INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeeb Road
Ann Arbor, Michigan 48106

Downloaded from SHAREOK. Persistent Handle URL: https://hdl.handle.net/11244/3569

73-31,462

ARNOLD, Jr., Robert Earl, 1946-
ADAPTIVE BEHAVIOR SCALES AS THEY RELATE TO LEVELS OF MEASURED INTELLECT WITHIN A STATE SCHOOL SITUATION.

The University of Oklahoma, Ph.D., 1973
Psychology, general

University Microfilms, A XEROX Company, Ann Arbor, Michigan

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

ADAPTIVE BEHAVIOR SCALES AS THEY RELATE TO LEVELS OF MEASURED INTELLECT WITHIN A STATE SCHOOL SITUATION

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

ROBERT E. ARNOLD, JR.

Oklahoma City, Oklahoma

1973

ADAPTIVE BEHAVIOR SCALES AS THEY RELATE TO LEVELS OF MEASURED INTELLECT WITHIN A STATE SCHOOL SITUATION

APPROVED BY

DISSERTATION COMMITTEE

ACKNOWLEDGMENTS

The author expresses appreciation to Doctors Alan P. Chesney, Alan S. Grubb, Robert W. Ketner, Wilson D. Steen, and Joseph E. Trimble.

Special appreciation is extended to Mr. Floyd Carrier whose kind attention and encouragement made the experience for this dissertation possible.

Individual consideration is extended to Mr. Tim Fergeson whose experience and effort in the field of retardation aided greatly to the suggestions for institutional change based upon this research.

Recognition and appreciation is extended to the employees of the State School who administered the Adaptive Behavior Scales and to the psychology unit for the use of their facilities and personnel.

Deepest appreciation is extended to the Department of Institutions Social and Rehabilitative Services for allowing this research to be done under their supervision.

TABLE OF CONTENTS

Page

LIST OF TABLES v

Chapter

I. THE PROBLEM 1

II. METHOD 27

III. RESULTS 31

IV. DISCUSSION 51

V. SUMMARY 60

BIBLIOGRAPHY 62

LIST OF TABLES

Table		Page
1.	Mean Part I Domain Scores - Male Institutional Population	32
2.	Mean Part I Domain Scores - Female Institutional Population	33
3.	Mean Part II Domain Scores - Male Institutional Population	34
4.	Mean Part II Domain Scores - Female Institutional Population	35
5.	Mean Part I Domain Scores by Mean Age - Male Institutional Population	37
6.	Mean Part I Domain Scores by Mean Age - Female Institutional Population	39
7.	Range of Part II Domain Scores - Institutional Males at Profound Level	41
8.	Range of Part II Domain Scores - Institutional Males at Severe Level	42
9.	Range of Part II Domain Scores - Institutional Males at Mild-Moderate Level	43
10.	Range of Part II Domain Scores - Institutional Females at Profound Level	44
11.	Range of Part II Domain Scores - Institutional Females at Severe Level	45
12.	Range of Part II Domain Scores - Institutional Females at Mild-Moderate Level	46
13.	Number of Residents in Part I Domain Scales with High and Low Badges	48
14.	Number of Residents in Part II Domain Scales with High and Low Badges	49
15.	Description of Raters	50

ADAPTIVE BEHAVIOR SCALES AS THEY RELATE TO LEVELS OF MEASURED INTELLECT WITHIN A STATE SCHOOL SITUATION

CHAPTER I

THE PROBLEM

Perhaps the best method of introducing a dissertation wouldn't be to begin with content at all, but rather why the content got there in the first place. The author's incident of inception was an experience as a psychological assistant for the Department of Institutions, Social and Rehabilitative Services. This single case history caused frustration with the process of evaluating intelligence as it was known and prodded the search for a more comprehensive and useful means of description.

One of the assistant's duties had been to travel to the county departments to aid in making determinations of eligibility for financial assistance. On one occasion the author had an interview with a 41-year-old woman who had made application for disability (physical). As she talked about her request, the author was impressed with her appearance and obvious ability to appear more attractive. She delivered her case in a concise manner, relating how her only marriage ended nine years ago with her husband having abandoned her, taking everything but the bills and three children with him. Since then she had held down two jobs.

During the day she worked as a clerk in a clothing store and at night, as a waitress in a restaurant where she ran the cash register.

Approximately two years previous to requesting financial help, she was in an automobile accident and had injured her spine. This made standing on her feet fourteen hours a day quite difficult and she was forced to quit one job. Because of this, she was now unable to provide for herself and three school age children. Mandatory with each evaluation for assistance was a battery of tests including a measure of intellectual quotient. In summary, this woman's measured intelligence was assessed to be 46 I.Q. points. When classified, she would be in the moderate range of intellectual functioning. If institutionalized, she would not have been allowed to participate in much of the academic schooling because her I.Q. was below 50. This incident pointed out dramatically the deficit of the I.Q. score for predicting abilities or performance outside school situations. The woman had married, divorced, raised a family, held down jobs, and sought help in her own behalf--all strongly suggestive of independent functioning, personal adaption, and social adaption.

It seemed that a below average Intelligence Quotient did not adequately predict the range or function of behavior. The intuitive hypothesis from this experience was that a measure of intelligence and a measure of adaptiveness would not always be positively correlated. That they may be variant due to the fact that they are, to some degree, different aspects of the general concept of intelligence, a concept was not sufficiently described by either measure when used independently. The major hypotheses of this study are worded differently than this

intuitive suggestion. These formal questions reflect the conventional view of scaled I.Q. scores and functional levels. That is, that tests of intelligence and tests of adaptive behavior are both measures of a general concept, not two different aspects of that concept. If the research does not support the conventional, then perhaps it was time to stop behaving as if it did. "Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior" (19). This statement came from the manual on terminology and classification of the American Association of Mental Deficiency (AAMD) which was first published in 1959 and revised in 1961. The last revision established a dual classification system for coding both medical and psychological factors. The medical system has provision for eight categories where mental retardation was associated with diseases or conditions due to intoxication. The second system provides for levels of retardation which were based on degrees of deficit or abnormality established in terms of general intelligence and adaptive function. In the second system behavior classifications were used to reflect a new emphasis in respect to retarded capacity and function, the behavior of the individual as a criterion for classification (35).

The object of this research was to demonstrate the possible utility of adding an adaptive behavior scale to any description of those mentally retarded persons who are institutionalized. The research was conducted within a "state school" for the mentally retarded and was designed exclusively to fit the realities of that particular institution. Their problems, limitations, strengths, and facilities set the stage for

demonstrating how a measure of adaptive behavior might become a legitimate criterion of the mentally retarded.

The state school was founded in 1909 as an Oklahoma hospital. It serviced 23 Oklahoma counties. The grounds encompass 694 acres and house approximately 1,000 residents. An average of 500 employees staff the facility. Residents live within a cottage life situation which includes nine male cottages, eight female cottages, one coed dorm, one half-way home, and a hospital. The 17 cottages are bedded in hospital-ward fashion for the most part. The dorm had semi-private facilities and the half-way house provides a minimum of independent living situations. The hospital was designed for total care situations and emergency service.

The designed function of the institution was to provide care and training to mentally retarded state residents between 6 and 18 years of age. The designed goal was to develop each resident to his capacity and return him to the community. The goal seems based upon the combined assumptions that each resident possesses sufficient capacities for returning to the community and that places exist within the community for these ex-residents.

In order to discharge both function and goal, a number of medical services and service programs were offered. Medical services include: dental clinic, laboratory and X-ray, medical clinic, nursing service, pharmacy, resident physician, and physical therapy. These services were available for the care of residents but were not used as part of resident training. A list of ten service programs illustrate the school's alternatives for therapeutic programming as well as care taking: arts and

crafts, chaplin, cottage life, psychology, recreation, rehabilitation, social service, special education, speech and hearing, and volunteer services. Each one of these services utilizes some form of reciprocity between staff and resident. This reciprocity shifts markedly from one to the other with the sophistication of speech and hearing at one pole and the laizze faire but highly rewarding arts and crafts at the other.

On a more informal level much of the real training that goes on with the majority of residentswas accomplished through certain operational services, namely, the canteen, farm, food service, grounds, laundry, and maintenance. Each of these entities ran consistently on a paying basis because of the resident personnel who were trained to work there. They did not receive pay in the traditional sense. However, they did learn fundamental elements of cooperation, trade, and vocational versatility. In addition, this work carried with it a recognized amount of status between residents, both because of the type of training and the mobility afforded the resident by the duties involved. Mobility, privilege, and privacy were key words in this school as it is within all arbitrarily drawn boundaries. The school makes no archaic attempts to bind people to its limits by walls or barbed fences. In fact, the large entrance to the administrative offices always tempted escape with its open gate. Nevertheless, the boundaries are there and they heighten the importance of all forms of movement, privilege, and privacy within its confines. These words were inexplicably intertwined for the resident; that is, any attempt to alter the privacy available to each in some way invariably affected that individual's privilege and rights to movement. This exemplified an ecologically sound principle of systems theory and

at the same time reflected the source of many behavior problems within the institution. Problems such as run-aways, malicious mischief, delinquency, and an all encompassing passivity have apparent ties to such system influence.

