

University of Montana

## ScholarWorks at University of Montana

---

Graduate Student Theses, Dissertations, &  
Professional Papers

Graduate School

---

1972

### Evaluation of a behavior modification training program for attendants in an institution for the mentally retarded

R. Carol Coats

*The University of Montana*

Follow this and additional works at: <https://scholarworks.umt.edu/etd>

**Let us know how access to this document benefits you.**

---

#### Recommended Citation

Coats, R. Carol, "Evaluation of a behavior modification training program for attendants in an institution for the mentally retarded" (1972). *Graduate Student Theses, Dissertations, & Professional Papers*. 6337. <https://scholarworks.umt.edu/etd/6337>

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact [scholarworks@mso.umt.edu](mailto:scholarworks@mso.umt.edu).

AN EVALUATION OF A BEHAVIOR MODIFICATION TRAINING PROGRAM  
FOR ATTENDANTS IN AN INSTITUTION FOR  
THE MENTALLY RETARDED

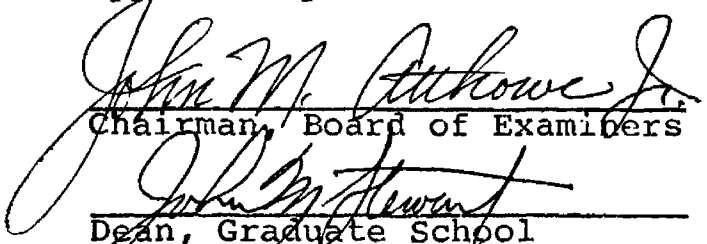
by

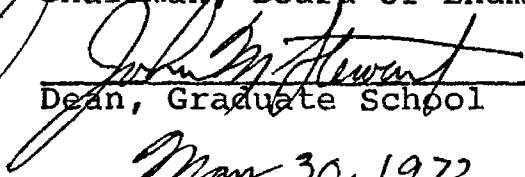
R. Carol Coats

B.A., University of Montana, 1970

Presented in partial fulfillment of the requirements for the  
degree of  
Master of Arts  
UNIVERSITY OF MONTANA  
1972

Approved by:

  
Chairman, Board of Examiners

  
Dean, Graduate School

  
Date

UMI Number: EP37138

All rights reserved

**INFORMATION TO ALL USERS**

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP37138

Published by ProQuest LLC (2013). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 - 1346

5-30-72

## ACKNOWLEDGMENTS

I would like to express my appreciation to the chairman of my thesis committee, Dr. John M. Atthowe, who provided me with materials, counsel, encouragement and helpful intervention.

I would also like to thank Robert Perry, Superintendent of the Boulder River School and Hospital, and his assistant, Keith McCarty for their help and interest in the study. Appreciation is also expressed to Region I Supervisor Joyce Stout, and to all the personnel of the region.

And finally, I am especially grateful to Bill Cook, Region I Behavior Modification Technician, for his greatly valued assistance and friendship.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	ii
LIST OF TABLES. . . . .	iv
Chapter	
I.    INTRODUCTION . . . . .	1
II.   THE PRESENT STUDY. . . . .	13
III.  METHOD . . . . .	16
IV.  RESULTS. . . . .	29
V.   DISCUSSION . . . . .	36
VI.  SUMMARY. . . . .	42
REFERENCES. . . . .	44
APPENDICES. . . . .	47

## LIST OF TABLES

Table	Page
1. Means and Difference Scores in Attitudes Toward Work for those Receiving (E) or Not Receiving (C) Training . . . . .	23
2. Means and Difference Scores in Four Attitudinal Factors Between Experimental and Control Groups . . . . .	29
3. Differences in Specific Attitudes as a Result of Training for Experimental Group. . .	31
4. Differences in Specific Attitudes for Control Group. . . . .	32
5. Mean Scores and Differences Per Category . . . .	34
6. Changes in the Energy Expended per Patient Over a Four-Month Period . . . . .	35

## CHAPTER I

### INTRODUCTION

In recent years an increasing interest has been focused upon the training of paraprofessionals and parents in the theory and practice of behavior modification. The need for effective behavior modifiers is everywhere evident (Guernsey, 1965), and the behavior modification technology is readily adaptable to the nonprofessional because of the specific behaviorally defined, task-relevant methodology. The earlier work began in institutions for the mentally retarded (Watson, 1966; Keith & Wallace, 1970), and in psychiatric hospitals (Ayllon & Michael, 1959; Poser, 1967; Poser & Ashem, 1969; Atthowe & Krasner, 1968), and involved the training of attendants and others directly involved with patient care. Public school teachers and teachers' aides have been another experimental pool (Becker, Madsen, Arnold & Thomas, 1967; Cooper, Thomson, & Baer, 1970). Reports of training programs appear with increasing frequency in the literature, but there are still few experimental studies which formally evaluate training methods, and which assess the efficiency of the trained behavioral technicians. An overview of this research is presented here, as background information for reporting a study conducted at the Boulder River School and Hospital, Boulder, Montana.



Watson (1969) described a behavior modification training program at Columbus State Institute for the Mentally Retarded involving lectures, text, exams, audio-visual aids, demonstrations, role playing and direct work with residents. Reinforcement principles were applied throughout the training program, with each advancement contingent upon satisfactory grades in the immediately preceding section. The nucleus of the ward training program was the development of the Itinerant Training Team (ITT). This group of attendant level behavior modifiers served in a dual capacity: (1) they taught self-help and social skills to residents of a ward, and (2) they were responsible for giving advanced on-the-ward behavior modification training to attendants who had recently completed the course and would maintain the behavior modification program after the ITT transferred to another ward.

Three assessment instruments were developed: Resident Comprehensive Behavior Checklist, Training Proficiency Scale (Gardner, Brust, & Watson, 1970), and Attendant Behavior Checklist (Gardner & Gianpa, 1970), and these were used to evaluate progress in the course. An independent measure of concept mastery was a 229-item true-false test administered before and after the course. The results of these measures have not been reported.

Keith and Wallace (1970) developed a behavior modification training program at Beatrice State Home, Beatrice,

Nebraska. This program was sufficiently funded so that a replacement staff could take the place of those being trained. About fifteen people were trained at a time, and training was intended for all persons who provided programming services to the residents. During the four-week training period, the first week was given to classroom instruction, followed by a three-week practicum conducted on the wards. Classroom instruction utilized films, discussions, role-playing, and the handbook which was the main point of reference for trainees' programming activity. Programs and data-recording techniques were examined in detail, and data collection folders were provided for each resident of the ward. In the practicum, teams of two trainees developed baseline observations and began training programs with residents under supervision. Successful completion of this activity was necessary for certification as a graduate of the project. Because the programs defined specific step-by-step activities, success could be evaluated by direct observations and evaluation of resident behavior. Of 140 self-care programs involving 103 residents (85% severely or profoundly retarded), 66 programs were reported "definitely progressing, 20 were definitely not making satisfactory progress, the rest too recent to justify such a judgment (p. 27)". Another independent measure of the effects of training was a comparison of turnover rates with that of the institution at large. For the 53-day period following completion of

training, trainees had a 3.61 turnover rate. The rate was 5.70 for the institution at large.

A course of training for attendants at Cleveland State Hospital (1968) consisted of seven lectures in Behavior Modification (as applied to the Mentally Retarded) and a behavior modification demonstration. A supplementary guide was developed to assist the newly trained personnel in carrying out their programs. No method of evaluation was reported.

Baldwin (1966) reported the results of a behavior modification training program for the development of social skills in mental retardates. Attendants received identical training before placement in one of three treatment wards: token economy, immediate food reinforcement, or social reinforcement. A fourth group of attendants received different training from the Social Service Department and was assigned to the control ward. Evaluation was made on the basis of the Progress Assessment Chart kept for each resident. Weekly meetings were held with all four wards to discuss programming, and the professional staff tried to spend equal time on each of the four wards. Improvement was demonstrated for all four groups, in the following order: (1) food reinforcement, (2) token economy, (3) control group, (4) social reinforcement. An analysis concerning the function of IQ and age and treatment condition revealed that ss having lower IQs and younger residents responded best to food

reinforcement and the Ss having higher IQs and older residents responded best to token economy. Conclusions were also made concerning the effects of attendant training and how social reinforcement might be utilized more effectively.

Publications by Poser and Ashem (1969) and Poser (1967) describe the behavior modification training program at Douglas Psychiatric Hospital in Montreal, Canada. Training was provided for both the Behavior Therapist (Level Two) and the Co-therapist, (Level One). They defined the Behavior Therapist as:

" . . . a professionally trained person fully familiar with contemporary theories of psychopathology, the psychology of learning and the measurement of behavior change. On the basis of his clinical experience and specialized training in the behavior therapies, such an individual could take charge of a behavior therapy service and be responsible for the elaboration of treatment strategies for patients in his care. The co-therapist, by contrast, does not require professional training in the mental health professions. Any mature individual who can master the basic principles and operations used in the behavior therapies can contribute at this level. Techniques of therapy such as relaxation training, and the implementation of operant schedules, satiation methods and certain desensitization procedures can all be competently handled by personnel with little training other than that received on the job. It is one of the great advantages of the behavior therapies that other than professionally trained workers can be utilized in their implementation, p. 39."

Level One training was along the lines of an apprenticeship (i.e., observe, assist experienced therapists in daily routines, and the classroom use of films, tapes and programmed text).

A variety of behavioral treatments were used at Douglas. These included reciprocal inhibition, aversive techniques, implosive therapy, covert sensitization and aversion-relief. Some patients were also maintained on token or other programs. Assertive group therapy or group relaxation sessions were used for some patients. The Douglas program stressed having the trainee apply the behavior modification principles early in the instruction period, as well as having him master the necessary theory and terms. No method of evaluating the Douglas training program was reported.

Watson (1971) recently made a progress report regarding the development of a Behavior Modification Community Training Program, reporting progress in four areas: (1) volunteer staff recruitment, (2) child-family recruitment, (3) staff training, and (4) child treatment. A training program was established for teaching behavior modification skills to volunteers and parents of children enrolled in the program. Also, a home training program was being developed for autistic and emotionally disturbed mentally retarded children enrolled in the program. Parents and volunteers taught the child self-help and social, educational

and language skills at home. In addition, special community classes for the children enrolled in the program were being established. The training program was divided into two phases: a classroom phase for both parents and volunteers, and a practicum or internship phase for volunteers. Mothers received their practicum training in their own homes under the supervision of a program staff member five times a week for four to six weeks. Volunteers were assigned to one of the enrolled families, made a home visit, and then completed their training in the Columbus State Institute where the volunteer was assigned a child as much like the home assignment as possible.

