

BEHAVIOR DEPARTMENT

Walter E. Fernald State School

Waverley, Massachusetts

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ANNUAL REPORT

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1.0 ADMINISTRATION

1.1 Support from grants and institution sources

1.11 As promised, we were cut 50% in Title I salaries. We had previously operated with four salaries from Title I, but for most of the past year we had only two. Because our teaching staff had to be cut accordingly, we were unable to carry out our plan for including a larger group of Fernald residents in our classroom programs.

1.12 Cutbacks in the laboratory staff were made in order to stretch our NIMH funds as long as possible. To permit us to complete the maximum amount of work, NIMH approved an extension of our current period of support without additional funds.

1.13 At present we have no promise of future grant support.

1.2 Further expansion of laboratory capabilities

1.21 We have begun to conduct sessions with our portable laboratory unit in the activity area of our classroom. We are exploring its potentiality as a tool for assessing both individual behavioral generality and group behavioral interactions. (See section 2.3.)

1.22 We now have a four-console, 20-channel system for continuous recording of behaviors in our classroom activity area and in our tutorial cubicles. Simultaneous measurement of ongoing behaviors in a "natural" environment should provide more reliable information about retarded behavior than was previously obtainable. (See section 2.5.)

1.23 Automated equipment (Room 3) for teaching and analyzing complex behaviors will be put into operation as soon as we complete the redesign of our system for photographing stimulus materials. (See section 2.4.)

1.3 Personnel

1.31 Regular staff

Ann Stuart replaced Linda Meistrell as special service assistant. Edward Pinkerton, M.A., replaced Steve Hanley as laboratory assistant and, during the year, was re-assigned to a teaching position. Timothy Barash, B.A., Barbara Colby, B.A., and Judith Rosenberg, A.B., continue in their regular positions.

James McCormack, Jr., M.Ed., continues as director of educational programs, Hara Bouganim, Ed.M., as program analyst, and Jessica Weld as teaching assistant. James Hamilton, Ph.D., has been developing procedures for assessing learning potential in severely retarded people (see section 2.9). Warren Hofstra resigned recently to go to graduate school, and Lee Vorderer left in September to get her master's degree in special education at George Peabody College.

1.32 Student staff on co-op assignment from Northeastern University were Barbara Campagna and Arthur Leslie.

1.33 Volunteers during the past year included 80 students representing nine colleges and universities (Boston College, Boston University, Brandeis, Harvard and Radcliffe, Middlesex Community College, Simmons, Tufts, and Wellesley) and three high schools (Lexington, Lincoln-Sudbury Regional, and Newton). They gave a total of 2,030 hours of their time to our educational and habilitative programs.

2.0 BEHAVIOR EVALUATION

A large part of our time and energy during the past year was devoted (in vain) to re-writing and supplementing proposals, and preparing for a site visit from a federal granting agency. Nevertheless, we were able to make progress in several areas, even with serious cut-backs in department staffing.

2.1 Because of imminent funding stoppage we were unable to add new participants. During the year, 37 residents continued to participate in our laboratory studies.

2.2 We are in the midst of analyzing our extensive, long-term data on simultaneous discrimination and differentiation as well as on simpler discrimination tasks that do not involve differentiation. We have devised what seems to be an effective format for graphically comparing individual acquisition skills and deficits and for displaying the multidimensional behavior patterns that constitute functionally defined behavior subgroups. At the same time, we have begun analyzing the classroom records of trainees within the laboratory-defined subgroups to establish criterion measures against which to assess the predictive validity of laboratory-measured behavior patterns. We hope that before the coming year is over, we will be able to report our latest findings to our professional colleagues.