Recognition and attempted resolution of such behavior was handled through the behavior management committee and its complex, yet ambitious, badge system. This system was not created specifically to handle all of the school's problems or to be its only tool, but it did serve as a standardization from which rewards and punishments were implimented. Mobility, privilege, and privacy have become largely contingent upon the badge the resident wears.

The badge system was comprised of five name tags, each of a specific color. Certain requirements and privileges were attached to a badge. The black badge required that the resident be responsible enough to stay within his cottage area, be capable of following instructions, require minimal assistance in self care, and followed through with routine tasks. This allowed the individual to go to and from campus locations for training or receipt of other services during daytime hours or to run an errand for the cottage supervisor. His mobility was limited by the necessity that he be accompanied by another resident. His space is limited by the kind of care he required.

The red badge supported the black badge's stipulations without supervision, plus maintaining minimal standards of performance in professional services, occupational therapy, at the cottage level. Privileges included unsupervised telephone calls and eligibility for serving as an escort for black badges. The green badge compassed all require-

ments of the red without assistance. In addition, they must meet performing standards of supervising employee in occupational therapy, professional services, and cottage life. All previous privileges accumulate, plus the badge allowed the attendant to attend all daytime training or leisure activities without an escort and, he may serve as escort for up to four badge or non-badge individuals.

The gold badge required that the resident exceed all performance standards of supervising employees in occupational therapy, professional services, and cottage life. Such fulfillment entitled the holder to attend evening activities when accompanied by a same-sex student with a green, orange, or gold badge. He may attend activities as two or more couples upon approval through established regulations. Town passes were available within established regulations and they may escort groups of five and are eligible for all rehabilitation programming. It was interesting that this badge extended mobility into the evening hours but limits a resident's personal space to an invasion of only the same sex. Simultaneously, the badge opened a new world outside the institution, a mobility and sense of privacy that far outstretches anything within the institution.

The last badge available was an honor badge which was orange in color. It assumed all prior requirements in addition to exceeding standards of performance expected from supervising employees in occupational therapy, professional services, and cottage life. Major additions to the privileges included attending activities as two or more couples upon approval through established regulations and to make the resident eligible for day work within established regulations.

It was evident from this discussion that the badge system supplies the staff and employees of the school with some means of quick identification, a prescribed status which the resident must fit into, and a matrix of controls. The badge boasted privileges, and, indeed, this was the formal way it affected the resident. However, mobility and privacy were equally affected in more subtle and informal ways. The question tion remained if this was the proper manner of affecting these three elements. Did the listing of privileges nourish and develop the care and training of residents, and did it lead to the kind of autonomy that places them back into the community?

It was difficult to understand just how a measure of adaptive behavior failed to become an integral part of any discussion or evaluation of retardation. That is, it was difficult until even a superficial review of the literature reveals that in retardation, like in so many other areas of human evaluation, the "mind" had stolen the show. Mental retardation has fallen into a very sophisticated trap of asserting that a given intellectual quotient (I.Q.) will surface to describe the history, present behavior, and predictable future performance of the individual. Mercer (26) has now characterized this trap as the "clinical perspective". This perspective held the conventional view of deviance as an attribute of the deviant. In so doing the investigator operated under certain more-or-less implicit assumptions: (a) he adopted the values of whatever social system has defined the person as retarded; (b) mental retardation was a lack within the person which must be explained; and (c) the search for etiology leads to diagnostic nomenclature, instruments, and professionalization of the diagnostic function to provide a

group of legitimate "labellers". Within this context it was quite clear how the mystical, yet quantifiable, potentials of the mind took precedance over the apparent randomness of behavior which was looked upon as a by-product of that potential.

The spirit of this study explicitly rejected the clinical perspective regarding mental retardation and in doing so, firmly attaches itself to the emphasis of the AAMD definition. Mercer (26) has suggested a new frame of reference complete with certain assumptions which the author will make most explicit from the onset. This approach, which Mercer calls the "social system perspective", views deviance as a label emerging from an interpersonal process in which one individual or group of individuals defined the behavior of another as different, strange, or beyond tolerable limits. The extent of deviation depended upon the norms of the evaluator as well as the one being defined. Deviation was not seen as a characteristic of the individual or as inherent, but as a socially derived label. Mervyn Susser's (1968) population pyramid, constructed on the British community of Salford, represents graphically that recognized mental subnormality is a social attitude frame (33). In the subnormal population there is a sharp increment in prevalence at each successive age group into young adulthood and a sharp decrement thereafter. Neither births nor immigration can account for the rapid increase in numbers during childhood. In the older age groups as well, numbers decline more sharply than can be accounted for by deaths or emigration. Recognition was determined by the social roles demanded of individuals at each stage of life. Biological attributes may determine baseline capacities, but the society sets the ante for how taxing these roles shall be.

Expectations of the industrial society, or as Bell (6) perceives it, "post industrial America", described the behavior regarded as appropriate and acceptable or as deviant and beyond the limits of tolerance. These limits and the mechanisms of society to handle deviant behavior depend upon the culture and the society; as they change, so have the institutions for the retarded. In our industrial society no rites of passage affirm the transitions of individuals and satisfy their new statues as they become ready for them (33). Much depended upon the individuals' total capacity to adapt.

Gunsberg (17) agrees with Susser's position by stating that mental retardation, unlike physical disability, is to a large extent a social concept. He cites increasing technological complexity as well as progress in medical and psychological science as leading to increased rates in the retarded population. Barker et al. (4), Berreman (7), and Wright (37) have all demonstrated the significance of attitudes in the acceptance of retarded or handicapped persons in social and educational settings. Jordan (20) indicated that one important determinant in the successful adjustment of the mentally retarded was socio-psychological factors such as the value orientation of the community in which the placement was made. Perhaps the most tragic, yet explicit, comment on the psychosocial element of retardation comes from the combined opinions of Tizard (34) and Clark et al. (8). They have indicated that historically, the classic pictures of the severely subnormal child may have been a description of what they are like when living in institutions rather than a description of subnormality itself.

It followed from social system perspective assumptions that the

inclusion of some measure of adaptiveness is not fragmenting the unitary concept of retardation exemplified by tests of intelligence. Rather, it was a willing admission that intelligence, as tested, was only one aspect of the degree to which any individual accomplishes a "degree of fit" between himself and his environment. The task given to us by the definition was one of forming a scientific analysis capable of explaining how the behavior of a person as a physical system is related to the conditions, genetic and environmental, under which he has lived and is living.

The contingencies of survival responsible for man's genetic endowment have produced in some a severely limited intellectual potential. However, it was the social system which defined a measured amount of verbal and non-verbal behavior as "retarded". The lable was a left-handed gift bestowed upon the individual from components of the society with the power to legitimize their norms. It was hoped that through broadening the aspects of and criteria for mental retardation to include adaptive behavior, the effects once assigned to the private and mysterious world of the "mind" might be more accurately traced to the complex, yet accessible, conditions of social living.

Stanford-Binet, Form L-M

Necessary to the literature review of such a study was the identification of the three concepts essential to the construct of retardation as defined by AAMD: general intellectual functioning; adaptive behavior; and the relationship between the two. The AAMD definition of retardation purposely emphasizes the level of general intellectual functioning without reference to other maladaptive behaviors, thus avoiding such interminable discussions as "autistic vs defective". Until the

20th Century, clinical judgement was used to determine whether a person was mentally retarded. Kanner (21) describes a number of early treatments for the retarded. Itard discussed Pinel's diagnosis of cases of "idiocy" and Howe designed a simple point scale for his survey in Massachussetts in the 19th Century (22). Interest in these attempts waned rather quickly in America, possibly because research in the area of mental retardation seemed to be serving as a thinly guised effort to develop tests with high predictive ability for "academic performance".

The earliest major breakthrough in intelligence testing was described in 1905 by Alfred Binet and Theodore Simon. They utilized a developmental approach to quickly differentiate retarded mental development from the more normal course of development. Over three revisions the Stanford-Binet Scales have achieved world-wide prominence due principally to its rigorous foundation in research and because it has served as the best predictor of academic success.

There was little else more confusing than to have probed around in the literature regarding intelligence. It appeared a bit absurd to expect the intellect of man to describe the intellect of man. However, by making a few declarative statements about the concept of intelligence, this author does avoid the deplorable stand that what is meant by intelligence is what intelligence tests measure. The major contribution of Binet appears to have been his intuitive assumption that in the selection of tests, it made little difference what sort of tasks you used, provided that they yield a measure of the child's general intelligence. Carl Spearman, in his two-factor theory of intelligence, has shown that such a common factor provides a functional equivalence of test items

which not only has to be assumed in the Binet Scale but in any scale which is composed of a variety or pool of intellectual tasks. This validates the arithmetic employed in arriving at the sum measure of intelligence (32). He has demonstrated that the presence of a general or common factor can be extricated from the tests by special correlational methods--a quantity he has referred to as "g". In addition, other specific factors exist, specific to any particular ability but different in every case from that of all others.

Just what "g" was psychologically or whether it was, indeed, the paramount factor is still a matter of speculation. Most clearly, it was a purely mathematical quantity intended to explain correlations that exist between the most diverse sorts of cognitive performance and which recur in all data obtainable from measures of intellectual ability. Most intuitively, "g" was also a nebulae that must be posited to describe the effects of mental work or the operations of the mind. Wechsler romanticized this by referring to it as a kind of energy or a measure of the same (36). Combining these two concepts, we may say that "g" was a psychomathematical quantity which measures the mind's capacity to do intellectual work.