On the subject of evaluation the author noted:

However, we are deficient in two areas. These are evaluation of progress and development of sophisticated language and social behavior programs . . . We plan to attack the two problems of evaluation and program development through systems analysis. We are designing an overall program for autistic and emotionally disturbed mentally retarded children who hopefully will adapt to life in their own homes and be admitted to a special class for mentally retarded or brain damaged children. We have chosen the systems approach because we feel that it will accurately help us identify the kinds of educational, social, and language skills a child needs to adapt to community living, and will also help us to develop the types of programs that will allow us to train these kinds of children to acquire such skills. We will be spending the next year designing and developing these kinds of programs (p. 78).

Browning and Stover (1971) describe an additional staff training program at the Children's Treatment Center in Wisconsin, a state facility for emotionally disturbed children and their families. Training involved a full-time six-week program. Courses, dealing with on-job skills relevant to the child-care worker, were taught by social workers, psychologists, psychiatrists, occupational therapists, educators and nursing personnel. Child-care workers who were involved in the research groups also had on-the-job supervision. Senior investigators kept the research groups up-to-date on relevant research literature. Individual case progress data was presumably the basis for evaluation of the training program. No summary of results was reported.

A temporary residential training program in behavior modification was described by Mahoney (1971). The program was developed to provide "a naturalistic treatment framework for behaviorally disturbed children (p. 2)." The program emphasized the family style setting, and the programming of everyday experiences to maximize the shaping and generalization of adaptive behavior patterns. Quoting the author,

Behaviorally trained couples provide the core of treatment and execute day-to-day responsibilities in program functioning. Two such couples are employed per house. The couples alternate weekly in the role of parent models

and behavior modifiers. Each couple works for one full week and is then off for a week. A full-time assistant aids the couples in the execution of individualized treatment programs (p. 3).

No information was given to describe the training of the behavior modifiers, and evaluation was limited to individual case progress data.

Whalen and Henker (1971) developed an innovative approach in the training of behavior modifiers. High functional retardates were trained as behavior modification technicians in a simplified four-and-a-half month training program, which concentrated on the basics of reinforcement, shaping and deceleration techniques. The program made extensive use of modeling. The authors were able to demonstrate significant improvement in adaptive behavior in less adequate residents as a result of the training provided by the retarded technicians. Evaluation was based on individual case progress data.

Smith (1971) instigated a Behavior Management In-service Training Course for paraprofessionals in open settings. It was designed for staff members of Homemaker Service, a community agency which provided "temporary help to families where a parent is out of the home or to aid in training parents in homemaking skills which would include behavior management and modification" (p. 3). Pre- and posttest measures were administered for the first course, and also for the simplified second course. The first course



required six full days, several texts and four hours daily of a professional instructor's time. The revised course required five days, one text, with discussion and review of the text material conducted by a previously trained homemaker. The second course produced a higher posttest performance with fewer trials to criterion. In addition, there was a significant saving of professional-trainer time with the second procedure. Smith further pointed out that academic performance alone is no guarantee that the principles will be properly applied. He suggested that training programs for paraprofessionals should provide for supervised experience and feedback in the applied setting.

The course of instruction (Heap, 1971) used in the present study has been used in the training of attendants at Central State Psychiatric Hospital in Nashville, Tennessee. A grade of 90% was required on each unit before the student was allowed to progress to the next unit, and to the final examination. When the course was completed, follow-up was provided by the professional staff who observed and offered counseling service to the newly trained behavior therapists, in the daily ward activities.

Gardner (1971), in reviewing research on teaching behavior modification, identified four levels of training:

1. The Behavior Modification Technician, who is capable of applying specific behavior modification techniques under limited conditions, as

in highly structured institutions.

2. The Behavior Modification Specialist, who is highly trained in a specific area and who can combine practice and theory to solve different aspects of specific problems.
3. The Behavior Modification Generalist, who is trained to apply both theory and practice to a wide variety of problems.
4. The Behavior Modification Consultant, who trains paraprofessionals in behavior modification principles and techniques. This level of training is usually limited to university systems.

Gardner singled out several major problem areas in the research literature. First, there is a lack of a comprehensive approach to the teaching of behavior modification. Piecemeal approaches make it difficult to identify the contributing variables. Second, few studies are replicable because detailed explanations of procedures are not included. Third, lack of preparation for follow-up studies severely limits the usefulness of the findings. Gardner's fourth concern was with the methods of evaluating the training procedures. Test scores have often been the criteria, which have ranged from objective exams to essay-type to scores on tests measuring proficiency in behavior modification techniques. He questioned whether any test scores are adequate for this purpose. "The major dependent variable :

should be the adaptive behavior change in the identified population. A person can be said to have been trained adequately when he is able to effect positive change in another individual (p. 11)."

His final concern was with the personality and attitude variables which may contribute to success in training. He concluded,

Techniques do not exist in isolation; people work with people. To be concerned with effective ways of teaching people requires concern with the total person, not solely the techniques involved. In this regard, we need to take account of the humanistic consequences of the total training situation. Do we teach someone that behavior modification is one and an effective way of changing behavior, or do we teach that man is his behavior, and behavior modification is the way to deal with him. In that answer lies the full growth potential of behavior modification.

The studies cited in this section demonstrate some measure of the range and heterogeneity of training methods, ways and/or lack of ways to evaluate training programs, the kinds of paraprofessionals being trained and for what purpose, and the kinds of questions still unanswered, especially in relation to the nonprofessional trainee. The purpose of the present study was to shed some light on two of these questions, namely the effect of behavior modification training on the attitudes of the trainees toward their job and the effect of this training on the behavior of patients.

## CHAPTER II

### THE PRESENT STUDY

The Boulder River study involved the training of the entire staff of one of the institution's residential units in the principles and practice of behavior modification. Weekly lectures and discussions, a programmed text, readiness tests, ward practicum assignments, demonstrations, and films were utilized.

Behavior modification methodology is an area in which non-professionals have demonstrated rapid proficiency, and improvements resulting from behavior therapy are often readily observable. It seemed reasonable to predict that the acquisition and practice of new and more efficient skills would produce changes in attitudes concerning a variety of job-related concepts, and would also result in changes in resident behavior.

An evaluation of the effects of training was based on measures of staff development in two general categories: (1) attitude change among personnel in regard to residents, administration, supervisors and job satisfaction; and (2) change in the amount of effort expended by the staff on residents. Reduced effort was considered an indication of improvement in the behavior of residents, thus requiring less staff involvement in management and supervision.

## HYPOTHESES

I. It was hypothesized that staff attitudes (Bensberg & Barnett, 1966) regarding residents, administration, supervisors, co-workers and working conditions would change in a positive direction as a result of behavior modification training, and that the total attitude change in the Experimental Group would be significantly different from that of the Control Group.

A. Factor One, job satisfaction: The Experimental Group would change in a positive direction, and would differ significantly from the Control Group.

B. Factor Two, not requiring resident conformity to a rigid set of moral standards: The Experimental Group would change in a positive direction, and would differ significantly from the Control Group.

C. Factor Three, regard for residents as human beings who should be treated with dignity: The Experimental Group would change in a positive direction, and would differ significantly from the Control Group.

D. Factor Four, a non-authoritarian factor: The Experimental Group would change in a positive

direction, and would differ significantly from the Control Group.

II. It was further hypothesized that the assessment of the amount of effort expended on residents in three dimensions -- Activities of Daily Living, Problem Behaviors, and Dependency (Atthowe, Salmon, & Hallock, 1966) would significantly decrease for the Experimental Group as compared to the Control Group.

Attitude change was measured by a 115-item questionnaire (Bensberg & Barnett, 1966) given before and after the course of instruction. Attitudes in 23 categories, five items per category, were measured as were four factors determined by factor analysis (Bensberg & Barnett, 1966). Region I personnel comprised the Experimental Group, and personnel from five other regions comprised the Control Group.

Simple behavior ratings (adapted after Atthowe, Hallock, & Salmon, 1966) were recorded at the beginning and again at the conclusion of the training period, in terms of the effort expended by the staff on each resident. The staff of Region I comprised the Experimental Group, and the staffs of two other regions comprised the Control Group.

The introduction to the training course appears in Appendix A. The Attendant Opinion Survey appears in Appendix B, along with a description of its factor analysis. Appendix C contains the three sections of the RAPIDS scale used in this experiment.

## CHAPTER III

### METHOD

#### Subjects

The Boulder River School and Hospital is the Montana State institution for the mentally retarded, located at Boulder, Montana. The institution is structurally organized into five divisions based on the geographical locations of the residents' home counties. A sixth unit is the juvenile building. All non-hospitalized children living on campus are assigned to this unit until about age 13, when they are assigned to the appropriate cottage, on the basis of legal residence. Each unit consists of two dormitories referred to as 'cottages,' and is assigned a supervisor, three house parents, a social worker, at least one behavior modification technician, and a staff of attendants. The personnel of Region I comprised the experimental group, and personnel from other regions comprised the control group.

The two cottage nurses serve all of the units, one of whom was included in the experimental group. The entire managerial and attendant staff for both morning and afternoon shifts successfully completed the course. Attitude survey data was collected from the supervisor, three house parents, the behavior modification technician, cottage nurse, and twelve attendants.

Enrollment in the course was voluntary, and the high percentage of volunteers may be accounted for by several factors: (1) interest and approval of the Administration; (2) active participation and encouragement to the staff by the supervisor of the region and house parents; (3) recognition in the form of a certificate given through the institution's in-service training program, and (4) optional college credit at regular extension course fees. An additional reinforcement promoting enrollment was the scheduling of small classes once a week, during work shifts, so that off-shift time and transportation did not present problems.

Data were gathered from employees in all of the other regions, which served as the control group. The attitude surveys were distributed and cooperation requested from all attendants and managerial personnel. Participation was voluntary, but encouraged by all of the supervisors, and indirectly encouraged by the Administration. Data were compiled for 52 staff members from Regions II, III, IV, V, and VI, which amounted to 35% of the total employed in those regions in March, 1971. An additional 37 people completed the first attitude survey form, but did not complete the second one, due to terminations, absences, procrastination, or refusal to participate.

During the four-month experimental period ending in June, 1971, there were 103 residents of Region I (50 females and 53 males). The mean age was 26.2 years.



The two units which served as the control for the RAPIDS profile had a total of 216 residents (91 females and 125 males). The mean age was 24.7. Because housing was based on geographical divisions, each unit had a heterogeneous population in regard to type and severity of mental retardation. All of the units had similar ratios of high and low functionals and problem behaviors, (30% - 40% profound retardation, 45% - 55% severe or moderate, 15% - 20% mild or borderline, based on Vineland Social Maturity Scales).