- 2.3 With our portable laboratory unit, we have begun exploratory studies of the generality of laboratory-measured behavior patterns of individuals who are currently participating in classroom programs. We are also examining various individuals' patterns of operating the portable unit when in the presence of other specific residents. We have already begun documenting a "social hierarchy" among our classroom trainees and will continue to explore this emergent phenomenon.
- 2.4 The design and programming of our new apparatus for teaching and analyzing complex behaviors is all but complete. This apparatus should enable us to extend the sensitivity of our behavioral assessment procedures to obtain more meaningful information on residents who appear nearly indistinguishable with the procedures we have previously used. It presents a much broader range of visual and auditory stimuli and can be programmed to require increasingly complex response chains as well as much simpler discriminations than are afforded by our other stimulus sources. Its initial programs are being designed with the help of Mr. McCormack, who has worked for some time on developing its multiple educational applications.
- 2.5 With the aid of video tapes and our new system for continuous recording of selected behaviors in a small group setting, we have begun tackling the problem of locating reliably defined movement classes that would reflect our trainees' considerable cognitive and social development that has not been revealed by more systematic training procedures. We have seen remarkable changes in many of our trainees--changes that appear to be byproducts of our program, i.e., not acquired from specifically designed instruction. Because of funding problems, we were forced to shelve this work which we believe could yield extremely important information to be considered in selecting behaviors for future training.
- 2.6 To describe what skills our trainees have acquired, the conditions which facilitate their transfer, and the areas that need special remediation, we have begun devising systems for component task analysis of our curriculum. One that seems to have great potential is a matrix which permits us to describe each phase of each program in terms of the nature of the matching required (type of input to pupil and type of pupil output) and the content of materials used (e.g., colors, pictures, or spoken words). By overlaying a matrix of each trainee's successes and failures, we can describe his acquired skills and apparent deficits in terms of the task-materials coordinates that define cells in which he failed and cells in which he learned. This information is then used to 1) trouble shoot possible reasons for his failure and/or 2) advance him to programs that build upon skills he has already acquired.

Similarly, by appropriate color-coding of cells, the analytic overlays can be used to show what skills each pupil has previously acquired, what he has failed on to date, whether skills in either of these categories are required in a new program, and whether the new program succeeded where others have failed.

- 2.7 We have also begun devising ways of analyzing our instructional sequences to locate "critical task" phases that sort our trainees into functionally defined subgroups and which, therefore, may be useful for both prescriptive and predictive purposes. Starting with instructional sequences on which we have the most data, we are plotting individual distributions of sessions to reach criterion on each phase of each program. Individual patterns of failure and their prevalence within the group are being revealed. Reference to the task-materials descriptors (see 2.6) of these phases gives an operational basis for 1) selecting remedial modifications of these phases for this individual and 2) defining the conditions under which acquisition and/or transfer breaks down for each trainee.
- 2.8 Curriculum-derived potential predictors have begun to emerge from our analysis to date. With more systematic study, we hope to evaluate their usefulness in both trainee placement and trainee selection. The following examples illustrate our direction.

<u>Program and/or Program Phase</u>	<u>Potentially Predictive of</u>
Peg Placement	Motor coordination adequate for classroom participation
Sorting by Color	Sorting objects on other dimensions, e.g., clothing, tableware, mechanical parts
Picture Identification	Expressive vocabulary, lower levels
Questions, Phases 1 & 2	Conversational abilities
Quantity, Phase 12	Use of counting and quantity concept irrespective of objects involved, e.g., table setting, use of currency, etc.

2.9 A "downward extension" of the standard Kohs Block Design Test to assess the learning potential of severely retarded people has been developed by Dr. James L. Hamilton, who has been with us part time on a doctoral research internship (Hamilton, 1972). Hamilton's assessment procedure showed, among other things that "learning potential" (as reflected in performance gain following brief, standardized instruction) clearly is not predicted from IQ levels within the severely retarded population and that the IQ < 31 group not only gained from coaching but also showed extensive overlap in learning potential with the IQ 32-51 group. Both groups retained their gains after 30 days. Learning-potential status (gainer or non-gainer) was significantly correlated with performance on a related Knox Cube task.

* * * * *

Despite a very difficult year with a great deal of "down time" devoted to a proposal for "middle-road research" (Gold, 1972) that, according to Tjossem (1972a), appeared to have fallen into one of the "cracks in the federal funding structure" (Tjossem, 1972b), we are moving ahead with our work. The accomplishments of the past year have provided tools that we believe can be applied to increase the scope and the efficiency of educational programming for severely retarded people.