It was at this point in the theoretical network that the logical conclusion derived from the two-factor theory becomes untenable. For all practical purposes the best tests of intelligence are precisely those which contain the largest amounts of "g"; thus, "g" and general intelligence are said to be equivalent. Being good Aristotelians it followed that an intelligence evaluation made up of a large number of tests rich in "g" would be the sine qua non of the diagnostic process.

The case history referred to at onset strongly suggests that such a battery of tests not only would fail to provide an adequate description of present or potential function but would serve only to further eliminate a number of abilities essential for what Wechsler (36) defines as the "aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment." These other abilities eluded to and the value attached to them more appropriately belong in the discussion of the relationship between general intelligence and adaptive behavior and are, therefore, temporarily deferred.

Even as early as 1915, the Binet scales came under the criticism of men like Porteus because he thought they were too heavily verbal and dependent upon cultural phenomena; directions are given orally for the most part and a high proportion of responses require the use of words. As a reaction to this, Porteus developed a series of maze tests designed to identify the retarded for training programs (28). Throughout the many years of its use, four additional criticisms have been leveled at the Stanford-Binet. In terms of the chronological age of the subject, the Stanford-Binet was not a good test to use for older adolescents or adults. This was due to the kind of intellectual performance represented by the concept of mental age. It does not allow for any consistent increase beyond age sixteen. So far as the Stanford-Binet was concerned, mental age reaches a plateau at that point. Consequently, this causes trouble in figuring the I.Q. of a person over sixteen years of age--when a sixteen-year-old and an eighty-year-old both have identical I.Q.'s, are they identical in anything beyond measured intellect?

Secondly, there are many props that go along with the test. This makes it inconvenient to use when large groups must be tested in a hurry or when trained testers are not available. An additional administrative difficulty for the institution was that those trained to give the scale and interpret the results are rarely the same ones in charge of the care of the resident. These diagnosticians tend to have a great deal of influence and a decided lack of contact with those whom they evaluate. Thirdly, the Stanford-Binet yielded a score which was indicative of overall or general mental development, but it does not provide an adequate picture of differential development of various kinds of intellectual abilities. This was an important issue in research on basic mental abilities and in the proper diagnosis of mental retardation. A more practical question for those in the institution than "to what degree is the resident retarded" was "in what ways is this retardation deleterious to the resident's functioning?"

The final and most recent criticism points out that the standardization population included no black subjects. The failure to stratify on the basis of race presented perhaps the most serious enigma of the Stanford-Binet. Social and psychosocial research over the past decade has unearthed the unpleasant fact that the generally poor showing of black children on tests of intelligence was less a matter of race and more a matter of racism. The items within the scale reflected a middle-class semantic idiom and its fetish for compulsory education through contriving institutions for learning, ergo, tests of intelligence become tests of school intelligence. Thus said Roszak (29) when he called us "technocrats".

Because of the practical restrictions of the state school, they are legally bound to use the Stanford-Binet, Form L-M, as an instrument of initial evaluation; to propose another measure of general intellectual function would only lessen the possible utility of the research. Achenbach (1) cites a number of reasons why this instrument should rightfully be used on the mentally retarded: (a) the Stanford-Binet is the test most frequently used with retarded populations (30); (b) at all levels up to 12 years, complete failures on some Wechsler Intelligence Scale for Children (WISC) subjects receive positive scaled scores; (c) the WISC full-scale I.Q. extends down only to 46; and (d) reviews of the WISC (5, 15) have recommended that the Binet has been shown to correlate more highly than the WISC with verbal learning in retarded persons (25). The functional equivalence of test items within the Stanford-Binet is demonstrated by the aritmatical process employed in arriving at a final measure of intelligence: correct responses to each item are assigned some numerical value, partial credits are added in reaching a simple sum, and then equal sums are treated as equivalent, irrespective of whether the test item was the discrimination of animals or memory for sentences. Without such an assumption the scores must remain disparate and the final summation unobtainable.

In a recent study Achenbach (1) concentrated on the empirical question of the comparability of test performance by individuals matched on mental age (M.A.) but differing in chronological age (C.A.) and intelligence quotient (I.Q.). The findings indicate that retarded subjects had superior performance over non-retarded subjects having the same M.A. on V(2), Paper Folding, and V(4). The fact that no more than

four items at best yielded substantial differences suggests that for most practical purposes, individuals differing in I.Q. and C.A., but matched for M.A., differ little on their performance on the Stanford-Binet, Form L-M (1). Baumeister in 1967 has suggested M.A. matching may disguise the fact that there are qualitative as well as quantitative differences in the ability structures of retarded individuals. Conklin and Dockwell (9) concluded from their efforts to predict academic achievement over a 4-year period that even when the full range of I.Q. test scores were included, I.Q. alone seldom accounted for more than 50 per cent of the variance in achievement. The remaining 50 per cent was accounted for by other factors such as personality and motivation. These factors were greatly heightened when dealing with intellectually limited individuals, i.e., mentally retarded. The restriction of range, an environmental fact of life in any total institution, means fewer opportunities for choice and decision making.

Based on the original intent of the author and the past literature which points out that retarded subjects were not included in the initial standardization sample, a summary might be offered. The Stanford-Binet, Form L-M, provides an "aspect" of general intellectual ability. Although it was quite adequate for the purposes of providing intellectual data for classification, the information does not by any means give all that was needed to achieve proper placement, residential setting, or program planning. As a test of intelligence it was culture bound, value laden, and geared to predict the potential for learning within academic situations. This, by no means, makes it useless--it only more clearly defines its use.

Adaptive Behavior Scale

Adaptive behavior refers to a complex matrix of behaviors which are both multi-dimensional and different during various stages of growth and development (19). As the second dimension of retardation, adaptive behavior stresses the need to make comparisons based on standards appropriate for the child's chronological age with attention to aspects of human functioning at different ages.

The working definition of "adaption" assumed that impairment in adaptive behavior implies unsuccessful or incomplete coping as defined by three facets: independent functioning, personal responsibility, and social responsibility. Independent functioning is defined by the individual's ability to accomplish those tasks demanded of him by the general community such as satisfactorily completing toilet training. Personal responsibility is reflected by the individual's decision making and choice of behaviors. Social responsibility is defined as the ability of the individual to accept responsibility as a member of a community group, such as cooperating in group activities. The area of social responsibility is often reflected through levels of conformity, socially positive creativity, social adjustment, and emotional maturity.

It was nearly an overwhelming experience to review the plethora of correlational information which existed between tests of measured intellect and human behavior. For years researchers seemed to have been seeking ways of predicting human performance in some fashion less laborious than a full scale test of intelligence. They have found correlations of I.Q. with speech problems, memory retention, growth rate, reflex time, and the size of women's breasts. Although the author sees some

advantage for each of these correlates, the unfortunate reality of such work has been the repeated attempt to reverse the correlation. That is, it has not been uncommon to find that a child was once labeled as retarded because his I.Q. was estimated from the observation of his speech problem or difficulty with memory retention. These measures had the fault of being so narrow in scope as to render them useless for the estimation of such a global concept of behavior. The need has not been to discover a test small enough, but, in fact, a test truly large enough to encompass the enormity of the task.

A number of attempts have been advanced in an effort to aid in encompassing such scope. These scales were more behavioral or descriptive in their organization. Their purpose has not been to substitute for tests such as the Stanford-Binet or the Adaptive Behavior Scales, but rather to help the evaluator when he was presented with testing limitations. Such times occurred with the heavily verbal Stanford-Binet when the child to be tested could not hear or speak. The author has presented

tests because of their relative prominence in the literature and their observed usefulness in the institutions for the retarded: Vineland Social Maturity Scale (VSMS); Cain-Levine Social Competence Scale (CLSCS); Comprehensive Behavior Check List (CBCL); and the Wisconsin Colony Scales of Adaptive Behavior (3). Garner and Giampa (14) used the VSMS, the CLSCS, and the CBCL as three behavioral indices for the purpose of differential diagnosis, placement, therapeutic programming and measurement of change in retarded individuals. Results confirmed that the VSMS was successful in differentiating among residents in the global area of "overall competence" but little help for the purposes of place-

ment and therapeutic programming. The CLSCL did provide percentile values for sub-areas but not sufficiently discriminating to be of real value to institutions. CNCL also proved to have utility in the measurement of behavior change. Balthazar and English (3) have developed a method for classifying individual behaviors and for grouping subjects on the basis of factor scales. Their major objective was to present a classification system of social behaviors of the more severely mentally retarded, one where relationships of the grouped and ungrouped behaviors can be expressed in a rank order system.