### Instruments

SREB Attendant Opinion Survey. The Attendant Opinion Survey was developed by Bensberg and Barnett (1966) for the Southern Regional Education Board (SREB) Attendant Training Project. Attitudes in 23 categories, five statements per category, are scored on a Likert scale. After each statement, one of four letters, (A a d D) is to be circled, indicating that the employee strongly agrees, mildly agrees, mildly disagrees, or strongly disagrees.

The attitude categories are labeled Strictness, Work Conflict, Breaking the will, Fostering dependency, Irritability, Suppression of resident aggression, Equality re residents, Inconsiderateness of the administration, Institutional identification, Encourage resident verbalization, Approval of resident activities, Avoidance of communication, Suppression of resident sex, Attendant seclusiveness, Intrusiveness, Comradship with residents, Job insecurity,

Push to develop residents, Job rejection, Negative attitude toward management, Negative attitude toward public relations, Negative attendant-supervisor relations, and Negative physical care.

Test-retest reliability coefficients were established for each category of items (Bensberg & Barnett, 1966). The average correlation for the sums of the five items in each category is .70, which the authors considered satisfactory for groups of only five items.

A factor analysis was also computed, based on 683 forms (Bensberg & Barnett, 1966). Four factors were extracted -- the first one concerned job dissatisfaction; the second, resident conformity to a rigid set of moral standards; the third, a regard for residents as human beings who should be treated with as much dignity as the attendants; and fourth, a factor described as benevolence with a touch of sternness. "The attendant who endorses it seems to have the patient's best interest at heart, but also intends to have the resident bow to his wisdom. It is an authoritarian factor." (p. 131)

These four factors account for 59% of the total variance, and most of the subtests are reported "quite pure measures" of one or another of the factors.

RAPIDS Scale. A second measuring instrument was also used. Behavioral ratings were gathered for each resident at the beginning and at the end of the instruction period.

Three sections of the six-section RAPIDS profile (Atthowe, Hallock & Salmon, 1966) were used for this purpose. The RAPIDS scale is a quick method of classifying patients receiving long-term care. The three scales appropriate for the present assessment were: A, Activities of Daily Living, in which self-help skills are itemized; P, Problem Behaviors, identified in terms of inappropriate, withdrawn or aggressive actions; and D, Dependency, which defines the degree to which the patient must rely upon others for survival.

This scale, (RAPIDS Form E), was administered (Salmon, Atthowe, & Hallock, 1966) to a random sampling of 225 patients from a population of about 900 public patients in 23 proprietary nursing homes and two county facilities in San Mateo County, California. That study was limited to public patients, but another study was based on private patients in an adjacent county. Inter-rater reliability among trained raters was demonstrated in the San Mateo County sample, and also in the adjacent county study, to be in the .90's for all categories.

According to the authors,

Form E of the RAPIDS Scale is not a description of the patient, but of the effort expended by the professional community on behalf of the patient. Form E represents what is being done. Its importance lies in its evaluation of long-term care within a specified setting. The eventual effectiveness of treatment or care depends in part upon the assessment of the energy expended . . . The system has

been found to be reliable when applied by individuals with diversified professional backgrounds; it has been found to be sensitive to significant changes occurring in patients being profiled from time to time." (Salmon, Atthowe, & Hallock, 1966).

### Course of Instruction

The course of instruction used in the training of the experimental group was entitled Behavior Therapy (Heap, 1969), and was designed to be used as either a ten-unit or twelve-unit course, leading to certification as either Behavior Technician or Behavior Therapist. Each unit consisted of programmed reading material, a ward exercise, and a unit examination. The course is indexed as follows:

#### Unit I

1. Behavior -- Therapy and Learning

#### Unit II

2. Responses
3. Reinforcers

#### Unit III

4. Ways to Increase Behavior
5. Ways to Decrease Behavior

#### Unit IV

6. Schedules of Reinforcement
7. Shaping Behavior

#### Unit V

8. Discrimination and Generalization
9. Types of Learning

#### Unit VI

10. Behavior Rules (Part I)
11. Behavior Rules (Part II)

#### Unit VII

12. Behavior Rules (Part III)
13. Behavior Rules (Part IV)

**Unit VIII**

14. Pinpointing and Recording Behaviors  
(Parts, I, II, III)

**Unit IX**

15. Changing Specific Behaviors (Part I)
  - A. The Frightened Withdrawn Resident
  - B. The Seclusive Resident
  - C. The Geriatric Resident

**Unit X**

16. Changing Specific Behaviors (Part II)
  - A. The Mute Resident
  - B. The Retarded Resident
  - C. The Overly-Active Resident

**Unit XI**

17. Changing Specific Behaviors (Part III)
  - A. The Dependent Resident
  - B. The Depressed Resident
  - C. The Resentful Resident

**Unit XII**

18. Changing Specific Behaviors (Part IV)
  - A. The Negative Resident
  - B. The Aggressive Resident
  - C. The Con Man Resident

Units VI and VII are omitted in the training for the Behavior Technician level. These consist of rather intensive instruction in the situational application of behavioral principles. The choice was optional for level of training, and all course enrollees except one elected to take the full 12 unit course.

**Procedure**

At the beginning of the behavior modification training program, attitude survey forms were distributed throughout all of the regions for attendants and managerial staff members to fill out. Routine institutional procedures were

followed. Administration approval was secured and relayed to supervisors by the Director of Nursing Services. Supervisors cooperated by personal participation, and by issuing specific requests for attendants to fill out and submit the completed forms. The experimenter attempted to delegate the form distribution and collection, but this was not found to be successful. It was necessary personally to contact each staff member, explaining that identification was needed because more data would be collected later, that the data would be used in a private research study, and that individual data would be held confidential.

The same procedure was followed at the conclusion of the training period. Survey forms were distributed by the experimenter, with the additional explanation that attitude change was being measured throughout the institution, as a part of evaluation of a training program. The questionnaires were filled out at the convenience of the participants, and personally collected by the experimenter on innumerable collection rounds.

The RAPIDS form, which measured amount of effort expended upon the residents, was also administered before and after the training course. The experimenter conducted the inquiry with on-shift personnel, requesting the cooperation of at least two staff members who were fully familiar with the unit residents. The Behavior Modification Technician was asked to participate, when possible.

For the course of training, the experimental group was supplied with all required readings and printed materials free of charge by the institution. In addition, students were allowed access to the limited supply of journals and related books in the psychology department library. Classes were scheduled weekly, meeting in small sections, one each shift for each cottage.

The first class hour was devoted primarily to group participation in the Shaping Game (Morgan, 1968, see Appendix A). A course overview was discussed, and first lesson materials distributed. During the first weeks of the course exams were scheduled individually at the student's convenience, however this was found to be unsatisfactory, and the exams were thereafter scheduled during class time. The brief readiness tests over the previous week's material were given in the first ten to fifteen minutes of class time. The tests consisted of about 10 fill-in or true-false questions, and two short essays. These were graded immediately following class, and returned at that time with comments. Point requirements for grades on the unit tests were clearly defined, and provision was made for optional retesting in the event of an unsatisfactory grade. Retesting occurred in one instance only, and the level of performance for all subjects was consistently high. The readings were well designed for non-academic people. Each chapter consisted of a double spaced, clearly worded, several-paged reading and was arranged with

a programmed review and a glossary of new terms. All units after the first one were composed of two or three readings.

In addition, there were weekly ward assignments designed to give experience in the practical application of behavior modification principles. Class lecture and discussion centered on the lesson material, with as much discussion of on-the-ward experiences as possible.

The behavior modification technician for the region was enrolled in the course, and by position and training, was an invaluable assistant both during and outside the class periods. His shift overlapped the two attendant shifts, making him available to both shifts for assistance, explanation and demonstration. This was especially important because the instructor (the E) was present at the institution only on the two days that classes were scheduled.

No final examination was provided with the course materials, but a two-part final was prepared by the experimenter. The first part had the same format as the unit exams, and the second part was a take-home problem. Students were asked to do a complete work-up on an imaginary new resident, pinpointing problem behaviors and recommending a program to modify the behavior. A general review session preceded the final examination.

The course of instruction covered fifteen weeks. The general plan was to discuss one unit per week, and this was



followed as nearly as possible. Several films were shown during the class periods -- the Skinner series, Behavior Theory in Practice<sup>1</sup> (four parts), and the Lovaas film, Reinforcement Therapy.<sup>2</sup>

---

<sup>1</sup>Appleton-Century-Crofts, 1967.

<sup>2</sup>Smith, Kline & French Laboratories, 1967.

## CHAPTER IV

### RESULTS

#### SREB Attendant Opinion Survey

Data for the Experimental and Control groups are summarized in Tables 1 and 2. Eighteen categories required lower scores in the second test to indicate positive change. For the five categories which required higher scores to indicate positive change, the figures were reversed for computational purposes. Thus, in Tables 1 and 2, all categories reflect positive change by lower scores on the second testing.

The statistical procedure used was a t test for the significance of the difference between two mean-differences (change scores) for independent samples.

The general hypothesis, that attitudes in the experimental group would change in a positive direction, and that there would be a significant difference between the experimental and control groups, was supported, as shown in Table 1.

Of the four attitudinal factors, only one was statistically significant ( $p < .01$ ), and two other factors almost reached significance ( $.05 < p < .10$ ). These results are shown in Table 2.

**TABLE 1**  
**MEANS AND DIFFERENCE SCORES IN ATTITUDES TCWARD WORK FOR**  
**THOSE RECEIVING (E) OR NOT RECEIVING (C) TRAINING**

Group	N	Mean Test 1	Mean Test 2	Mean Difference	Standard Error	t
Experimental Group	18	291.00	283.00	8.00		
Control Group	52	310.38	312.42	-2.04	5.37	1.87*

\* p < .05 (one-tail test)

TABLE 2  
 MEANS AND DIFFERENCE SCORES IN FOUR ATTITUDINAL FACTORS  
 BETWEEN EXPERIMENTAL AND CONTROL GROUPS

Factor	Group	N	Mean Test 1	Mean Test 2	Mean Difference	Standard Error	t
Factor 1	E	18	140.33	134.72	5.61	4.11	1.45*
	C	52	155.29	155.62	-.33		
Factor 2	E	18	53.22	53.05	.17	1.88	-.44
	C	52	58.88	57.88	1.00		
Factor 3	E	18	49.05	49.00	.05	1.25	1.85*
	C	52	49.17	51.42	-2.25		
Factor 4	E	18	71.72	67.88	3.84	1.55	3.33***
	C	52	73.25	74.57	-1.32		

\* p <.10 (two-tail test)

\*\* p <.05 (two-tail test)

\*\*\* p <.01 (two-tail test)

Definition of Factors

Factor 1 - concerns job dissatisfaction.