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-mindedness 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 a profound effect on the pattern of education for the severely retarded child. (D'Amelio, 1971, Pp. 4-5).

References for Section 2.0

D'Amelio, D. Severely Retarded Children: Wider Horizons. Columbus, Ohio: Merrill, 1971.

Gold, M. Facilitating the researcher-practitioner apostasy. Presented at American Academy on Mental Retardation, Minneapolis, May 1972.

Hamilton, J. L. Application of the learning potential paradigm to severely mentally retarded adolescents. Unpublished doctoral dissertation, University of Missouri, Columbia, June 1972.

Tjossem, T. Personal communication, March 1972 (a).

Tjossem, T. President's remarks. Presented at American Academy on Mental Retardation, Minneapolis, May 1972 (b).

3.0 EDUCATION AND HABILITATION OF FERNALD RESIDENTS

Trainee improvement this year was impressive. An analysis of each trainee's progress through his programs was conducted so that we could list terminal behaviors achieved during the year. For the first time, we are able to begin setting long-term goals for the trainees--possible jobs outside the institution, placement in sheltered workshops, or for the less capable, responsibilities in their residential units.

- 3.1 Since 1 July 1971, 42 residents have participated in our educational programs. Their ages range from 11 to 43. Six are classified as "educable," 10 as "trainable," and 26 as "severely" or "profoundly" retarded. The majority live in Wheatley Hall, but some come from other buildings: East, Kelley, Dowling, West, Farrell, Chipman, Warren, Wallace, Dolan. Regular daytime sessions have 24 residents enrolled; evening sessions have an enrollment of 18. In the past 12 months, residents have spent a total of 17,646 hours in classroom activities. During that time, 14,046 individual tutorials were conducted. Every trainee was scheduled for at least five different programs, each taught 2 to 10 times a week.
- 3.2 We have continued to hold weekly preclassroom training sessions in Wheatley Hall for 10 residents who still lack some basic skills necessary for participation in regular classroom programs. The curriculum was described briefly in last year's annual report.
- 3.3 Assessment of workshop readiness began during the past year. A number of our trainees have acquired skills that we believe could make them eligible for participation in workshop activities. Since Fernald does not yet have a workshop for residents at the level of our trainees, we devised our own simulated workshop tasks. Part of our second classroom has been screened off to provide an area where we are assessing 1) the workshop potential of our trainees and 2) the effectiveness of training in elementary academic skills as a prerequisite to workshop participation. Trainees are required to increase their proficiency in skills previously acquired in tutorial programs. Their work rate and

duration of work periods under different degrees of supervision are being assessed, first individually and then in the presence of increasing numbers of other trainees. In addition, they are given tasks on which they have had no direct training but which require generalization of previously learned skills, e.g., sorting nuts and bolts when previously trained to sort shapes, letters, words, numbers, etc. Progress is impressive. We are finding that training in basic skills readily transfers to new and highly specific tasks.

- 3.4 Dr. Barrett and Mr. McCormack have begun to examine the efficacy of the varied-teacher tutorial as a classroom teaching tactic. Our files are full of evidence of its workability, but we hope to determine whether its effectiveness is trainee-determined, program-determined, or limited by the repertoire of a trainee's available skills or by his previous exposure. In our initial studies, we are comparing individual trainee's acquisition under randomly sequenced varied-teacher and constant-teacher (traditional) tutorials conducted on the same day.
- 3.5 Our system for handling data (see enclosure, "Habilitative and Educational Programs for Severely and Profoundly Retarded People") was improved this past year by the addition of a large control board showing each trainee's progress on every phase of every instructional program to which he is assigned.
- 3.6 The core curriculum, set up in December 1970, continues to be modified and refined in response to trainee progress. On the basis of students' achievements and failures over the past year, some programs were revised, others replaced entirely. For example, the Dates program was separated into reading phases (days, months, date numbers) and comprehension phases (learning the sequence of days, months, and months in each season). The Currency program was completely rewritten, with the terminal behavior becoming the use of vending machines on the Fernald grounds. The Math program was divided into two parts: Number Identification (1 through 12, to prepare students for learning to tell time by the hour) and Quantity (using the concept of 1 to 5 items in everyday situations). New programs were written: Table Clearing, Color Recognition (touching colors that the teacher names), Leisure Time Activities (teaches severely retarded students to do school work during their free time in their residential building), Verbal Reasoning (judging whether a statement makes sense or not), SR-400 Pre-Reading (a series of SR-400 machine programs to teach association of words with appropriate pictures and colors). Other programs were expanded after students reached criterion on the final phase. Examples include Printing, Questions (conversational language development), and Quantity. For some details, see the Supplement to last year's annual report, the enclosed brochure entitled "Habilitative and Educational Programs..." and reports by Bouganim on "Math Sequence" and "Color Discrimination and Matching Program."