The most widely used of the behavior scales has been the Vineland Social Maturity Scale (11). The final measure of the VSMS yields a social quotient (S.Q.). However, a given S.Q. may indicate quite different levels of social competence at different ages and, of course, a given level of competence may be indicated by quite different S.Q.'s. This problem arose because the means and standard deviations of social quotients were not constant for the various age groups in the standardization sample. This was an identical problem of the Stanford-Binet until Terman and Merrill, in 1960, came out with the Form L-M which abandoned I.Q. in favor of deviation I.Q.'s with a mean of 100 and standard deviation of 16 for all ages. Silverstein (31) has proposed a corrective factor stabilizing the Vineland's S.Q. across age groups. Erickson et al. (12) note that the Vineland generally overestimates a child's developmental functioning when used on infants due to its emphasis on motor items. If a child's motor development is at a higher level than his mental development, the Vineland scores will be higher than his I.Q.

as measured by the infant tests such as the Cattell Infant Intelligence Scale. This scale serves as a downward extension of the Stanford-Binet. If the problem is one of a physical nature, the S.Q. will be lower than his I.Q. Therefore, the Vineland has its greatest usefulness as an initial screening device to detect infants with potentially deviant development (12).

Each of these scales has shown some utility in demonstrating levels of adaptive behavior. Collectively, the scales have contributed to the sparsely populated literature concerning levels of adaptive behavior. The Adaptive Behavior Scale (27) was chosen as the measure of adaptation for this study because of its increased comprehensiveness in identifying impairment in all three facets of adaptation. The Scale itself contains 40 sub-domains. Factor analysis of domain scores delineated three major dimensions: Personal Independence; Social Maladaption; and Personal Maladaption. Personal independence was defined by the domains suggestive of autonomy--eating skills, toilet use, cleanliness, etc. Social maladaption was defined by the domains reflecting relatedness--rebellious behavior, untrustworthy behavior, destructive behavior, etc. Personal maladaption was defined by the domains suggestive of individual concern--self-abusive behavior, unacceptable, or eccentric habits, etc. In general, social maladaption described a dimension of extra-punitive, anti-social behavior, while personal maladaption represented a dimension of intro-punitive behavior.

The Scale did not yield a Social Quotient like the Vineland which was roughly equivalent to an Intelligence Quotient. Instead, a

score summary is provided which quantitatively describes the individual's skills and habits within ten domains: (a) independent functioning; (b) physical development; (c) economic activity; (d) language development; (e) number and time concept; (f) occupation - domestic; (g) occupation - general; (h) self-direction; (i) responsibility; and (j) socialization. A second part provided a quantitative measure of maladaptive behavior related to personality and behavior disorders across 14 domains: (a) violent and destructive behavior; (b) antisocial behavior; (c) withdrawal; (d) stereotyped behavior and odd mannerisms; (e) inappropriate inter-personal manners; (f) unacceptable vocal habits; (g) self-abusive behavior; (h) hyperactive tendencies; (i) sexually aberrant behavior; (j) psychological disturbances; (k) use of medication. The combination of these domains suggested that the Adaptive Behavior Scale provided a means for observing and describing an individual's resources and limitations in adapting to his environment.

The Relationship between Stanford-Binet and Adaptive Behavior Scale

The last concept was the relationship between intelligence and adaptive behavior. The AAMD was not entirely clear concerning this relationship. Empirically, there was a wide range of reported correlations (23). Conceptually, it was still undecided whether deficits in intelligence and adaptive behavior are concommitant or that one might be said to "cause" another. Alexander (2), in his monograph on Intelligence, Concrete and Abstract, experimentally tested Spearman's two-factor theory with a second prominent theory, the unique traits theory. Unique traits theory, unlike Spearman's assumes that intelligence involves several

abilities, each independent of one another. Unexpectedly, Alexander confirmed the two-factor theory contention that there was one and only one common factor in all measures of intelligence and, simultaneously, that this alone is not sufficient to explain the total correlational variance which existed between items. Theoretically this finding pointed to the existence of a general factor and pertinent additional factors which are recurrent in a significant number of abilities to form what factor analysts now have determined to be "clusters". Alexander described these clusters as "functional unities", each requiring a separate factor to take care of its respective contribution to the global measurement of the human intellect.

The findings of this research provided the foundation for the emergence of a third theory. Alexander discovered that even after eliminating the general factor and the sources of variance contributed by the functional unities--a considerable amount of his total inter-correlational variance continued to be elusive. Tentatively, he labelled these supplementary global factors "X" and "Z". Wechsler renamed them "non-intellective" factors. Regardless of what one calls or labels these factors, they definitely bring attention to the subject's behavior, to his interest in performing the tasks, his persistence in attaching them, and the responsibility and cooperativeness with which he aspires to succeed.

Making use of this particular theoretical terminology, adaptive behavior as it contributes to intelligence, was an "ability". Factorial analysis has gleaned out three factors responsible for this ability:

Filmed as received

without page(s) 24 .

UNIVERSITY MICROFILMS.

help determine constructive programs for mentally retarded children. Gratton (16) studied the developmental aspects of this relationship by attempting to verify that any condition accompanied or caused by a severe disturbance in the mother-child relationship will result in severe mental retardation or arrest in cognitive development within the sensorio-motor stage. Results showed that an "adherence" of cognitive development was positively correlated with both early infantile autism and mental retardation. Halpern and Equinozzi (18), in 1969, chose to favor a causal model, namely, that impaired adaptive behavior constituted the performance core of the definition of mental retardation, and that lowered intelligence should be regarded as one of the major causes of this impairment. The general hypothesis being evaluated was the prediction that the Verbal Expressivity Scale (VES) would do as well or better than I.Q. in estimating levels of adaptive behavior. Halpern and Equinozzi concluded that perhaps I.Q. is predicting those aspects of adaptive behavior related to academic success, whereas, VES scores are predicting those aspects of adaptive behavior related to skill in communication. It was not apparent from these results that the relationship has been proven to be either cause and effect of concommitance.

The consequence of discovering that I.Q. and adaptive behavior do not form an isomorphic relationship has an immediate effect upon the institution's evaluation for eligibility and admission. Questions yet to be answered are: What if measured intellectual quotient is within a range of retardation but adaptive behavior is far above average for residents of his age, sex, and I.Q.? What if adaptive behavior is far below average for residents of his age, sex, and I.Q., but intelligent quotient

is within the borderline range of retardation? Despite these questions the institution has an effective tool for describing any individual's eligibility for services. Adaptive behavior affects placement. Once an admission is accepted, such a precise description of behaviors will give the department of cottage life a more accurate appraisal of potential problems and strengths of each new resident and how he may fit into current situations at any cottage. Therapeutic and vocational programming are similarly aided by the evaluation of adaptive behavior. Physical, psychological, and social disturbances are outlined within the Scale and may serve as indicators of immediate concern to the child's well-being and his adjustment to the institution.

The Scale as an adjunct to present evaluation procedures runs the same risk of all tools of evaluation, that is, of being utilized as if it were a measure of human potential or some unitary description of personality. To do so would frustrate all attempts at broadening the scope of knowledge concerning man's interaction with other men and his environment.

Hypotheses

The following hypotheses concerning the relationship of Stanford-Binet, Form L-M, scores and ratings from the Adaptive Behavior Scale were advanced:

I - That increasing scores on the Stanford-Binet, Form L-M, will be positively correlated with Part I domain scores.

II - That a significant relationship exists between scores on the Stanford-Binet, Form L-M, and Part II domain scores.

CHAPTER II

METHOD

Subjects

The sample of residents was drawn from a total population of 1,100 residents of a "state school" for the mentally retarded. The sample was stratified on the basis of age, sex, and measured intellectual quotient. Within the age classification, there are four mutually exclusive categories in years: 5 to 8 years; 9 to 12 years; 13 to 16 years; and, 17 to 20 years and over. Within the sex classification, there are two mutually exclusive categories: male; female. The classification of measured intellectual quotient includes three mutually exclusive ranges of scaled I.Q. scores: profound, 0-25; severe, 26-49; moderate-mild, 50-75. Sixteen residents, eight male and eight female, represent each age and intellectual classification for a total sample of 192.

Instruments and Measures

The Stanford-Binet, Form L-M, was the proposed predictive measure of academic success in the institutional setting. It is an age scale making use of age standards of performance. The 1960 scale incorporates in a single form, designated as the L-M Form, the best subtests from the 1937 scales (Terman and Merrill, 1960). Biserial correlations for the subtests included in the Form L-M reveal the mean correlation

for the 1960 scale is 0.66. At preschool levels, 2-6 through 5, the 1960 mean is 0.61. For year levels 6-0 through 14-0 the mean is 0.67. The adult levels, AA through SA III, have the highest correlations, 0.73 (Terman and Merrill, 1960, pp. 347).

The Adaptive Behavior Scale was chosen as a behavior rating scale for mentally retarded individuals. Primarily, it refers to the effectiveness of the individual in adapting to the natural and social demands of his environment (27). The Adaptive Behavior (A.B.) Scale consists of two parts. Part I is designed to assess the individual's skills and habits in ten behavior domains pertinent to the maintenance of personal independence in daily living. Part II is designed to provide measures of maladaptive behavior related to personality and behavior disorders (27). There are two forms of the Adaptive Behavior Scale. One is designed for children 12 years or younger, the other for adolescents and adults 13 years or older. Few studies have been done regarding the validity of the scale. However, based on a study of 41 institutionalized retardates, age range, 10-13, all of the Part I domain scores discriminated significantly between the retardates who have been previously classified at different levels of adaptive behavior by clinical judgement (23). Estimates of inter-rates reliability conducted on 26 male and 21 female patients have yielded Part I mean reliability of 0.74, while the mean reliability for Part II was 0.61. Full scale reliability was 0.67 (27).