Factor 2 - concerns requiring resident conformity to a rigid set of moral standards.

Factor 3 - reflects belief that residents are human beings, and should be treated with dignity.

Factor 4 - expresses benevolent authoritarianism.

An analysis of the four attitudinal factors yielded the following results: For Factor One (job satisfaction), differences between the experimental and control groups approached but did not reach statistical significance ( $.05 < p < .10$ ). For Factor Two (not requiring the resident to conform to a rigid set of moral standards), differences were not significant. For Factor Three (belief that residents are human beings, and should be treated with dignity), differences approached but did not reach statistical significance ( $.05 < p < .10$ ). For Factor Four (non-authoritarian), differences were significant ( $p < .01$ ).

In order to throw further light upon the effects of training, the sign test was applied to the raw data for both experimental and control groups. This information appears in Tables 3 and 4. For the experimental group, no categories were significantly different; only four categories approached statistical significance ( $p < .10$ ). They were:

Strictness  
Irritability  
Comradeship with Residents  
Job Rejection

The control group showed significant negative change in two categories:

Encourage Resident Verbalization ( $p < .05$ )  
Comradeship with Residents ( $p < .01$ ).

Looking at direction of change on each category, the experimental group scored positive change in 17 categories,

**TABLE 3**  
**DIFFERENCES IN SPECIFIC ATTITUDES AS A RESULT OF**  
**TRAINING FOR EXPERIMENTAL GROUP**

Category	N	Positive Change	Negative Change	Sum
1. Strictness . . . . .	15	11	4	+4*
2. Work Conflict. . . . .	15	8	7	+1
3. Breaking the Will. . . . .	13	7	6	+1
4. Fostering Dependency . . . . .	15	8	7	+1
5. Irritability . . . . .	15	11	4	+7*
6. Suppression of Resident Aggression .	15	9	6	+3
7. Equality re: Residents. . . . .	15	4	11	-7
8. Inconsiderateness of the Admin . . .	16	9	7	+2
9. Institutional Identification . . . . .	15	6	9	-3
10. Encourage Resident Verbalization . .	13	8	5	+3
11. Approval of Resident Activities. . .	14	9	5	+4
12. Avoidance of Communication . . . . .	17	8	9	-1
13. Suppression of Resident Sex. . . . .	12	7	5	+2
14. Attendant Seclusiveness. . . . .	15	10	5	+5
15. Intrusiveness. . . . .	16	7	9	-2
16. Comradeship with Residents . . . . .	12	9	3	+6*
17. Job Insecurity . . . . .	15	9	6	+3
18. Push to Develop Residents. . . . .	15	7	8	-1
19. Job Rejection. . . . .	14	10	4	+6*
20. Negative Att. toward Management. . .	16	7	9	-2
21. Negative Att. toward Public Rel. . .	15	6	9	-3
22. Negative Attendant-Supervisor Rela .	13	8	5	+3
23. Negative Physical Care . . . . .	18	11	7	+4

\* p < .10

TABLE 4

DIFFERENCES IN SPECIFIC ATTITUDES FOR CONTROL GROUP

Category	N	Positive Change	Negative Change	Sum
1. Strictness . . . . .	42	20	22	-2
2. Work Conflict. . . . .	46	27	19	+8
3. Breaking the Will. . . . .	42	25	17	+8
4. Fostering Dependency . . . . .	42	23	19	+4
5. Irritability . . . . .	46	24	22	+2
6. Suppression of Resident Aggression .	42	23	19	+4
7. Equality re: Residents. . . . .	36	13	23	-10
8. Inconsiderateness of Administration.	43	27	16	+11
9. Institutional Identification . . . .	43	18	25	-7
10. Encourage Resident Verbalization .	40	12	28	-16**
11. Approval of Resident Activities. . .	37	15	22	-7
12. Avoidance of Communication . . . .	44	26	18	+8
13. Suppression of Resident Sex. . . . .	34	20	14	+6
14. Attendant Seclusiveness. . . . .	46	19	27	-8
15. Intrusiveness. . . . .	41	21	20	+1
16. Comradeship with Residents . . . . .	37	10	27	-17***
17. Job Security . . . . .	44	26	18	+8
18. Push to Develop Residents. . . . .	43	26	17	+9
19. Job Rejection. . . . .	46	27	19	+8
20. Negative Att. toward Management. . .	39	17	22	-5
21. Negative Att. toward Public Rela . .	41	19	22	-3
22. Negative Attendant-Supervisor Rela .	44	21	23	-2
23. Negative Physical Care . . . . .	45	21	24	-3

\* p <.10  
 \*\* p <.05  
 \*\*\* p <.01

no change in one category, and negative change in 5 categories. The control group scored positive change in 9 categories, and negative change in the remaining 14 categories, as summarized in Table 5.

### RAPIDS

Data for the experimental and control groups are summarized in Table 6. Three scales were used to measure resident behavior: A = Activities of Daily Living; P = Problem Behaviors; D = Dependency. The statistical procedure involved evaluating the differences between two proportions based on independent samples. The hypothesis that the residents in the experimental group would take less supervision in carrying out the basic activities of daily living, in their aberrant or problem behavior and in their overall care than the control group was supported, for each of the three dimensions. Although most residents did not change during this four-month period, those changes that did occur were clearly within the experimental region.



TABLE 5

MEAN SCORES AND DIFFERENCES PER CATEGORY

Category	Experimental Group				Control Group			
	Dir. of Change	Mean Sc Test 1	Mean Sc Test 2	Mean Diff	Dir. of Change	Mean Sc Test 1	Mean Sc Test 2	Mean Diff
1. S	+	13.67	12.22	+1.45	-	13.30	13.50	-.20
2. WC	+	11.61	11.55	+ .06	-	14.08	14.12	-.04
3. BW	+	10.17	9.72	+ .45	+	12.12	11.70	+.42
4. FD	+	8.83	8.05	+ .78	-	10.56	10.80	-.24
5. I	+	11.67	10.39	+1.28	-	12.80	12.90	-.10
6. SA	-	10.94	11.11	- .17	+	11.18	10.94	+.24
7. E	-	16.11	15.00	-1.11	-	15.74	15.30	-.44
8. IA	+	14.83	14.39	+ .44	+	15.76	15.58	+.18
9. II	-	12.89	12.78	- .11	-	12.98	12.96	-.02
10. EV	+	16.44	16.83	+ .39	-	17.16	15.92	-1.24
11. AA	+	15.00	15.94	+ .94	-	15.96	15.00	-.96
12. AC	-	11.89	12.44	- .55	+	13.38	12.92	+.36
13. SS	+	8.78	8.55	+ .23	+	10.26	10.02	+.24
14. AS	+	10.50	10.00	+ .50	-	11.64	11.94	-.30
15. IN	+	13.61	13.39	+ .22	+	13.52	13.46	+.06
16. CR	+	17.56	18.33	+ .77	-	18.86	17.86	-1.00
17. JI	+	10.67	9.94	+ .73	+	11.94	11.74	+.20
18. AD	0	14.78	14.78	.00	+	15.00	14.48	+.52
19. JR	+	12.39	11.22	+1.17	+	13.82	13.70	+.12
20. NWM	-	13.11	13.55	- .44	-	13.98	14.26	-.28
21. NPR	+	10.94	10.72	+ .22	-	11.70	12.12	-.42
22. ASR	+	12.72	12.22	+ .50	-	13.70	13.72	-.02
23. NPC	+	11.50	10.72	+ .78	-	11.40	11.62	-.22
	<u>T=17+</u>			<u>+8.53</u>	<u>T=9+</u>			<u>-3.14</u>

The range of possible scores was 5 to 20. Positive change was indicated by reduced scores in all categories except 7, 9, 10, 11, and 16, which indicated positive change by increased scores.

TABLE 6  
 CHANGES IN THE ENERGY EXPENDED PER PATIENT  
 OVER A FOUR-MONTH PERIOD

Scale	Group	N	Positive Change		Negative Change		No Change		Z Score
			Freq.	%	Freq.	%	Freq.	%	
A	E	103	20	.19	4	.04	79	.77	5.66*
	C	216	4	.02	5	.02	207	.96	
P	E	103	35	.34	11	.11	57	.55	3.40*
	C	216	37	.17	25	.12	154	.71	
D	E	103	30	.29	1	.01	72	.70	3.75*
	C	216	29	.14	10	.05	177	.81	

\* Significant at the .01 level.

A - Activities of Daily Living

P - Problem Behaviors

D - Dependency

N - refers to number of residents cared for by the Experimental and Control Groups.

## CHAPTER V

### DISCUSSION

Before the results can be fully examined, some background information is needed regarding the organizational structure and policies of the Boulder River School and Hospital. Behavior modification approaches had been used sporadically, and a strong new program was currently in progress. The previous year ten college-educated people were hired and given a two-month period of training in Behavior Modification principles as applied to the mentally retarded. Following the training period, the entire group was assigned to what was then called Junior Hall, the pre-puberty quarters.

By coincidence it happened that the institution's behavior modification program was entering a new phase at exactly the time the experimental course of study was beginning in Region I. This new development was the dispersal of the Behavior Modification technicians (BMTs) into regional assignments, one or two per region, leaving two to work in the prepuberty ward. Bill Cook was assigned to Region I, and his effect upon both residents and personnel in the region should not be minimized. He was well trained, highly skilled, and had excellent relationships with the

resident population and with his co-workers. Some of the BMTs in other regions encountered resistance.

Another important consideration is a major change that occurred four months before the beginning of the experimental period. Housing at this time was rearranged on the basis of geographical home locality. Prior to this residents had been grouped according to functional level. This wide-scale move was a source of great emotionality and fear on the part of the residents, and was followed by a period of adjustment to different living quarters, attendants, and managerial staffs.

During the time period that the course was being taught in the Experimental Group, four institution-wide programs were introduced or expanded, which would be expected to have effects upon residents and staff. One was the previously discussed dispersion of trained BMTs into the regions to set up token economies and/or other group programs, and to work with specific individuals. Second was an expansion of the 'Foster Grandparent' program which utilized senior citizens from the community to work with certain youngsters to develop skills. A third program was an enlarged activity and recreation program which involved every resident leaving the cottage every day to participate in some activity. This plan was extremely stimulating and valuable for the profoundly retarded, many of whom had been habitually inactive and who never left the cottage. A fourth change was the establishment

of a new general policy called 'normalization' which set forth the official position that residents should be regarded as human beings, and should have as full a range of human experience as possible. Institution life style should approximate life on the 'outside' as nearly as is manageable, with the goal that many of the residents would be placed in communities outside the institution in the near future. This policy and program was intended to facilitate transfer into normal life situations.