3.7 Vocational habilitation opportunities for adult residents

3.71 P.S. continues to perform his janitorial duties adequately. He has shown remarkable growth in social skills, and clearly enjoys serving as our receptionist when Mrs. Stuart is on her lunch hour or away from her desk for some other reason. P.S. monitors the telephone, relays messages (often in writing), and greets visitors with considerable competence. We have received compliments on his courteous telephone behavior. He has also been working at arithmetic problems and is learning the value of "banking" his hard-earned stipends; recently, for the first time, P.S. purchased a pair of well-fitted shoes with his own money. It is probably not coincidental that he now shuffles less when he walks. P.S. recently graduated from the Travel Program and is pleased to have received a certificate of his accomplishment.

D.G. continues to be a cheerful, concerned and productive presence in our department. During the past year he has shown considerable improvement in his writing style (he has been studying a grammar workbook), and had 2 articles published last year (reprints enclosed). We were informed this spring that there is a good chance that D.G. will be transferred to Middlesex Hospital. We are hopeful that this will materialize. Although our entire staff will miss D.G., we feel that his demonstrated intellectual competence--despite tremendous physical disability--clearly warrants his placement in a facility for the chronically ill or handicapped rather than in an institution for the retarded.

3.72 Four of Fernald's educable residents are functioning as teaching aides. Altogether, they have spent over 2,930 hours in the classroom this year. Their duties include conducting tutorial programs and recording the appropriate data, sorting and filing data, running a twice-daily "store," conducting group arts and crafts activities, taking students to a campus store to make purchases with their tokens, cleaning the classroom, and accompanying students on field trips. They are also being taught more advanced academic skills by programmed instruction.

Two of these residents have improved significantly this year. M.H. works with students in the classroom activity area while teachers and volunteers are conducting programmed tutorials. She has been asked to work as an assistant counselor in a camp for the retarded this summer. A.P. takes students to the store and does general cleaning work. He will advance to the Fernald League Opportunity Workshop (F.L.O.W.) this September. If successful there he will eventually be given an outside job. The other two resident teaching aides, D.B. and R.C., do their work adequately but still need supervision.

4.0 TRAINING

Our training functions have expanded considerably during the past year. This has been accomplished despite staffing cutbacks because every member of the Behavior Department has carried a share of the work. Our group functioned as a coordinated team more than ever before.

4.1 Evaluation of volunteer-tutor accuracy. Our student volunteer tutors generally receive about a 30-minute orientation to the various procedures involved in our communication circuit that sequences, schedules, and describes all tutorial operations in the classrooms. Last fall Mr. McCormack devised a checklist covering the kinds of errors that anyone could make in following the directions for tutorial instruction (see appended brochure entitled "Habilitative and Educational Programs for Severely and Profoundly Retarded People"). After they had participated as tutors for two or three afternoons, McCormack spot-checked 14 of our volunteers and recorded their accuracy in each of the 22 performance categories. The overall error rate was 6%. Only 1% of the possible errors occurred in the tutor-trainee interface (actual instruction) and only 1% in recording of trainee responses. The other 4% of possible errors were in operations not directly concerned with either the reliability of our data or the replicability of our tutorial procedures.