The badge system previously described was utilized to support the contention that the Adaptive Behavior Scales yield a measure of the residence's performance. In its most simplistic form, the badge system

is an attempt to rank the performance of those individuals who become part of its system. As such, this ranking was collapsed to describe those who place high and low within the system. The high badge included all those within the sample who carried the orange, gold, and green badges. This encompassed the requirements and privileges of these three badges. A low badge included all those within the sample who carried the black and red badges, encompassing the requirements and privileges of these two badges. For the purpose of comparing domain scores with the badge system, a median score was determined for each scale within the Adaptive Behavior Scales. Those lying above the median were considered high for that scale; those below it were characterized as low. Complete data on badge identification was available for 40 residents who were included in this comparison.

Statistical Design

The control variables in this study were age, sex, and measured I.Q. The variable used to measure the effects of these controls were the levels of adaptive behavior evaluated from the Adaptive Behavior Scale. In accordance with the first hypothesis a Pearson (r) was done to assess the relationship between I.Q. scores and Part I domain scores. To test if a relationship existed between I.Q. scores and Part II domain scores a correlation was computed. The level of statistical significance was set at .10. To justify that the Adaptive Behavior Scales were a measure of the resident's performance a chi square test was performed between those ranking high and low on the badge system and their Adaptive Behavior Scale scores for Parts I and II. The level of statistical significance was set at .05.

Procedure

Information concerning age, sex, I.Q., and any other medical, social, or psychological material pertinent to evaluation was gathered from the individual resident's history file found in the institution's social service division. All such information was cross-checked at the time of the study by consulting with the resident or attendant supervisor. Where a Stanford-Binet, Form L-M, had not been administered within the past twelve months, a new test was given and compared to previous results. In the cases where recent tests deviated by more than five points from past tests with the same instrument, a new evaluation was scored.

The Adaptive Behavior Scale was administered by a psychologist at the state school. Because of a wide variety of communication problems encountered when testing individuals with intelligence quotients below the normal ranges, informants were used to fill out the Scale on each resident: attendants, supervisors, speech therapists, vocational therapist, etc. The informant was chosen on the basis of his or her total contact with the resident. This was often of benefit to the individual being evaluated since attendants or staff familiar with individual problems such as language or physical deficits were more aware of actual abilities than a naive investigator. Since the setting was an institution, it was possible for the investigator to observe all behaviors listed by the informants as appropriately describing the resident in question.

CHAPTER III

RESULTS

Two series of Pearson r's were performed on the data. In the first series mean scores on each of the Adaptive Behavior Scales and mean scores for each level of retardation served as separate variables. Within Part I of the Adaptive Behavior Scales nine of ten scales demonstrated significant validity coefficients: independent functioning (+ .803, $p < .10$), physical development (+ .73, $p < .10$), general occupation (+ .798, $p < .10$), self-direction (+ .732, $p < .10$), number and time concept (+ .896, $p < .05$), domestic occupation (+ .877, $p < .05$), economic activity (+ .937, $p < .01$), language development (+ .926, $p < .01$), and responsibility (+ .939, $p < .01$). In Tables 1 and 2, means of Part I domain scores are presented in terms of three levels of measured intellect.

Part II correlations yielded significant validity coefficients in five of fourteen scales: rebellious behavior (+ .776, $p < .10$), psychological distrubance (+ .771, $p < .10$), antisocial behavior (+ .965, $p < .01$), untrustworthy behavior (+ .955, $p < .01$), stereotyped behavior and odd mannerisms (- .784, $p < .10$). In Tables 3 and 4, means of Part II domain scores are presented in terms of three levels of measured intellect.

TABLE 1

MEAN PART I DOMAIN SCORES - MALE
INSTITUTIONAL POPULATION

Domain	Levels of Retardation[a] Profound (18)	Severe (36)	Mild - Moderate (64)
I Independent Functioning	31.19	83.13	81.94
II Physical Development	14.72	22.38	22.44
III Economic Activity	0.63	4.21	5.53
IV Language Development	6.44	12.25	20.12
V Number and Time Concept	1.13	6.69	7.28
VI Occupation Domestic	0.69	5.34	5.97
VII Occupation General	0.43	6.00	6.31
VIII Self-direction	8.75	21.03	21.28
IX Responsibility	0.50	2.06	2.84
X Socialization	11.03	18.22	19.97

[a]Mean I.Q.'s based upon Stanford Binet, Form L-M. Each level represents N = 64.

TABLE 2

MEAN PART I DOMAIN SCORES - FEMALE
INSTITUTIONAL POPULATION

Domain	Levels of Retardation[a] Profound (18)	Severe (36)	Mild - Moderate (64)
I Independent Functioning	48.09	89.34	99.38
II Physical Development	16.78	25.16	24.13
III Economic Activity	2.06	3.99	6.00
IV Language Development	9.09	17.94	21.56
V Number and Time Concept	2.28	5.97	8.19
VI Occupation Domestic	2.09	5.94	8.75
VII Occupation General	3.41	5.94	6.91
VIII Self-direction	16.56	20.69	21.88
IX Responsibility	0.81	2.26	2.90
X Socialization	15.75	20.69	19.50

[a]Mean I.Q.'s based upon Stanford Binet, Form L-M. Each level represents N = 64.

TABLE 3

MEAN PART II DOMAIN SCORES - MALE
INSTITUTIONAL POPULATION

Domain	Levels of Retardation[a] Profound (18)	Severe (36)	Mild - Moderate (64)
Violent and Destructive Behavior	7.50 (10)[b]	9.68 (19)	9.02 (22)
Antisocial Behavior	2.42 (10)	9.02 (22)	12.14 (22)
Rebellious Behavior	3.95 (17)	10.91 (20)	7.34 (23)
Untrustworthy Behavior	0.75 (12)	2.67 (15)	4.89 (16)
Withdrawal Behavior	3.83 (14)	4.25 (11)	6.42 (13)
Stereotyped Behavior and Odd Mannerisms	4.33 (11)	3.84 (19)	3.65 (10)
Inappropriate Interpersonal Manners	2.50 (10)	3.83 (16)	4.63 (10)
Inappropriate Vocal Habits	1.00 (13)	3.07 (14)	1.98 (10)
Unacceptable or Eccentric Habits	5.42 (18)	8.73 (17)	5.29 (16)
Self-Abusive Behavior	1.13 (14)	2.92 (19)	3.25 (16)
Hyperactive Tendencies	2.54 (12)	4.25 (17)	3.13 (14)
Sexually Aberrant Behavior	2.31 (10)	4.43 (14)	3.54 (14)
Psychological Disturbances	3.16 (12)	8.20 (21)	7.22 (27)
Use of Medication	3.10 (21)	3.04 (10)	2.03 (15)

[a]Mean I.Q.'s based upon Stanford Binet, Form L-M. Each level represents N = 64.
[b]Number of individuals who received the score of one or higher.

TABLE 4

MEAN PART II DOMAIN SCORES - FEMALE INSTITUTIONAL POPULATION

Domain	Levels of Retardation[a] Profound (18)	Severe (36)	Mild - Moderate (64)
Violent and Destructive Behavior	5.90 (12)[b]	6.42 (10)	9.58 (16)
Antisocial Behavior	3.54 (12)	5.94 (17)	13.72 (20)
Rebellious Behavior	2.98 (11)	5.67 (11)	6.72 (17)
Untrustworthy Behavior	1.00 (12)	3.50 (14)	6.83 (13)
Withdrawal Behavior	5.87 (19)	4.47 (15)	2.33 (10)
Stereotyped Behavior and Odd Mannerisms	4.76 (13)	3.23 (10)	2.92 (16)
Inappropriate Interpersonal Manners	1.25 (12)	3.88 (18)	3.23 (11)
Inappropriate Vocal Habits	4.75 (10)	2.50 (16)	2.75 (12)
Unacceptable or Eccentric Habits	5.43 (18)	2.68 (18)	4.44 (10)
Self-Abusive Behavior	1.81 (17)	0.63 (15)	1.75 (12)
Hyperactive Tendencies	4.00 (16)	3.50 (17)	4.42 (13)
Sexually Aberrant Behavior	1.84 (18)	1.25 (14)	2.94 (10)
Psychological Disturbances	4.58 (17)	7.42 (13)	8.64 (23)
Use of Medication	2.04 (11)	1.79 (17)	2.12 (13)

[a]Mean I.Q.'s based upon Stanford Binet, Form L-M. Each level represents N = 64.
[b]Number of individuals who received the score of one or higher.