The results indicate that changes in both groups were small. The small amount of change may be partially accounted for by the narrow range of the scale. There was not much room for scores to move; however, the scale is adequate to identify trends. The Control Group registered negative change on the overall attitude index, and on three of the factors. No negative changes were shown by the Experimental Group. It appears that attitudes within the Experimental Group showed a slight positive gain or remained stable while morale in the rest of the regions was deteriorating. Deterioration was especially noticeable for one region. When this region was eliminated from the analysis the overall result was not significant ( $.05 < p < .10$ ). However, none of the other results was negatively affected.

As previously discussed, other influences were operating concurrently with the course of instruction throughout the region, and would be expected to minimize the difference

between the groups. Those influences include the assignment of BMTs to the regions, the expanded resident activity program, and the 'normalization' policy. An attention placebo effect was probably operating in the Experimental Group. Personnel received a 14-week course of instruction and could have seen their region as recipient of more interest and approval by the administration than the other regions.

The course of instruction was considered the principal instrument of change because (other than the placebo condition) it was the only variable that had no counterpart in the other regions.

The decline of morale outside Region I was probably related to the resistance of some employees toward the investigation and development of new programs and policies within the institution. The training course allowed the Experimental Group to learn a set of principles, skills, and vocabulary that were valued by their own and other institution administrations. Active participation and preparation for the change to an expanded behavior modification orientation produced a climate which minimized the development of suspicious, hostile resistance, and which maximized acceptance of change.

### Implications

It is suggested that a training program of a structure similar to that offered in Region I might be influential in

alleviating unfounded fears and negative attitudes among employees, and in bringing about improvements in attitudes toward fellow workers, supervisory and administrative personnel, residents, and in increasing job satisfaction in general. In addition to the growth in understanding and cooperation generated by the course content, the weekly discussion period is itself valuable as a cohesive process.

Problems encountered during the course of the study were: (1) shortage of time, (2) lack of distraction-free classroom space, and (3) lack of an efficient method of data collection from the Control Group.

Where funding is sufficient to make it possible, the ideal arrangement would give each shift at least a half-day free of routine responsibility each week, to allow time for tests, discussions, demonstrations, films, and the supervised carrying out of ward exercises. Reference was made in Chapter I to the behavior modification training program at Beatrice State Home, Beatrice, Nebraska (1970), where federal funds were made available to finance a replacement staff during the training period. The same skeleton crew providing shift relief for the training classes could also solve the data collection problem by relieving Control Group attendants for the completion of the questionnaires in group sessions.

The Boulder River study assessed trainee attitudes and resident performance in an attempt to systematically evaluate

a training course in behavior modification principles. A statistically significant change between groups did occur but this study did not sufficiently control all of the non-specific conditions which could have accounted for the results. Whether the results were a consequence of the course content, or to the "Hawthorne effect" of the introduction of the course in Region I, cannot be ascertained without further research. A third control group should be added to the research design, to measure the attention placebo effect. A discussion group, not oriented to behavior modification, but receiving equal professional time and equal interest and approval of the administration could be evaluated for this purpose. Provision should also be made for follow-up, to determine whether the positive changes were lasting.



## CHAPTER VI

### SUMMARY

A behavior modification training course was taught to the personnel of Region I (the Experimental Group) at the Boulder River School and Hospital. The training course is considered the independent variable, and the dependent variables were pre- and posttest measures of general attitude change, and pre- and posttest measure of change in the amount of effort expended upon the residents. Personnel from other regions or cottages served as a Control Group for changes in attitudes. Residents from two of those regions served as the Control Group for changes in residents' performance, in terms of effort expended by the staff.

The Experimental Group, when compared to the Control Group, significantly changed their attitudes toward work in a positive direction and the residents performed more effectively, demanding less supervision, at the completion of the four-month course.

When the attitude survey was broken down into four independent factors, only one factor, which reflected a non-authoritarian view, differentiated the Experimental from the Control Groups. However, two other factors were just short of significance. These were a humanitarian attitude toward residents ( $p < .1$ ) and job satisfaction ( $p < .1$ ).

The fourth factor, requiring resident conformity to a rigid set of moral standards, failed to differentiate the Experimental from the Control Groups.

On the RAPIDS scale, which measured effort expended on the residents, residents in the Experimental Group required significantly less supervision in all three dimensions (Activities of Daily Living, Problem Behaviors, and Dependency) after the completion of the course than did those in the Control regions.

The introduction of a training program in the form of a university extension course produced appreciable changes both in staff attitudes and residents' performance. Whether this change is due solely to the course of instruction or to the special attention (Hawthorne effect) given to the Experimental region cannot be clearly answered by this study. However, such attention can be a valuable adjunct to any treatment regimen.

## REFERENCES

- Atthowe, J. M., Jr., Hallock, M. R., & Salmon, P. RAPIDS Profile, Form E. San Mateo, Calif.: Dept. of Public Health and Welfare, 1966.
- Atthowe, J. M., Jr. & Krasner, L. Preliminary report on the application of contingent reinforcement procedures (token economy) on a "chronic" psychiatric ward. Journal of Abnormal Psychology, 1968, 73, 37-43.
- Ayllon, T. & Michael, J. The psychiatric nurse as a behavioral engineer. Journal of the Experimental Analysis of Behavior, 1959, 2, 332-334.
- Baldwin, V. L. Development of social skills in retardates as a function of three types of reinforcement programs. (Doctoral dissertation, University of Oregon). Eugene, Ore.: University Microfilms, 1967, No. 67-1844.
- Bandura, A. Principles of behavior modification. New York: Holt, Rinehart & Winston, 1969.
- Becker, W. C., Madsen, C. H., Jr., Arnold, C. R., & Thomas, D. R. The contingent use of teacher attention and praise in reducing classroom behavior problems. Journal of Special Education, 1967, 1, 287-307.
- Bensberg, G. J. & Barnett, C. D. Attendant training in southern residential facilities for the mentally retarded. Atlanta, Geo.: Southern Regional Educational Board, 1966.
- Browning, R. M. & Stover, D. O. Behavior modification in child treatment. Chicago: Aldine-Atherton, Inc., 1971.
- Cleveland State Hospital. Manual for operant conditioning ward personnel. Unpublished manuscript, 1968.
- Cooper, M. L., Thomson, C. L., Baer, D. J. The experimental modification of teacher attending behavior. Journal of Applied Behavior Analysis, 1970, 3, 153-157.
- Ferguson, G. A. Statistical analysis in psychology and education. New York: McGraw-Hill, 1966.

- Gardner, J. M. Training the trainers. Paper presented at the A.A.B.T. Convention, Wash. D. C., 1971.
- Gardner, J. M., Brust, D. J., & Watson, L. S., Jr. A scale to measure skill in applying behavior modification techniques to the mentally retarded. American Journal of Mental Deficiency, 1970, 74, 5.
- Gardner, J. M., & Giampa, F. L. The attendant behavior checklist: Measuring on-the-ward behavior of institutional attendants. American Journal of Mental Deficiency, 1971, 75, 617-622.
- Guerney, B. G. (Ed.) Psychotherapeutic agents, new roles for nonprofessionals, parents, and teachers. New York: Holt, Rinehart & Winston, 1969.
- Heap, R. F. Behavior therapy. Unpublished instructional material, Central State Hospital, Nashville, Tenn., 1969.
- Keith, K. D. & Wallace, A. R. A report of the progress of an inservice training project in behavior modification skills. Staff development project. Beatrice, Neb.: Beatrice State Home, 1970.
- Mahoney, M. J. A residential program in behavior modification. Paper presented at A.A.B.T. Convention, Wash. D.C., 1971.
- Morgan, W. G., Jr. The shaping game. Unpublished paper, Palo Alto, Calif.: Palo Alto V.A. Hospital, 1966.
- Poser, E. G. Training behavior therapists. Behavior Research and Therapy, 1967, 5, 37-41.
- Poser, E. G. & Ashem, B. Establishing a behavior therapy teaching unit. Association for the Advancement of Behavior Therapy Newsletter, 1968.
- Salmon, P., Atthowe, J. M., Jr., & Hallock, M. R. RAPIDS, A system for classification of patients receiving long-term medical and/or nursing care. San Mateo, Calif.: Dept. of Public Health & Welfare, 1966.
- Siegel, Sidney Nonparametric statistics for the behavioral sciences. New York: McGraw-Hill, 1956.

- Smith, J. D. Training para-professionals as open setting agents of behavior change. Paper presented at A.A.B.T. Convention, Wash. D.C., 1971.
- Smith, J. & Smith, D. E. P. Child management. Ann Arbor, Mich.: Ann Arbor Publishers, 1970.
- Watson, L. S. Behavior modification of residents and personnel in institutions for the mentally retarded. Progress Abstract. Columbus, Ohio: Columbus Institute, 1969.
- Watson, L. S. Behavior modification community training program. Progress report for community mental retardation facilities. Franklin County, Ohio: Behavior Modification Community Training Program, 1971.
- Watson, L. S., Gardner, J. M., & Sanders, C. Shaping and maintaining behavior modification skills in staff members in an mr institution: Columbus state institute behavior modification program. Mental Retardation, 1971, 9.
- Whalen, C. & Henker, B. Pyramid therapy in a hospital for the retarded: Methods, program evaluation, and long term effects. American Journal of Mental Deficiency, 1971, 75, 414-434.

APPENDIX A

## THE SHAPING GAME

Wesley G. Morgan, Jr., Ph.D.  
Palo Alto V.A. Hospital

A new parlor game has been derived from the childhood games of "Charades" and "Hot and Cold" (Wood and Goddard, 1940) and a more modern technique of behavior control known as "shaping" (Skinner, 1960).

The equipment needed for the game includes a stopwatch or clock with a sweep-second hand, pencil, paper, and a "clicker" such as is found in the inexpensive metal crickets sold in department stores. The players (four or more) are divided into two equal teams. Each team makes a list of simple tasks or behaviors (at the beginning it is best to use easy ones such as touching one's shoe, sitting in a particular chair, etc.) for the other team's members to perform. When the lists are finished, each task is placed on a separate scrap of paper. There should be at least one task per team member and possibly some other multiple of this number depending upon the length of game desired. Team "A" is designated to go first by a flip of a coin. They select one of their number to be the "pigeon" and another member to be the "shaper". The "shaper" holds the "clicker" and draws a task from the ones prepared by team "B". Everyone present but the "pigeon" may know what the task is, but no hints may be given. The "shaper" is then given the signal to begin and is to reinforce by clicking the "clicker" any behavior

of the "pigeon" approximating the prescribed task. Team "B" keeps track of the elapsed time and are the judges of when the task is successfully completed by the "pigeon". When team "A's" "pigeon" has completed the task or exceeded an arbitrary time limit (about 4 minutes is usually adequate), team "B" then selects a "pigeon" and "shaper" from among its members, and the game continues as before. The "pigeon" and "shaper" are alternated from side to side and rotated among the individual team members so that each member serves in each position an equal number of times. The team which completes all of its tasks in the shortest total time is declared the winner.