Assuming this to be a representative sample of volunteer-tutor performance, the results show that our techniques of training and our program scripts are simple enough to permit anyone who is interested--even with only intermittently available time--to become an effective paraprofessional educator of severely and profoundly retarded people. It also enhances the rationale for continued use of the varied-teacher tutorial as a tactic for training both pupils and teachers. (See Section 3.4 and the appended brochure entitled "Habilitative and Educational Programs for Severely and Profoundly Retarded People" as well as last year's Annual Report.)

4.2 Because of the increased volume of practitioners and students who come to learn about our work, we have begun a videotaped presentation to assist in training. Mr. Barash, Mr. McCormack, and Miss Weld--with the kind consultation of Mr. Mike McCoy at CERC's Media Services--have nearly completed the original taping. Although we have written a script for voice-over narration, adequate funds to edit the videotape and prepare a synchronized recording of the narration. However, even in its present version, with live narration, the videotape has proved to be a useful adjunct to our orientation and training programs.

4.3 Mr. McCormack prepared two handouts--"What is a Program?" and "What is a Data Form?"--to further facilitate orientation of volunteers and visitors.

4.4 Dr. Barrett and Mr. McCormack, at the request of the Massachusetts Psychological Center, Institute for Continuing Studies in Psychology, taught a six-week course entitled "Behavior Modification: Behavioral Approach with the Retarded." The seminars, held one evening a week in our department, were attended by 15 paid registrants, most of them special education teachers in community and DMH facilities.

4.5 Consultation provided for new behaviorally-oriented programs

4.51 At the request of Mrs. Darlene Agin, director of the Behavior Modification Unit at Monson State Hospital, we spoke to supervisory staff, attendants, and teaching aides, and offered two-day apprenticeships in our classroom for three teaching aides at a time. We also visited the Unit at Monson as consultants on particular programs with residents. We are continuing to keep in touch with this group.

4.52 Another relationship developed with the staff of the Behavior Modification Classroom in Brockton, under the direction of Mr. Robert Gracia. We offered a lecture to the whole staff, then each of their teachers spent two days working in our classroom. Their supervisor, Miss Ronnie Allalemdjian, spent two weeks with us, setting up her own programs with our assistance.

4.6 Fifteen normal sixth graders from Lexington and their student teacher, a former volunteer tutor, spent an entire day in our classroom. During the morning, staff members showed them our facilities and explained our procedures. In the afternoon, the children conducted tutorial sessions with our trainees. We were impressed with the able performance of these sixth graders and hope they will sustain their interest in retarded people.

4.7 University and high school students

4.71 James L. Hamilton, who just received his Ph.D. from the University of Missouri at Columbia, spent much of his time this past year in our department on a graduate research internship. His work is described in section 2.9.

4.72 Students working for course credit were Nancy Silver and Diane Dennis. Ms. Silver, a Boston University undergraduate psychology student, spent two mornings each week in the classroom. She structured a program to teach dressing skills. Four trainees completed the program while six others are currently involved. Ms. Silver was hired by the Fernald Recreation Department for this summer. Ms. Dennis, a graduate student in special education at Northeastern, joined us recently for a summer practicum

4.73 Students from 12 high schools and colleges have continued to volunteer their services to our department (see section 1.33). As a result of experience in our classroom, one former volunteer is now an attendant at Fernald, another is a counselor at Camp Freedom, and a third is a teacher of disturbed children.

4.74 Undergraduate co-op students from Northeastern University continue to receive training as teaching assistants under Mr. McCormack's supervision.

4.8 We continue to offer lectures and demonstrations to institution personnel as a regular part of their in-service orientation program. In addition, a number of teachers from Farrell Hall and attendants from GBU, West and East Buildings have spent some time in our classroom to learn about our approach. One Farrell Hall teacher made copies of several of our instructional programs for use with her own pupils.

4.9 This past year, 40 inmates of the Concord Reformatory have visited our department and received an orientation to our work as part of their C.A.R.V.E. training program.

5.0 COMMUNICATION

5.1 New articles and reports

Barrett, B. H. Review of: Gardner, W. I. Behavior Modification in Mental Retardation: The Education and Habilitation of the Mentally Retarded Adolescent and Adult. Chicago: Aldine-Atherton, 1971. Behavior Therapy, in press. (Preprint enclosed)

Bouganim, H. A. Help students see what tokens earn. Submitted for publication. (Preprint enclosed)

Bouganim, H. A. Color discrimination and matching program. Behavior Department, September 1971.