In the second series mean scores on Part I of the Adaptive Behavior Scales and mean age of those within the four age groups served as separate variables. At the profound level of retardation, results of the Pearson r yielded three significant validity coefficients: independent functioning (+ .6485, $p < .10$), number and time concept (- .7825, $p < .05$), and general occupation (- .7455, $p < .05$). At the severe level of retardation six significant validity coefficients were demonstrated: self-direction (+ .6997, $p < .10$), socialization (+ .6480, $p < .10$), domestic occupation (+ .7645, $p < .05$), economic activity (+ .7830, $p < .05$), independent functioning (+ .8226, $p < .02$), number and time concept (+ .8425, $p < .01$), and general occupation (+ .8512, $p < .01$). At the mild-moderate level eight significant validity coefficients were demonstrated: independent functioning (+ .6683, $p < .10$), domestic occupation (+ .6317, $p < .10$), self-direction (+ .6963, $p < .10$), responsibility (+ .7697, $p < .05$), language development (+ .7994, $p < .02$), economic activity (+ .3619, $p < .01$), number and time concept (+ .8989, $p < .01$), and general occupation (+ .8552, $p < .01$). Tables 5 and 6 present means of Part I domain scores in terms of the four age groupings and three levels of retardation. Due to the small number of individuals scoring within Part II domain scores when presented by age groupings, ranges were determined rather than means. Tables 7, 8, 9, 10, 11, and 12 illustrate the ranges of Part II domain scores by four age groupings and levels of retardation. These ranges indicate the wide latitude of some domain scoring despite the narrow age groupings. Other ranges illustrate a tight clumping and the implied rarity of scores outside the range.

TABLE 5

MEAN PART I DOMAIN SCORES BY MEAN AGE
- MALE INSTITUTIONAL POPULATION

Domain		Age Ranges 7.2			11.6		
		Profound	Severe	Mild-Moderate	Profound	Severe	Mild-Moderate
I	Independent Functioning	14.00	71.25	66.25	53.38	68.50	69.75
II	Physical Development	11.00	21.13	22.75	21.00	22.75	21.25
III	Economic Activity	0.50	0.75	2.25	0.50	1.50	3.88
IV	Language Development	4.25	14.75	17.25	11.13	12.25	19.75
V	Number and Time Concept	0.75	4.00	3.75	2.00	2.88	5.75
VI	Occupation Domestic	0.75	2.13	3.25	1.00	2.75	6.88
VII	Occupation General	0.13	2.13	3.38	1.63	2.50	4.25
VIII	Self-Direction	6.25	19.75	18.50	11.75	19.00	21.63
IX	Responsibility	0.50	1.63	1.38	0.50	0.75	3.13
X	Socialization	2.50	17.88	15.63	15.75	13.63	21.63

TABLE 5--Continued

Domain		Age Ranges 14.2 Profound	Severe	Mild-Moderate	19.0 Profound	Severe	Mild-Moderate
I	Independent Functioning	7.13	95.75	88.13	50.25	97.00	103.63
II	Physical Development	7.63	22.25	22.38	19.25	23.38	23.38
III	Economic Activity	0.50	7.50	6.13	1.50	7.13	9.88
IV	Language Development	2.25	1.88	19.13	8.13	26.13	24.38
V	Number and Time Concept	0.50	8.13	7.88	1.75	9.00	11.75
VI	Occupation Domestic	0.13	9.00	4.88	0.88	7.50	8.88
VII	Occupation General	0.16	10.38	8.13	0.50	9.00	9.50
VIII	Self-Direction	1.25	24.88	21.38	15.75	20.50	23.63
IX	Responsibility	0.40	3.13	3.00	0.50	2.75	3.88
X	Socialization	10.75	20.13	20.38	15.13	21.25	22.25

TABLE 6

MEAN PART I DOMAIN SCORES BY MEAN AGE
- FEMALE INSTITUTIONAL POPULATION

Domain		Age Ranges 7.2 Profound	Severe	Mild-Moderate	11.6 Profound	Severe	Mild-Moderate
I	Independent Functioning	17.25	75.88	93.63	47.00	92.13	95.13
II	Physical Development	9.88	20.50	23.13	16.00	32.25	23.88
III	Economic Activity	1.63	2.63	3.75	2.00	4.00	5.25
IV	Language Development	5.00	14.88	18.50	12.13	16.38	20.00
V	Number and Time Concept	0.88	3.50	6.25	2.50	6.38	8.50
VI	Occupation Domestic	1.38	2.50	6.38	1.86	6.63	9.75
VII	Occupation General	0.88	3.75	3.63	2.88	4.75	4.38
VIII	Self-Direction	12.00	16.13	21.50	18.38	17.63	21.75
IX	Responsibility	0.63	0.88	2.45	0.13	1.50	2.50
X	Socialization	14.50	17.75	20.75	14.63	19.50	18.63

TABLE 6--Continued

Domain		Age Ranges 14.2 Profound	Severe	Mild-Moderate	19.0 Profound	Severe	Mild-Moderate
I	Independent Functioning	56.00	85.13	103.63	72.13	104.25	105.13
II	Physical Development	20.63	23.38	24.50	20.63	24.50	25.00
III	Economic Activity	2.63	1.87	8.25	2.00	7.50	6.75
IV	Language Development	10.13	15.88	25.00	9.13	24.13	22.75
V	Number and Time Concept	3.13	5.00	7.88	2.63	9.00	10.25
VI	Occupation Domestic	2.13	2.50	9.25	3.00	12.13	9.63
VII	Occupation General	4.00	4.88	10.50	5.88	10.38	9.13
VIII	Self-Direction	14.25	22.50	22.50	21.63	26.50	21.75
IX	Responsibility	1.00	2.63	3.63	1.50	4.13	3.00
X	Socialization	17.13	22.63	20.13	16.75	22.88	18.50

TABLE 7

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL MALES AT PROFOUND LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(6) 1[a] 87.5%[b]	(2-22) 5 37.5%	(1-16) 2 75.0%	(3-6) 2 75.0%
B. Antisocial Behavior	-[c]	(2-19) 6 25.0%	-	(2-8) 4 50.0%
C. Rebellious Behavior	(4) 1 87.5%	(1-24) 5 37.5%	-	(3) 1 87.5%
D. Untrustworthy Behavior	-	(2-4) 2 75.0%	-	-
E. Withdrawal	(2-8) 5 37.5%	(3) 1 87.5%	(1-4) 5 37.5%	(3-9) 3 62.5%
F. Stereotyped Behavior and Odd Mannerisms	(6-12) 2 75.0%	(2-5) 3 62.5%	(2-4) 3 62.5%	(1-3) 3 62.5%
G. Inappropriate Interpersonal Manners	(2) 1 87.5%	(2-5) 3 62.5%	-	(5) 1 87.5%
H. Inappropriate Vocal Habits	-	(3) 2 75.0%	-	(1) 1 87.5%
I. Unacceptable or Eccentric Habits	(1-8) 5 37.5%	(1-8) 6 25.0%	(1-15) 5 37.5%	(4-8) 2 75.0%
J. Self-Abusive Behavior	-	(1-4) 2 75.0%	(2) 2 75.0%	-
K. Hyperactive Tendencies	(2-6) 3 62.5%	(1-6) 6 25.0%	(1) 1 87.5%	(2) 2 75.0%
L. Sexually Aberrant Behavior	(1-4) 2 75.0%	(2-5) 4 50.0%	(1-2) 2 75.0%	(1-3) 2 75.0%
M. Psychological Disturbances	(2-3) 2 75.0%	(2-9) 7 12.5%	(2) 2 75.0%	(3) 1 87.5%
N. Use of Medications	(2-4) 4 50.0%	(1-4) 3 62.5%	(4-6) 7 12.5%	(2-4) 7 12.5%

[a] Number of individuals who received the score of 1 or higher.
[b] Percentage of those who received zero score.
[c] All individuals within the cell received zero score.

TABLE 8

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL MALES AT SEVERE LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(7-35) 7[a] 12.5%[b]	(1-34) 8 00.0%	(2-20) 3 62.5%	(4) 1 87.5%
B. Antisocial Behavior	(1-25) 7 12.5%	(1-23) 8 00.0%	(1-26) 5 37.5%	(1-3) 2 75.0%
C. Rebellious Behavior	(2-20) 8 00.0%	(2-25) 7 12.5%	(1-14) 4 50.0%	(13) 1 87.5%
D. Untrustworthy Behavior	(2-3) 4 50.0%	(1-6) 5 37.5%	(4-12) 4 50.0%	(1) 2 75.0%
E. Withdrawal	(1-6) 3 62.5%	(3-9) 3 62.5%	(5-8) 4 50.0%	(3) 1 87.5%
F. Stereotyped Behavior and Odd Mannerisms	(2-5) 6 25.0%	(2-6) 7 12.5%	(1-4) 3 62.5%	(4-9) 3 62.5%
G. Inappropriate Interpersonal Manners	(5-10) 6 25.0%	(1-8) 6 25.0%	(1-6) 2 75.0%	(1) 2 75.0%
H. Inappropriate Vocal Habits	(1-9) 3 62.5%	(2-4) 4 50.0%	(1-4) 5 37.5%	(2-4) 2 75.0%
I. Unacceptable or Eccentric Habits	(1-23) 7 12.5%	(4-18) 6 25.0%	(3-5) 3 62.5%	(3) 1 87.5%
J. Self-Abusive Behavior	(1-12) 3 62.5%	(3-8) 3 62.5%	(1) 2 75.0%	(1) 1 87.5%
K. Hyperactive Tendencies	(2-8) 6 25.0%	(3-7) 6 25.0%	(2) 2 75.0%	(2-7) 3 62.5%
L. Sexually Aberrant Behavior	(2-11) 5 37.5%	(1-11) 5 37.5%	(5-7) 2 75.0%	(2-3) 2 75.0%
M. Psychological Distrubances	(2-17) 7 12.5%	(4-16) 6 25.0%	(3-7) 4 50.0%	(2-14) 4 50.0%
N. Use of Medications	(2-4) 3 62.5%	(2-4) 2 75.0%	(1-6) 4 50.0%	(2) 1 87.5%

[a] Number of individuals who received the score of 1 or higher.
[b] Percentage of those who received zero score.

