within the next month.

Irregular Nursing and regular monthly School Department staff meetings are attended by our research nurse and research teacher, who are jointly affiliated with the Behavior Research Department. Each also meets with her respective departmental head on a PRN basis.

Should the In-Service Nursing Education staff resume their former program of training and behavior modification, we are ready to resume our former regular biweekly meetings with their supervisory personnel as well as semiannual lectures and laboratory tours for their trainees.

The training and laboratory supervisory personnel from this department also meet three to four times a year with the supervisory personnel of the Hospital Improvement Program at Wrentham on a consulting basis. Common problems and the techniques developed to deal with them are the subject of discussion. In addition we have been assisting them in developing methods for gathering the appropriate data to evaluate the effectiveness of their training procedures.

Outside the above, informal and irregular meetings are held with personnel from other departments as problems and plans arise. These include Social Service, Director of Training and Education, Chaplain, Steward, and Superintendent.

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4. Institutional services and the community.

The Behavior Research Department communicates its work and findings primarily through an open door policy at the laboratory. During the years 1964-1966, we averaged 84 students and parent visitors per year and 137 professional visitors per year. These visitors span more than half the world in geographical location and represent varieties of medical, behavioral, and social sciences as well as architecture, engineering, law, and theology.

Over the same three year period, we received and filled an average of 125 reprint requests per year and we mailed an average of 321 unsolicited reprints and reports per year to potentially interested individuals and agencies.

In addition to the above, we mailed to all Fernald School Department Heads, Professional Staff, and Matrons a yearly Progress Report highlighting developments which may interest them.

Consultation requests from institutions in New Jersey, North Carolina, Michigan, Indiana, and Massachusetts have resulted in a series of visits and talks to professional staffs by the Director of Behavior Research.

Local parent groups, youth groups, universities, and professional groups frequently call upon our staff for formal and informal discussions of both the laboratory and training aspects of our program. All requests are filled. We have had only two such requests from Fernald: one from the In-Service Nursing Education Program well over a year and a half ago and one, more recently, from the Director of Research for presentation at a regular neurology conference.

Cooperative training arrangements have been established with the Harvard University Psychology Department and Phillips Brooks House, with the Boston University Departments of School Psychology and Special Education, with the Northeastern University's Student Cooperative Program, and with the Neighborhood Youth Corps.

Volunteer programs have been arranged both by our staff and through the assistance of Fernald's Director of Auxiliary Services. These include Phillips Brooks House (Harvard, N-25), Waltham High School Interact Club (N-25), Brookline Jewish Community Youth Group, and the Wayland Lutheran Church. These programs have included individual recreation as well as such activities as painting and equipping hitherto unused areas which we are now using for training of the children we are currently studying.

Ideally, we would like to see as many children as possible leave the current deprivation of the institution and find acceptable homes in the community. For this reason we are just now starting to develop a program for working with parents of the children we are studying and training. A staff member responsible for this program has just joined us. He will encourage parent visits and consultation in a preliminary effort to elicit

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4. Institutional services and the community (continued)

sufficient parental involvement to start training them to train their children. To nurture the existing parental interest, one of our staff members regularly attends and participates in meetings of the Fernald Parent League.

Since there are many children for whom it will likely be impossible to find homes in the community, and since the current institutional community is not set up to support more normal behavior from most of its children, we have taken every opportunity to discuss with the appropriate administrative and department heads the possibilities of developing more community-like opportunities on the grounds of Fernald. This would involve canteen, store, payment for movies, parties, field trips, etc. with cash earned contingent on specific behavioral signs of progress. In the laboratory we have found that this works very well even with severely retarded children who are learning to purchase items and privileges during earned field trips into the community.

Further efforts to improve the institutional environment for the children in our program include 1) a dental service and evaluation program recently established by our research nurse in liason with Tufts University, and 2) a continuous effort by all staff members to locate and get transferred to more behaviorally demanding programs those children whose behavioral progress depends on growing requirements from their environments.

Beatrice H. Barrett, Ph.D.,
Director - Behavior Research Department
May, 1967