Bouganim, H. A. Math sequence. Behavior Department, September 1971.

Behavior Department. Habilitative and educational programs for severely and profoundly retarded people. Revised, March 1972. (Copy enclosed)

5.2 Publication to be anthologized

Barrett, B. H. Reduction in rate of multiple tics by free operant conditioning methods. Journal of Nervous and Mental Disease, 1962, 135, 187-195.

To be reprinted in: Brown, A. R. (Ed.) Modifying Children's Behavior. Springfield, Illinois: Charles C Thomas.

5.3 Distribution of articles

Since 1 July 1971 we have received 107 requests for reprints and other descriptions of our work. We have distributed a total of 146 articles and reports.

5.4 Presentations to professional and university groups

McCormack, J. E., Jr. The Behavior Department Classroom. Harvard-Radcliffe student group, Radcliffe College, November 1971.

Barrett, B. H. A behavioral approach to learning potential in severely retarded children. Department of Special Education, Boston University, December 1971.

Barrett, B. H. Varied-teacher tutorial as a tactic for training teachers and pupils. American Academy on Mental Retardation, Minneapolis, May 1972.

5.5 Presentation to community parent group

Barrett, B. H. Educating "trainable" people. Southern Worcester County Association for Retarded Children, Southbridge, Mass., October 1971.

5.6 Presentation to other Fernald staff

On 6 April 1972, J. E. McCormack, Jr., described our department's educational programs to 30 members of the CERC staff.

5.7 Parent meeting

On 11 June 1972, 20 parents and other relatives of our trainees attended "open house" in our classroom.

5.8 Department tours and lectures

Since 1 July 1971 the laboratory has welcomed 171 visitors, including 68 professionals. The 776 visitors to our classroom included groups from other state schools, from the Cambridge Mental Health Association, and from the Arlington Public Schools, as well as psychology, occupational therapy and nursing students from Boston University, and students from Wellesley College, George Peabody College, and the University of Wisconsin.

5.9 Attendance at professional meetings

During the past year members of our staff attended meetings of the Eastern Psychological Association, Massachusetts Psychological Association, American Academy on Mental Retardation, American Association on Mental Deficiency, and the Council for Exceptional Children. Dr. Barrett also attended a precision-teaching workshop sponsored by AAMD, and Mrs. Bouganim attended an advanced behavior modification workshop sponsored by the Massachusetts Psychological Center.

6.0 PLANS FOR THE FUTURE AND NEEDS FOR NEXT YEAR

We have reached the stage where we believe we can make substantial long-range contribution to Fernald's educational programs. We hope that the changing educational scene at Fernald will enable us to do this **without** loss of momentum or of the considerable esprit de corps that has developed among our core staff.

The applicability of our work has become more evident as attitudes toward retarded people have begun to change.

- New laws upholding the educational rights of all retarded children have enhanced the timeliness not only of our approach but also of our focus on the severely and profoundly retarded-- those children who have been excluded from schooling on the assumption that they were "subtrainable" or "custodial" cases.
- Joseph P. Rice, new Associate Commissioner for Special Education, told us last March that our program could be directly applied in the Brazier school house. In light of the current legislative push for Department

of Education involvement in the educational programs at state schools, we find Dr. Rice's interest particularly encouraging. We hope it bodes well for continued--and possibly increased--support from the Department of Education's allotment under Title I (P.L. 89-313).

- Robert Audette, new Assistant Superintendent in charge of educational programs at Fernald, has been instrumental in renewing our optimism for the continued development and refinement of our program. We look forward to a collaborative working relationship with Dr. Audette as, together, we try to evolve ways of providing equal educational opportunities for all retarded children.

6.1 Plans for the forthcoming year

Without any assured source of continued funding, it is difficult to set forth specific plans for the next year. Our NIMH grant will support only one teaching assistant until the end of August and one half of an auto-instruction programmer until the end of February.