TABLE 9

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL MALES AT MILD-MODERATE LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(1-36) 6[a] 25.0%	(1-35) 7 12.5%	(1-14) 6 25.0%	(2-4) 3 62.5%
B. Antisocial Behavior	(1-26) 6 25.0%	(1-40) 8 00.0%	(2-24) 5 37.5%	(1-20) 3 62.5%
C. Rebellious Behavior	(1-32) 8 00.0%	(1-16) 5 37.5%	(1-23) 6 25.0%	(3-16) 2 75.0%
D. Untrustworthy Behavior	(1-4) 4 50.0%	(1-10) 5 37.5%	(1-8) 4 50.0%	(4-12) 3 62.5%
E. Withdrawal	(1-10) 3 62.5%	(1-6) 6 25.0%	(1-14) 3 62.5%	(9) 1 87.5%
F. Stereotyped Behavior and Odd Mannerisms	(4-5) 2 75.0%	(2-3) 3 62.5%	(2) 2 75.0%	(2-11) 2 75.0%
G. Inappropriate Interpersonal Manners	(2-7) 3 62.5%	(4-5) 3 62.5%	(2-3) 2 75.0%	(8) 1 87.5%
H. Inappropriate Vocal Habits	(1-3) 3 62.5%	(1-8) 3 62.5%	(1-2) 4 50.0%	- [b]
I. Unacceptable or Eccentric Habits	(1-16) 2 75.0%	(1-9) 7 12.5%	(2-3) 4 50.0%	(5) 1 87.5%
J. Self-Abusive Behavior	(5-13) 2 75.0%	(1-3) 3 62.5%	(2) 1 87.5%	-
K. Hyperactive Tendencies	(1-6) 6 25.0%	(2-6) 4 50.0%	(2) 3 62.5%	(1) 1 87.5%
L. Sexually Aberrant Behavior	(2-5) 3 62.5%	(1) 4 50.0%	(1-8) 6 25.0%	(5) 1 87.5%
M. Psychological Disturbances	(1-16) 8 00.0%	(2-18) 8 00.0%	(1-8) 7 12.5%	(2-15) 4 50.0%
N. Use of Medications	(1-4) 2 75.0%	(1-2) 5 37.5%	(1-4) 5 37.5%	(2) 3 62.5%

[a] Number of individuals who received the score of 1 or higher.
[b] Percentage of those who received zero score.

TABLE 10

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL FEMALES AT PROFOUND LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(4-6) 2[a] 75.0%	(1-9) 4 50.0%	(2-7) 3 62.5%	(1-14) 3 62.5%
B. Antisocial Behavior	(7) 1 87.5%[b]	(2-6) 5 37.5%	(1-2) 3 62.5%	(1-2) 3 62.5%
C. Rebellious Behavior	(2) 1 87.5%	(1-7) 5 37.5%	(2-3) 3 62.5%	(2-4) 2 75.0%
D. Untrustworthy Behavior	(2) 1 87.5%	(2) 1 87.5%	-	-
E. Withdrawal	(2-4) 4 50.0%	(6-14) 5 37.5%	(1-16) 4 50.0%	(1-8) 6 25.0%
F. Stereotyped Behavior and Odd Mannerisms	(2-4) 3 62.5%	(6-12) 5 37.5%	(1-3) 3 62.5%	(1-8) 2 75.0%
G. Inappropriate Interpersonal Manners	- [c]	(1) 1 87.5%	-	(4) 1 87.5%
H. Inappropriate Vocal Habits	(2) 2 75.0%	(2-4) 2 75.0%	(1-2) 3 62.5%	(2-6) 3 62.5%
I. Unacceptable or Eccentric Habits	(2-7) 4 50.0%	(5-22) 5 37.5%	(1-11) 5 37.5%	(1-9) 4 50.0%
J. Self-Abusive Behavior	(2) 1 87.5%	(1-8) 4 50.0%	(2) 2 75.0%	-
K. Hyperactive Tendencies	(4-6) 2 75.0%	(4-6) 2 75.0%	(2) 1 87.5%	(4) 1 87.5%
L. Sexually Aberrant Behavior	-	(2-6) 3 62.5%	(1-2) 3 62.5%	(1-3) 2 75.0%
M. Psychological Distrubances	(2-4) 2 75.0%	(5-15) 3 62.5%	(2) 1 87.5%	(5) 1 87.5%
N. Use of Medications	(2-6) 7 12.5%	(2-4) 3 62.5%	-	(2) 1 87.5%

[a] Number of individuals who received the score of 1 or higher.
[b] Percentage of those who received zero score.
[c] All individuals within the cell received zero score.

TABLE 11

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL FEMALES AT SEVERE LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(4-19) 4[a] 50.0%[b]	(6-17) 3 62.5%	- [c]	(1-12) 2 75.0%
B. Antisocial Behavior	(2-18) 4 50.0%	(2-24) 4 50.0%	(1-2) 5 37.5%	(1-6) 4 50.0%
C. Rebellious Behavior	(2-14) 5 37.5%	(1-8) 4 50.0%	(4) 1 87.5%	(9) 1 87.5%
D. Untrustworthy Behavior	(6) 1 87.5%	(1) 1 87.5%	(1) 1 87.5%	(6) 1 87.5%
E. Withdrawal	(1-8) 7 12.5%	(8-13) 3 62.5%	(1-4) 2 75.0%	(1-3) 3 62.5%
F. Stereotyped Behavior and Odd Mannerisms	(2-10) 5 37.5%	(2-12) 3 62.5%	(1) 1 87.5%	(2) 1 87.5%
G. Inappropriate Interpersonal Manners	(1-10) 4 50.0%	(3-8) 2 75.0%	(2) 1 87.5%	(3) 1 87.5%
H. Inappropriate Vocal Habits	(2) 1 87.5%	(2-6) 2 75.0%	(1) 1 87.5%	(4) 2 75.0%
I. Unacceptable or Eccentric Habits	(1-10) 5 37.5%	(3-4) 2 75.0%	-	(2) 1 87.5%
J. Self-Abusive Behavior	(1-2) 4 50.0%	-	-	(1) 1 87.5%
K. Hyperactive Tendencies	(2-4) 3 62.5%	(6-8) 2 75.0%	(2) 1 87.5%	(2) 1 87.5%
L. Sexually Aberrant Behavior	(2) 1 87.5%	(8) 1 87.5%	-	(2) 1 87.5%
M. Psychological Disturbances	(1-12) 6 25.0%	(5-11) 2 75.0%	(1-5) 2 75.0%	(1-34) 3 62.5%
N. Use of Medications	(2-4) 2 75.0%	(4) 1 87.5%	(1) 1 87.5%	(2-4) 3 62.5%

[a] Number of individuals who received the score of 1 or higher.
[b] Percentage of those who received zero score.
[c] All individuals within the cell received zero score.

TABLE 12

RANGE OF PART II DOMAIN SCORES - INSTITUTIONAL FEMALES AT MILD-MODERATE LEVEL

Domain	Age Ranges (5-8) yrs.	(9-12) yrs.	(13-16) yrs.	(17-20) yrs.
A. Violent and Destructive Behavior	(1-4) 4[a] 50.0%	(2-26) 7 12.5%	(6-13) 2 75.0%	(13-22) 3 62.5%
B. Antisocial Behavior	(2-10) 5 37.5%[b]	(6-24) 7 12.5%	(4-52) 4 50.0%	(2-33) 4 50.0%
C. Rebellious Behavior	(1-12) 3 62.5%	(1-18) 6 25.0%	(2-14) 3 62.5%	(1-18) 5 37.5%
D. Untrustworthy Behavior	(3-10) 4 50.0%	(2-10) 4 50.0%	(2-14) 3 62.5%	(6-16) 3 62.5%
E. Withdrawal	(1-2) 2 75.0%	(2-5) 1 87.5%	(1-2) 4 50.0%	(3-6) 3 62.5%
F. Stereotyped Behavior and Odd Mannerisma	(1-2) 3 62.5%	(2) 1 87.5%	(6) 1 87.5%	(2) 1 87.5%
G. Inappropriate Interpersonal Manners	(2) 1 87.5%	(1-11) 4 50.0%	(2-9) 3 62.5%	(1-3) 3 62.5%
H. Inappropriate Vocal Habits	(2) 2 75.0%	(2) 3 62.5%	(1-6) 4 50.0%	(2) 3 62.5%
I. Unacceptable or Eccentric Habits	(1-4) 4 50.0%	(6-9) 2 75.0%	(1-3) 3 62.5%	(6) 1 87.5%
J. Self-Abusive Behavior	- [c]	(6) 1 87.5%	-	(1) 1 87.5%
K. Hyperactive Tendencies	(2-8) 3 62.5%	(1-8) 6 25.0%	(4-6) 2 75.0%	(2-4) 2 75.0%
L. Sexually Aberrant Behavior	(1-2) 2 75.0%	(2-6) 2 75.0%	(1-7) 4 50.0%	(2-5) 2 75.0%
M. Psychologioal Disturbances	(1-6) 6 25.0%	(4-24) 7 12.5%	(1-12) 5 37.5%	(4-32) 4 50.0%
N. Use of Medications	(2) 1 87.5%	(2-4) 5 37.5%	(1-2) 4 50.0%	(1-4) 3 62.5%

[a] Number of individuals who received the socre of 1 or higher.
[b] Percentage of those who received zero score.
[c] All individuals within the cell received zero score.