The game has been found quite useful in demonstrating the importance of a number of shaping principles. The value of an immediate reward and a highly motivated "pigeon" are immediately apparent, as is the necessity of reinforcing closer and closer approximations to the behavior desired. In addition, the game is good practice for those involved in behavior modification, educational, fun, and of value in demonstrating to others the technique of shaping which in any other form might be quite unpalatable. This game, or one similar to it, has already proved its effectiveness in training parents of autistic children (Pumroy, 1967) and in the training of hospital ward personnel by the author.

The game may be easily modified by the instructor to demonstrate or teach the effects of other operations on



behavior. For example, the click may be defined as an aversive consequence of the "pigeon's" behavior indicating "don't do that response again" (you are getting colder) to compare the effectiveness of this technique with that of positive reinforcement, or superstitious behavior on the part of a naive "pigeon" may be generated by sounding the clicker every 5 seconds or so regardless of his responses. The intensification of behavior noted in early extinction can be demonstrated by giving "clicks" at a relatively high rate for about 30 seconds and then stopping all reinforcement while continuing to observe his behavior. Imagination can produce many other demonstrations and applications, and thus the game may serve as a constant source of reference for many behavioral phenomena.

#### REFERENCES

- Pumroy, D. K. Behavior therapy at the University of Maryland. AABT Newsletter, 1967, Vol. II, No. 3, p. 7.
- Skinner, B. F. Science and Human Behavior. New York: The Free Press, 1960, pp. 91-98.
- Wood, C. and Goddard, G. The Complete Book of Games. Garden City: Garden City Books, 1940, pp. 456, 456a, 459.

BEHAVIOR THERAPY PROGRAMMED TRAINING COURSE  
SUPERVISORY PERSONNEL

A. GETTING ORGANIZED

1. Immediately following this section, you will find a complete breakdown of the organization of the course of instruction, along with the long range aims of the course. Read them over very carefully. Lectures, demonstrations and movies will be provided so that you may gain a more complete understanding of the program.
2. This course is similar to the course that the Psychiatric Aides will take except on their program we focus upon practical methods of recording and changing behaviors. In this course, the emphasis is placed on the theory behind the practice. As future instructors you need to know why a reinforcer is a reinforcer and why one particular approach to behavior change is superior to another.
3. If you do not understand something on the reading assignments, immediately ask an instructor for clarification. If the same thing occurs during a lecture or a demonstration, let us know right then and there.
4. The first assignment is devoted to giving you a general explanation of Behavior Therapy and Learning. As the course progresses, we will gradually cover further details about Behavior Therapy techniques, and begin to practice their use.

B. AIMS OF THE COURSE

1. Develop overall knowledge of the skills required to operate a Behavior Therapy ward.
2. Become thoroughly familiar with each part of the total program.
3. Become qualified to teach the techniques of Behavior Therapy.

C. CONTENT AND PROCEDURE OF THE COURSE

The course is designed so that you may move, from start to finish, at your own pace. You will not be

forced to go ahead until you are ready. How fast you go will be up to you. The work is divided into twelve (12) units, which consist of eighteen reading assignments and ward exercises. The units come in numerical order, and each unit will consist of the following: (a) reading assignments; (b) ward exercises; (c) a readiness test; (d) lecture; and, (e) demonstrations. You will be given the reading assignments at the beginning of each unit. In some of the units you will do the ward exercise along with your reading assignment, and turn the exercises in to your supervisor. He will then grade the exercise and tell you whether it needs to be redone. In the other units you should make an appointment with your supervisor in advance so that he can be with you during the ward exercise. When you have successfully completed both the reading assignments and the ward exercises, you should go to your proctor and take the readiness test for that unit.

The lectures and demonstrations will be geared to prepare you to teach Behavior Therapy techniques and ward management. The lectures will be announced well in advance and you should attend them.

#### D. COURSE OF INSTRUCTION - READING ASSIGNMENTS

##### UNIT I

1. Behavior - Therapy and Learning

##### UNIT II

2. Responses
3. Reinforcers

##### UNIT III

4. Ways to Increase Behavior
5. Ways to Decrease Behavior

##### UNIT IV

6. Schedules of Reinforcement
7. Shaping Behavior

##### UNIT V

8. Discrimination and Generalization
9. Types of Learning

## UNIT VI

10. Behavior Rules (Part I)
11. Behaviors Rules (Part II)

## UNIT VII

12. Behavior Rules (Part III)
13. Behavior Rules (Part IV)

## UNIT VIII

14. Pinpointing and Recording Behaviors (Parts I, II, and III)

## UNIT IX

15. Changing Specific Behaviors (Part I)
  - A. The Frightened Withdrawn Resident
  - B. The Seclusive Resident
  - C. The Geriatric Resident

## UNIT X

16. Changing Specific Behaviors (Part II)
  - A. The Mute Resident
  - B. The Retarded Resident
  - C. The Overly-Active Resident

## UNIT XI

17. Changing Specific Behaviors (Part III)
  - A. The Dependent Resident
  - B. The Depressed Resident
  - C. The Resentful Resident

## UNIT XII

18. Changing Specific Behaviors (Part IV)
  - A. The Negative Resident
  - B. The Aggressive Resident
  - C. The Con Man Resident

- E. When you have finished the reading assignments and ward exercises for a unit you should plan to take the readiness test as soon as possible. The readiness tests will be given any weekday morning from 8:00 a.m. to 12:00 Noon at either the Psychology Department's office in the \_\_\_\_\_.

**APPENDIX B**

## SREB Attendant Opinion Survey

In the following scale, numerical ranks are given each response in such a way that strong agreement to each of the 5 items in a category would result in a score of 20. Strong disagreement to each item of a given category would result in a score of 5. Administration time takes approximately 40 minutes.

## SREB Attendant Opinion Scale

Directions: Read each of the statements below and then rate them as follows:

A = strongly agree      a = mildly agree  
d = mildly disagree      D = strongly disagree

Indicate your opinion by marking the "A" if you strongly agree; "a" if you mildly agree; "d" if you mildly disagree; and "D" if you strongly disagree. Mark only one answer for each statement.

This is not a test; therefore you will not receive a score. There are no right or wrong answers, so answer according to your own opinion. It is very important that all questions be answered. Many statements will seem alike, but all are necessary to show slight differences of opinion. The term "resident" refers to retarded individuals housed in the institution.

---

1S1.	A resident will be grateful later on if the attendant is strict on him.	A	a	d	D
2WC1.	People who think they can always work together without arguments just don't know the facts.	A	a	d	D
3BW1.	Some residents are so bad they must be taught to fear adults for their own good.	A	a	d	D
4FD1.	A good attendant should shelter his residents from life's little difficulties.	A	a	d	D
5I1.	Residents will get on any attendant's nerves after being with them all day.	A	a	d	D
6SA1.	A resident should be taught to avoid fighting, no matter what happens.	A	a	d	D
7E1.	Attendants should adjust to the resident rather than expect the resident to adjust to them.	A	a	d	D
8IA1.	Attendants would do a better job with the children if the administration were more understanding.	A	a	d	D

9III.	Institutions like this one are often unjustly criticized.	A	a	d	D
10EV1.	Residents should be allowed to disagree with their dormitory attendants if they feel their own ideas are better.	A	a	d	D
11AA1.	There are so many things a resident needs to learn that there is no excuse for his sitting around with time on his hands.	A	a	d	D
12AC1.	If you let residents talk about their troubles they end up complaining even more.	A	a	d	D
13SS1.	A young resident should be protected from hearing about sex.	A	a	d	D
14AS1.	Attendants can do a better job if they are left alone.	A	a	d	D
15IN1.	An attendant should make it her business to know everything that is going on in the institution.	A	a	d	D
16CS1.	Residents are happier and better behaved when attendants show an interest in their affairs.	A	a	d	D
17JI1.	When things go wrong the attendant is the only one who usually get the blame.	A	a	d	D
18AD1.	Residents should be pushed to develop as soon as possible.	A	a	d	D
19JR1.	Most attendants frequently wish that they had taken up some other line of work which pays more.	A	a	d	D
20NWM1.	Most attendants feel that cleaning a dormitory is pure drudgery.	A	a	d	D
21NPR1.	Most attendants would prefer to have fewer visitors on their ward.	A	a	d	D
22ASR1.	Supervisors could be of more help if they would take time to get to know the attendant's problems.	A	a	d	D
23NPC1.	Most attendants prefer to perform jobs other than giving direct physical care to residents.	A	a	d	D
24S2.	Strict discipline develops a fine, strong character.	A	a	d	D
25WC2.	Sometimes it is necessary for an attendant to "tell off" a fellow worker in order to get her rights.	A	a	d	D
26BW2.	It is frequently necessary to drive the mischief out of a resident before he will behave.	A	a	d	D
27FD2.	The resident should learn to rely on the attendant for solving all of his little problems.	A	a	d	D

28I2.	Attendants often feel that they can't stand their particular group of residents a moment longer.	A	a	d	D
29SA2.	A resident should always be taught to back away rather than fight when he is in trouble.	A	a	d	D
30E2.	Attendants must earn the respect of residents.	A	a	d	D
31IA2.	Most attendants feel that they are not included enough when plans for the residents are being made.	A	a	d	D
32II2.	The attendant should always go to bat for the institution, regardless of whether or not he agrees with its policies and practices.	A	a	d	D
33EV2.	Residents should be encouraged to tell their dormitory attendants when they feel rules are unreasonable.	A	a	d	D
34AA2.	There is no reason why, on nice days, residents should not be out-of-doors as much as possible.	A	a	d	D
35AC2.	Attendants who start a resident talking about his worries don't realize that sometimes it's better to leave well enough alone.	A	a	d	D
36SS2.	It is very important that young boys and girls not be allowed to see each other completely undressed.	A	a	d	D
37AS2.	Having a lot of visitors and parties on a ward keeps the attendant from doing the best job possible.	A	a	d	D
38IN2.	A resident should never keep a secret from the attendant.	A	a	d	D
39CS2.	Laughing at residents' jokes and telling jokes to residents make things go more smoothly.	A	a	d	D
40JI2.	Most attendants really feel somewhat insecure in their work.	A	a	d	D
41AD2.	The sooner a child learns to do for himself the better off he is.	A	a	d	D
42JR2.	Much of the time the attendant's job is not very rewarding.	A	a	d	D
43NWM2.	Entirely too much record keeping is required of the attendant.	A	a	d	D
44NPR2.	Very often attendants should be permitted to "get tough" with visitors or parents who are trouble makers.	A	a	d	D
45ASR2.	The trouble with most supervisors is that they usually can't make up their minds if they want to be on the attendant's side or the administration's.	A	a	d	D