Our work is clearly at a point where its potential usefulness greatly depends on testing its applicability with a larger group of trainees in an educational environment where the instructional programs and recording procedures are both uniform and explicit enough to yield behaviorally specific criteria of trainee "progress." Such methods are currently available for teaching a variety of behaviors to severely retarded people in a classroom setting. Many have been developed in our classroom and await sufficient staff and trainees to determine their validity.

We hope that the educational changes being planned at Fernald will include and support continued development of the considerable resources we have built over the years. We would like to help shape a system that will 1) ensure the educational development of the severely retarded children at Fernald and 2) facilitate the investigative work that should accelerate future development.

It appears that federal granting agencies are favoring multifaceted programs with potentially broad applicability. To the extent that our work can be shown to have value for many severely retarded people and to the extent that we can, with Dr. Audette and other well-qualified professionals, begin to build an effective educational team, the chance of our getting renewed federal support should be greatly enhanced.

6.2 Immediate needs for skeletal operation

6.21 From Fernald School. To avoid losing Mr. McCormack, our supervisor of educational activities, and to sustain the educational program that has gained considerable public attention, especially during the past year, we submitted the following requests to the Steward's Office on 29 March of this year. The three items listed below were our sole requests, for we are aware of the financial status of the school and the Commonwealth. As noted, all have been requested in previous years.

-- Priority No. 1: For the fourth year, we requested a position of Supervisor in Education for James E. McCormack, Jr., M.Ed., who has ably directed our educational program for three years, and whose supervisory skills are now so well known that other agencies seek him. His contributions to both the residents and the image of Fernald School are well documented in the administrative files.

-- Priority No. 2: Fluorescent lighting and electrical outlets for our second classroom were requested for the second year. Mr. Bailey said these were not granted for fiscal 73 but that he would request them again for fiscal 74. Layout drawings are on file with Mr. Bailey and in the Steward's Office.

As noted in section 3, we run evening classes. In addition, this year we are trying to use our second classroom for simulated workshop activities. Old locker room lighting and a single dual receptacle box are now the only electrical sources in this room.

We would like to develop our workshop training endeavor in our second classroom. Its proximity to the rest of our facilities enables us to work with fewer staff. The data control board, located in that area, makes it possible to teach our pre-workshop trainees to record their own behaviors.

-- Priority No. 3: Vinyl asbestos sheet flooring in our classrooms (fourth request) would help cut down the infestation of ants, silverfish, and cockroaches that nest in the cracks in the concrete slabs that constitute the floors in both classrooms. It is difficult to train residents to clean floors when they are beyond our own abilities as they currently exist!

6.22 From Title I grant. Last year we were forced to reduce our services to Fernald residents because of a cutback in Title I funding. Our teaching staff was cut in half. We were told this was because of a greatly reduced ADA (average daily attendance) in Fernald's educational programs. Somehow this seems inconsistent with what appears to be a greatly increased number of residents in educational programs throughout the institution.

With new direction for the education of Fernald's residents and the expressed interest of the Associate Commissioner for Special Education, we hope we will regain the two positions lost in last year's cut. If so, we will be able to include more residents in our program. We already have competent people to move into these positions as soon as they become available.

6.3 Behavioral Dimensions of Trainability: proposal for the next three years

We hope the following summary will clarify what we have been about these many years and where we are headed.

- 6.31 Background and current status of our work. The Behavior Department was seeded with NARC research funds and evolved primarily with support from NIMH applied research funds, later supplemented by positions from Fernald School and by salaries from Title I (P.L. 89-313). Our focus has been, and is, the assessment of trainability (or learning potential) in severely and profoundly retarded persons from our custodial wards. Our methods, derived from basic behavioral conditioning research, now range from fully automated mini-instructional environments to teacher-conducted programmed tutorials, group "learning" games and, most recently, the beginning of simulated workshop environments. Our studies --as well as those of many other investigators--have clearly shown that the severely retarded have been denied educational opportunities not because they are untrainable, but because their ability to learn from carefully designed instruction cannot be predicted from their scores on conventional tests or from the reports of ward personnel about their current competencies.
- 6.32 Rationale. Courts may rule in favor of the neglected and schools may be forced to accept them. But, while legislation may alleviate society's guilt by requiring "schooling" for all children, the problem still remains: habilitation programs will continue to be as limited as the sensitivity of the instruments used to assess individual learning potential within the severely retarded population.
- 6.33 Broad objectives. Our program combines investigative and training functions in an effort to develop ways to help severely retarded people show more of their individual skills than are tapped by conventional assessment methods. Our long-range goal is to provide an empirical basis for increasing the educational options of severely retarded people. Our strategy is to develop systematic procedures for obtaining predictive and educationally prescriptive behavior samples derived from analysis of individual progress on selected instructional programs.