46NPC2.	Changing soiled linens and bathing sick or total-care residents are pretty depressing jobs at times.	A	a	d	D
47S3.	Most residents are dealt with too leniently when they cause problems.	A	a	d	D
48WC3.	No matter how much two people like each other, when they work together there are always differences which cause irritation and lead to arguments.	A	a	d	D
49BW3.	A wise attendant will teach a resident early just who is boss.	A	a	d	D
50FD3.	Residents should learn to come to the attendant for advice, even if the decision to be made is very minor.	A	a	d	D
51J3.	It is a rare attendant who can be sweet and even tempered with her children all day without letting them get on her nerves.	A	a	d	D
52SA3.	There is no good excuse for a child hitting another child.	A	a	d	D
53E3.	Residents are too often asked to do all the compromising and adjustment and that is not fair.	A	a	d	D
54IA3.	When an attendant doesn't do a good job with the residents, it may be because the administration doesn't do its part around the institution.	A	a	d	D
55II3.	Attendants are completely satisfied with the job this institution is doing.	A	a	d	D
56EV3.	A resident has a right to his own point of view and should be allowed to express it.	A	a	d	D
57AA3.	Attendants should teach their children that the way to get ahead is to keep busy and not waste time.	A	a	d	D
58AC3.	Residents pester you with all their little upsets if you aren't careful from the first.	A	a	d	D
59SS3.	Children who take part in sex play usually have something wrong with them.	A	a	d	D
60AS3.	Most attendants would prefer to get their ward work done rather than attend staff meetings.	A	a	d	D
61IN3.	An attendant has to do the planning because she is the one who knows what is going on in the ward.	A	a	d	D
62CS3.	Attendants who are interested in hearing about residents' activities outside the ward help them progress faster.	A	a	d	D

63JI3.	Too often attendants are fired for reasons that are not important and for things that were not their fault.	A	a	d	D
64AD3.	The sooner a resident is weaned from emotional ties to the attendant, the better off he will be.	A	a	d	D
65JR3.	Being an attendant sometimes presents more headaches than it's worth.	A	a	d	D
66NWM3.	The attendant is required to do too much housekeeping on the dormitory.	A	a	d	D
67NPR3.	When neighbors ask a question about the institution, it is better for the attendant to answer it a little incorrectly than not to answer it at all.	A	a	d	D
68ASR3.	Unfortunately, most supervisors know little more about managing a ward than does the attendant.	A	a	d	D
69NPC3.	If there is one thing that most attendants balk at, it's working on a ward where the residents need total physical care.	A	a	d	D
70OS4.	Most residents should have more discipline than they get.	A	a	d	D
71WC4.	There are some things which just can't be settled by a mild discussion.	A	a	d	D
72BW4.	Residents frequently need some of the natural meanness taken out of them.	A	a	d	D
73FD4.	Attendants should know better than to allow residents to be exposed to situations which may be difficult.	A	a	d	D
74I4.	Managing retarded children is a nerve racking job.	A	a	d	D
75SA4.	Children should not play roughly because it often leads to trouble or injury.	A	a	d	D
76E4.	An attendant should treat a resident as an equal.	A	a	d	D
77IA4.	Probably an attendant's first wish would be that the superintendent and professional staff would be more understanding.	A	a	d	D
78II4.	Attendants should not criticize the institution in public.	A	a	d	D
79EV4.	A resident's ideas should be seriously considered in making dormitory decisions.	A	a	d	D
80AA4.	A resident who is doing something all the time will most likely be happy.	A	a	d	D
81AC4.	If a resident has upset feelings, it is best to leave him alone and not make it look serious.	A	a	d	D

82SS4.	Sex is the most important problem to be contended with in an institution.	A	a	d	D
83AS4.	Professional staff who visit the wards often do more harm than good.	A	a	d	D
84IN4.	The whole ward does fine if the attendant finds out what is going on and really takes charge of things.	A	a	d	D
85CS4.	If attendants would have fun with their residents, the residents would be more apt to take their advice.	A	a	d	D
86JI4.	Most attendants are constantly worried about doing something which will cause them to lose their job.	A	a	d	D
87AD4.	An attendant should always be pushing residents to develop as soon as possible.	A	a	d	D
88JR4.	People who work as attendants often would rather be doing some other kind of job.	A	a	d	D
89NWM4.	Institutions should take steps to see that the attendant is relieved of cleaning and housekeeping jobs on the dormitory.	A	a	d	D
90NPR4.	What the attendant does away from the job is of no business to the institution.	A	a	d	D
91ASR4.	The trouble with most supervisors is that they are too concerned about their own problems to be of much help to the attendant.	A	a	d	D
92NPC4.	There are so many things to be done that it seems a waste of time for the attendant to have to do all the bathing and physical care of sick or dependent residents.	A	a	d	D
93S5.	Residents are actually happier when they are made to "toe the line" at all times.	A	a	d	D
94WC5.	It's natural to have quarrels when two people who both have minds of their own work together.	A	a	d	D
95BW5.	It is sometimes necessary for the attendant to break the resident's will.	A	a	d	D
96FD5.	Residents should be kept away from all jobs which might be discouraging.	A	a	d	D
97I5.	It's natural for an attendant to "blow her top" when residents get on her nerves.	A	a	d	D
98SA5.	Most attendants prefer a quiet resident to an active "scrappy" one.	A	a	d	D

- 99E5. There is no reason attendants should have their way all the time, any more than residents should have their way all the time. A a d D
- 100IA5. Few superintendents realize how difficult it is to be an attendant. A a d D
- 101II5. When I hear others comment unfavorably about our institution, it makes my blood boil. A a d D
- 102EV5. When a resident is in trouble he should know he won't be punished for talking about it with his dormitory attendant. A a d D
- 103AA5. The sooner a resident learns a wasted minute is gone forever, the better off he will be. A a d D
- 104AC5. The trouble with giving attention to residents' problems is that they usually just make up a lot of stories to keep your attention. A a d D
- 105SS5. Masturbation by residents is a serious thing and should be dealt with severely A a d D
- 106AS5. Having attendants get together to talk over their problems usually causes more harm than good. A a d D
- 107IN5. An attendant must often be prepared to "snoop" a little to find out what is really going on around the institution. A a d D
- 108CS5. When you do things together residents feel close to you and can talk easier. A a d D
- 109JI5. In working as an attendant, one never knows what he may be accused of next. A a d D
- 110AD5. The earlier a child is weaned from the bottle the better off he is. A a d D
- 111JR5. On bad days I sometimes wonder why I ever took a job as an attendant. A a d D
- 112NWM5. Of all aspects of the attendant's job, cleaning up and keeping the records straight are the most boring. A a d D
- 113NPR5. When off duty the attendant has the right to criticize the institution just like any other citizen. A a d D
- 114ASR5. The attendant cannot always depend upon the supervisor's judgment, and therefore must sometimes take things into her own hands. A a d D
- 115NPC5. It would be a good thing if the attendant could be relieved of most of the activities involving direct physical care of residents who are sick or dependent. A a d D

### Attendant Opinion Scale--Scoring Form

In the following Attendant Opinion Scale Scoring Form, numerical values are assigned to attendant responses as follows:

Strongly agree = 4	Mildly disagree = 2
Mildly agree = 3	Strongly disagree = 1

Institution: \_\_\_\_\_

Code Number: \_\_\_\_\_

	Categories		Items				Total
1	Strictness (S)	( 1)	(24)	(47)	(70)	( 93)	_____
2	Work Conflict (WC)	( 2)	(25)	(48)	(71)	( 94)	_____
3	Breaking the Will (BW)	( 3)	(26)	(49)	(72)	( 95)	_____
4	Fostering Dependency (FD)	( 4)	(27)	(50)	(73)	( 96)	_____
5	Irritability (I)	( 5)	(28)	(51)	(74)	( 97)	_____
6	Suppression of Aggression (SA)	( 6)	(29)	(52)	(75)	( 98)	_____
7	Equality (E)	( 7)	(30)	(53)	(76)	( 99)	_____
8	Inconsiderateness of Administration (IA)	( 8)	(31)	(54)	(77)	(100)	_____
9	Institutional Identification (II)	( 9)	(32)	(55)	(78)	(101)	_____
10	Encourage Verbalization (EV)	(10)	(33)	(56)	(79)	(102)	_____
11	Approval of Activity (AA)	(11)	(34)	(57)	(80)	(103)	_____
12	Avoidance of Communication (AC)	(12)	(35)	(58)	(81)	(104)	_____
13	Suppression of Sex (SS)	(13)	(36)	(59)	(82)	(105)	_____
14	Attendant Seclusiveness (AS)	(14)	(37)	(60)	(83)	(106)	_____
15	Intrusiveness (IN)	(15)	(38)	(61)	(84)	(107)	_____

Attendant Opinion Scale--Scoring Form (continued)

16	Comradeship with Residents (CR)	(16)	(39)	(62)	(85)	(108)		
17	Job Insecurity (JI)	(17)	(40)	(63)	(86)	(109)		
18	Push to Accelerate Development (AD)	(18)	(41)	(64)	(87)	(110)		
19	Job Rejection (JR)	(19)	(42)	(65)	(88)	(111)		
20	Negative Ward Management (NWM)	(20)	(43)	(66)	(89)	(112)		
21	Negative Public Relations (NPR)	(21)	(44)	(67)	(90)	(113)		
22	Negative Attendant Supervisor Relations (A-SR)	(22)	(45)	(68)	(91)	(114)		
23	Negative Physical Care (NPC)	(23)	(46)	(69)	(92)	(115)		

The Attendant Opinion Scale was administered twice a sample of 75 attendants from three different institutions. The time interval between testing was one week.

The second column in Table 24 shows the average test-retest reliability co-efficients for each category of items. These figures are the means of five correlations. The third column contains the test-retest co-efficients for the sums of each of the five items in each item category. The average correlation of this column is .70, which should be considered satisfactory for groups of only five items.

Table 24

Test-Retest Reliability Co-efficients of  
the Opinion Scale Categories<sup>1</sup>

Category	Mean Item Test-Retest	Sum of Category Test-Retest
1	.553	.773
2	.514	.691
3	.523	.761
4	.477	.775
5	.443	.650
6	.502	.738
7	.451	.544
8	.635	.856
9	.547	.699
10	.306	.604
11	.492	.804
12	.462	.732
13	.576	.732
14	.508	.680
15	.496	.584
16	.464	.734
17	.679	.819
18	.440	.596
19	.532	.761
20	.626	.793
21	.519	.412
22	.580	.776
23	.437	.588

<sup>1</sup>We are indebted to Dr. Earl Butterfield of the Psychology Department, Yale University, for the analysis of these data.

Williams (1966) correlated scores made by attendants on the Opinion Scale with 13 variables. These included:

Attendant Age	Shift Assigned
Attendant Sex	Cottage Assigned
Attendant Education	Number of Residents
Religious Preference	Supervised
Own Children	Resident Mental Level
Years Employed	Age of Residents
Nursing Service vs. Cottage Life Assignment	Sex of Residents

Out of the 13 variables only the department to which the attendant was assigned was found significant. Those employed in the Cottage Life Department showed more positive attitudes than those in the Nursing Service Department.

A factor analysis was made of the Opinion Scale, based on a sample of 683 attendants described in the earlier section dealing with the Information Survey. Through rotation, four factors were extracted which account for 59 percent of the total variance. Most of the subtests are quite pure measures of one or the other of the factors. The nature of the items which loaded heavily on the first factor and the magnitude of their loadings were as follows:

.804	JR	Job unrewarding
.752	JI	Insecure in job
.744	I	Residents are irritating
.727	NPC	Doesn't like to give direct physical to residents
.724	ASR	Supervisors are not much help
.684	NWM	Job is too demanding
.683	AS	Attendants should be left alone to do their jobs
.666	WC	There are bound to be frictions between people working together
.624	NPR	Visitors should be kept off the wards
.558	S	Should be strict with residents
.530	BW	Residents must be forced to submit to attendant's will
.483	AC	Residents should not be allowed to complain to attendants

The phrases after the label abbreviations indicate how an attendant who agreed with the items in the category would feel. It is apparent that this factor is concerned with job dissatisfaction. The attendant with low scores on this factor finds his job unrewarding; is insecure in his job; finds the



residents irritating; does not like to give direct physical care to residents; feels that the supervisors do not understand his problems and are of little help to him; finds his job too demanding; would rather be left alone to do his work; believes that it is inevitable that people working together will disagree and clash; would rather keep visitors off the ward; and feels that residents need to be strictly controlled. The last three are the only ones which refer directly to the management of patients, and all three of them load on other factors.

The first factor is larger than the others. Twelve of the subtests have loadings of greater than .40 on this factor and it accounts for 40 percent of the total variance.

The subtests which load heavily on the second factor and their loadings are:

.779	FD	The resident should be completely dependent upon the attendant
.747	SA	Aggressive tendencies should be punished severely
.663	SS	Sexuality should be suppressed
.537	AC	The residents should not be allowed to complain to the attendants
.503	II	The attendant should always represent institution in good light

This factor concerns making the resident conform to rigid set of moral standards. The attendant scoring low on this factor would like to have all retardates appear to be innocent and childlike. Why the institution identification should load here is unclear, unless perhaps this factor reflects a general tendency to deny badness. All of these subtests are pure measures; none of them have high loadings on any of the other three factors.

The subtests which load heavily on the third factor and their loadings are:

.809	EV	Residents should be encouraged to express their feelings
.781	E	Residents should have the same rights as attendants
.598	CS	Attendants should be comforting to residents

This factor reflects very simply the belief that residents are human beings and should be treated with as much dignity as the attendants. Only the third subtest loads on another factor.

The subtests which load heavily on the fourth factor and their loadings are:

.688	AA	The residents should be kept busy
.687	IN	The attendant needs to know all about the resident and the func- tioning of the institution to do his job well
.538	S	Attendants should be strict with residents
.473	BW	The residents must be made to bow to the attendant's will
.507	CS	The attendants should comfort the residents

This factor seems to be one of benevolence with a touch of sternness. The attendant who endorses it seems to have the patients' best interest at heart, but also intends to have the resident bow to his wisdom. It is an authoritarianism factor.

**APPENDIX C**

THE RAPIDS PROFILE  
FOR DESCRIBING LONG-TERM CARE  
FORM E: ACTUAL EFFORT EXPENDED

J. M. ATTHOWE, JR., PH.D.

MARIA R. HALLOCK, P.H.N.

PIERRE SALMON, M.D.

INSTRUCTIONS TO RATERS:

The purpose of this profile is to describe the actual amount of effort expended on behalf of a given patient in each of six areas of dependency or care. The profile consists of six dimensions. Each of these six dimensions should be rated independently of the others (five of the dimensions are assumed to be independent estimates of care; the sixth dimension D, represents the patient's total dependency).

Please read the definition of the dimension before rating the actual effort expended. It is suggested that you practice on at least one patient before profiling. If no effort was expended, mark an (X) through the number 1 on the scoring sheet beside the dimension being rated. If a minimal effort was expended, mark an (X) through the number 2, and so on. Each dimension is composed of five degrees of effort.

Your task is to determine which of the five categories best describes the effort expended on the patient. If a patient cannot be easily described by one of the five categories, check the category which is the closest to describing the effort expended.

Rate each patient for each of the six dimensions. Each dimension should be rated separately.

The ratings should be a description of the effort typically expended on the patient during the preceding two weeks.

If no information is available as to the amount of effort actually expended, write in the word none opposite the dimension on the scoring sheet.

In any community there is a limited amount of energy or effort which can be expended on long-term care for the chronically ill. Long-term care must take into consideration the patient's dependency in areas other than his physical illness.

In fact, for most chronic patients, a physical illness is generally not the sole reason for their dependency on public or private care.

The acronym RAPIDS was developed by the San Mateo County Dept. of Public Health and Welfare to describe the amount of effort expended by all persons and institutions dealing with a chronically ill patient. The RAPIDS Profile represents the amount of effort expended by the community in caring for the long-term patient in six general areas of his dependency. These six areas of dependency are assumed to cover all of the relevant dimensions of long-term care. The six dimensions are:

- R : : Restorative Procedures
- A : : Activities of Daily Living
- P : : Problem Behavior
- I : : Illness
- D : : Dependency, General
- S : : Social Service

The RAPIDS Profile value lies in its description of chronic illness within a specified community. It is intended to be a simple and quick means for describing the general areas of long-term care. It is not intended to be a detailed diagnostic picture of a given patient.

Evidence from San Mateo County shows the profile to be easily and quickly administered. Any member of the Health and Welfare Services can use the profile reliably if he attends to the definitions of the scale categories and if the medical and nursing charts are sufficient. A five minute or less interview with the nurse in charge can result in a reliable profile which is sufficiently sensitive to changes in the patient's status.

Specifically, RAPIDS is a reliable and rapid means of efficiently classifying patients receiving long-term care. The objective of the profile is to describe the total effort expended on a given patient.

Two forms of the RAPIDS Profile have been developed. Form E describes the actual effort expended. Form N describes the effort assumed to be needed (i.e., profitably expended) if adequate facilities were available. The comparison of Forms E and N can provide a means of evaluating the effectiveness of long-term care. The profile may be used in any long-term care facility whether that facility be a nursing home or convales-

cent hospital, a facility for the mentally retarded or emotionally disturbed, a boarding or rest home, or a private resident.

#### A     ACTIVITIES OF DAILY LIVING (ADL)

This dimension is limited to the amount of help typically given to a patient so he can carry out the normal routine activities associated with self care and personal hygiene.

The dimension refers to the help the patient receives and thus his degree of dependency in the following areas:

- a. turning in bed
- b. feeding
- c. incontinence
- d. transferring in and out of bed and going to the toilet
- e. ambulation, whether patient has or has no mechanical supports
- f. dressing
- g. personal hygiene - washing, shaving, brushing teeth, combing hair, etc.
- h. bathing or showering

#### Definition:

The amount of help given to a patient so he can carry out the routine daily activities associated with personal care and hygiene.

1. No help given to the patient in any of the areas of ADL listed above (completely independent).
2. Patient receives help in one or two areas of ADL.
3. Patient receives help in three to five areas of ADL.
4. Patient receives help in six to seven areas of ADL.
5. Patient receives help in all areas of ADL. (completely dependent).

P      PROBLEM BEHAVIOR

This dimension designates the amount of effort received by the patient in order to deal with his aberrant behavior. The type of diagnosis is not to be considered. Only problem behavior requiring attention, supervision and control will be considered.

Aberrant behavior will be classified into four general areas for our purpose:

- a. apathetic behavior (dejected and discouraged, indifferent, disinterested, withdrawing, etc.).
- b. inappropriate and annoying behavior, (confused and wandering, inappropriate and annoying mannerisms, rituals and other acts, inappropriate and annoying speech, etc.).
- c. detrimental behavior (assaultive, destructive, overindulges in alcohol or drugs, hyperactive (agitated, loud and restless), amoral acts (stealing, sexual problems, etc.).
- d. dangerous behavior (homicidal and suicidal behavior).

Definition:

The amount of observation, supervision and control received by the patient in order to deal with his dangerous, detrimental, inappropriate, annoying or apathetic behavior.

1. No effort expended on the patient.
2. Patient receives reassurance and support for apathetic or annoying and inappropriate behavior and may be given medication when necessary.
3. Patient receives supervision and/or medication for frequent annoying, apathetic and inappropriate behavior.
4. Patient is receiving psychiatric treatment or consultation for his detrimental behavior or his uncontrolled annoying and inappropriate behavior.
5. Patient receives close supervision in a controlled environment for his dangerous behavior or his uncontrolled detrimental behavior.

D      DEPENDENCY

This dimension represents the amount of total dependency, representing the care the patient receives because of his disabling condition or conditions. The dimension designates the degree to which a patient can manage him self independently of others.

Definition:

The amount of dependent care received by a patient as a consequence of his physical, behavioral, and/or diseased condition, or his social dependency.

1. Patient can completely manage himself independently of others. He is self-sufficient and receives no care in providing for his own necessities.
2. Patient is self-sufficient but receives meals and lodging.
3. Patient is generally self-sufficient but receives some assistance in activities of daily living. He also receives occasional medical and nursing care.
4. Patient is generally dependent on others and receives frequent supervision and observation or attention for his illness and behavior problem.
5. Patient is totally dependent on others and receives continual attention, supervision and/or observation.