- 6.34 Methods. To approach this goal we are producing instructional sequences that teach a variety of basic elementary school and pre-vocational skills to "subtrainable" residents. We are refining a system that 1) enables volunteers (including parents and even normal sixth graders) to become effective tutors with only a few hours' training, 2) enables us to teach such complex skills as sentence reading comprehension to "subtrainable" people, 3) produces scores for every pupil in every tutorial, and 4) permits us not only to assess a given pupil's progress and current status but also to analyze and, therefore, improve the effectiveness of our instructional procedures--whether they be teacher or machine mediated.
- 6.35 Aims for the next three years. Our past work has brought us to the point where we are ready to 1) apply our methods with a larger group of severely retarded residents, 2) evolve more systematic ways of testing their predictive and prescriptive value for future use, and 3) assist others in using our methods, findings, and facilities to update the educational programs for severely retarded people at Fernald School, at other institutions, and in the community. Our potential as a resource for teacher training, volunteer training, and consulting--in addition to our investigative role--has been amply demonstrated. Adequate funding will enable us to build on our accomplishments to date in order to ensure that the new behavioral technology will be applied efficiently not just with the retarded people we know today, but also with those of future generations.

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Tests with which a child cannot cope will hardly serve to identify his assets. No curriculum can be built on what a child cannot do.*

*Schucman, H. Evaluating the educability of the severely mentally retarded child. Psychological Monographs, 1960, 74 (14, Whole No. 501). (Page 1.)

FERNALD SCHOOL

Dana Gustafson, Reporter

Recently Susie Sattell, an occupational therapist, left Fernald.

As we had become acquainted with Susie, when she was here, it soon was clear how much interest she took in her work and that her interest in helping the handicapped went beyond her professional duties.

It was Susie who got me and some of the others interested in joining the Massachusetts Paraplegics Association. She made the arrangements for us to attend the meetings each month and gave her personal time in accompanying us to them.

I remember another event in which Susie gave much of herself. Late in June of 1971 when the Paraplegics Association sponsored the Bay State wheel chair games in Shrewsbury, Mass., it was on a Saturday--Susie's day off. Not only did she make the arrangements for us to attend, but she also came with us. A few of us actually won medals that day!

Susie also helped to make it possible for us to join the Cerebral Palsy Association and through her and Mrs. Schneider's help, made it possible for us to spend that wonderful weekend at Blue Waters.

Susie's greatest desire, that there would be a place for the handicapped in society, is on the verge of becoming a reality. For now through her efforts, along with some other people, the handicapped from Fernald can look forward to going to a halfway house in the near future.

Susie is now working with handicapped children in a hospital out in Canton, Mass.

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MEMORABLE EVENTS

Dana Gustafson, Reporter
Fernald State School

Since we became members of the Cerebral Palsy Organization lots of happiness and meaning has entered our lives. It has given us the chance to get out and meet and make new friends. We have also experienced some wonderful times.

One of our memorable times was the weekend in January when eight of us were guests at the Blue Waters Hotel. Some of us from Fernald have never been away from our surroundings more than a day, so being a guest at the Blue Waters was like living in heaven.

Joseph DuPlease and John Bitinas have commented to me many times on how their volunteer, Walter Day, made them feel that it was their weekend and this is how every volunteer made us all feel.

David Bunker and Mike Megna said going to Blue Waters is one of their greatest memories. They enjoyed dancing with the pretty girls.

Another new experience for us was going to the Aquarium on Saturday to view the many different types of fish.

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