The results of the chi square performed on the badge system and Part I-II domain scores are presented in Tables 13 and 14. One table in Part I and two tables in Part II could not be analyzed with the chi-square. The following chi squares were derived: independent function (1.738, $p < .10$), physical development (6.030, $p < .025$), economic activity (17.067, $p < .001$), number and time concept (9.724, $p < .005$), occupation domestic (6.061, $p < .025$), occupation general (1.034, $p < .50$), self-direction (4.642, $p < .05$), responsibility (0.689, $p < .50$), socialization (6.411, $p < .025$). Comparison within Part II yielded twelve of fourteen significant relationships: violent and destructive behavior (1.141, $p < .50$), antisocial behavior (1.392, $p < .25$), rebellious behavior (1.392, $p < .25$), untrustworthy behavior (1.392, $p < .24$), withdrawal behavior (0.103, $p < .75$), stereotyped behavior and odd mannerisms (0.101, $p < .75$), inappropriate interpersonal manners (0.101, $p < .75$), inappropriate vocal habits (0.101, $p < .75$), self-abusive behavior (1.141, $p < .50$), sexually aberrant behavior (8.291, $p < .005$), psychological disturbance (4.045, $p < .05$), and use of medication (0.086, $p < .90$).

The results of Part I chi square analysis yielded six statistically significant comparisons: physical development, economic activity, number and time concept, occupation domestic, self-direction, and socialization. Results from Part II chisquare analysis yielded two statistically significant comparisons: sexually aberrant behavior and psychological disturbance. It appeared from these results that the ratings of performance which led to giving a specific badge was dependent upon certain aspects of a resident's behavior. For example, it was suggested here that economic activity and sexually aberrant behavior were major dimensions in

TABLE 13

NUMBER OF RESIDENTS IN PART I DOMAIN SCALES
WITH HIGH AND LOW BADGES

Domains		High Badge	Low Badge
Independent Functioning	High	15	13
	Low	3	9
Physical Development	High	17	12
	Low	1	10
Economic Activity	High	13	1
	Low	5	21
Language Development	High	14	16
	Low	4	6
Number and Time Concept	High	12	3
	Low	6	19
Occupation Domestic	High	11	4
	Low	7	18
Occupation General	High	12	10
	Low	6	12
Self-Direction	High	16	13
	Low	2	9
Responsibility	High	8	1
	Low	10	21
Socialization	High	16	10
	Low	2	12

df = 1

TABLE 14

NUMBER OF RESIDENTS IN PART II DOMAIN SCALES
WITH HIGH AND LOW BADGES

Domains		High Badge	Low Badge
Violent & Destructive Behavior	High	1	5
	Low	17	17
Antisocial Behavior	High	2	7
	Low	16	15
Rebellious Behavior	High	2	7
	Low	16	15
Untrustworthy Behavior	High	2	7
	Low	16	15
Withdrawal Behavior	High	4	7
	Low	14	15
Stereotyped Behavior & Odd Mannerisms	High	4	4
	Low	14	18
Inappropriate Interpersonal Manners	High	1	3
	Low	17	19
Inappropriate Vocal Habits	High	2	2
	Low	16	20
Unacceptable or Eccentric Habits	High	3	2
	Low	15	20
Self-Abusive Behavior	High	1	5
	Low	17	17
Hyperactive Tendencies	High	4	4
	Low	14	18
Sexually Aberrant Behavior	High	2	9
	Low	16	13
Psychological Distrubances	High	2	10
	Low	16	12
Use of Medication	High	3	4
	Low	15	18

df = 1

the staff's selection of the appropriate badge.

There were limitations to the use of the badge system: lack of clear performance criteria for the selection of one badge over another; lack of consistency among those charged with selecting the badges; and not every member of the sample was rated on the badge system. Thus the sample size was considerably reduced. Each of these contributed to a lack of precision of the badge system. The lack of precision may be an explanation for the low number of significant chi squares. An alternative explanation of these findings was that, indeed, little relationship existed between the measures of the Adaptive Behavior Scales and employee ratings of a child's performance on the badge system.

The institution's limited number of personnel made it impossible to determine a level of rater reliability with the administration of the Adaptive Behavior Scales. However, Table 15 presents certain information collected on those who administered the Scales. It is apparent that the great majority of those who care for, train, and educate the retarded child are female. This institutional fact likely affects not only the ratings of residents but the development of their abilities as well.

TABLE 15

DESCRIPTION OF RATERS

Age		Job Classification	
over 60 = 12	Sex	Charge Attendant	50.8%
56 - 60 = 7	Male 9.5%	Attendant	42.8%
51 - 55 = 8	Female 90.5%	Nurse	6.4%
46 - 50 = 10	Education		
41 - 45 = 11	2 yrs. college 9.5%		
36 - 40 = 3	High School 60.5%		
31 - 35 = 5	Elementary School 30.0%		
below 30 = 7			
N = 63			

CHAPTER IV

DISCUSSION

Two hypotheses were advanced in this research. The first hypothesis indicated that Part I domain scores from the Adaptive Behavior Scales and levels of intellect as measured by the Stanford-Binet, Form L-M, would exhibit a clear positive correlation. That is, as intellectual levels increased from profound to severe to mild-moderate, the assessed level of the individual's skills and habits would increase in a corresponding manner. This hypothesis was supported to a significant degree for both males and females. Nine out of ten scales from Part I demonstrated an increase across the three levels; their significance ranged from $p < .10$ to $p < .01$. From these findings it appears that the sole adaptive function that was not in some way indicated by a measure of intellectual quotient was socialization. Perhaps of greatest importance was the finding that these domains increase but at different levels of significance from one another. These differential validity coefficients make it quite precarious to rely upon any given I.Q. as an accurate description of any given measure of adaptive behavior.

The second hypothesis indicated that Part II domain scores from the Adaptive Behavior Scales and levels of intellect as measured by the Stanford-Binet, Form L-M, would exhibit some systematic corre-

lation. That is, as measured intellect increased throughout the three levels of retardation, the assessed level of the individual's maladaptive behavior would exhibit some systematic change. These hypotheses were not supported by the balance of Part II domain scores. Significant validity coefficients were found in five or fourteen scales. Increases in the degree of maladaptive behavior were demonstrated in the areas of rebellion, psychological disturbance, antisocial behavior, and untrustworthy behavior. Stereotyped behavior and odd mannerisms displayed an inverse relationship to measured intellect. That is, the higher the I.Q., the less likely the resident was to exhibit problems in this adaptive function. Of greatest importance, this findings disputed the contention that a measured I.Q. is sufficient to describe the range of performance of the resident. Nine of the domains in Part II did not correspond systematically with I.Q. and were, therefore, not adequately covered by its assessment. In addition to this lack of coverage, those scales which did respond systematically, like those in Part I, had differential levels of significance which range from $p < .10$ to $p < .01$.

Results from the chi-square analysis on the badge system and the Adaptive Behavior Scales suggested that only certain components of adaptive behavior were related to the badge system. The number of statistically significant chi squares evidenced dramatized the need for caution in the use of the Adaptive Behavior Scales. In addition to the absence of comparison between these separate rating systems, adequate standardization of the Adaptive Behavior Scales has not been completed.

The Adaptive Behavior Scales could be standardized on the total population of institutionalized retardates in Oklahoma. This implimen-

tation could be done within the context of research. For example, the sample size could be enlarged initially to include fifty per cent of each of the three institutionalized populations in the state. Using the Scales for administrative decisions concerning eligibility would be withheld until its completion.

The badge system has been discussed as the evolution within this institution of a means of tapping the degree to which a resident adapted to the prevailing social conditions. This marked the importance of understanding Mercer's social system perspective. The badge held by the resident may be viewed as, in part, the result of an interpersonal process in which one individual defined the behavior of another as deviant because of existing values within that social system. The badge he held reflected not only the one evaluated but the norms of the ones who did the evaluation. A black badge may be handed to the child not in recognition of his degree of inherent deviation, but as a sign of his lack of adherence to the social environment of which he was a part.

Tests of measured intellect and scales of adaptive behavior are two different aspects of a more general intelligence. These aspects are not entirely independent of one another by any means. However, they do seem to tap different kinds of resources which aid the individual in different ways depending upon the impinging environment in which he finds himself. The different environmental pressures which externally impinge upon the individual were dramatically different for the woman who applied for assistance and the resident of the institution. For the woman, it was imperative that she accept and adapt in such a way that she could make money to feed her children and herself. For the resident, it would

seem imperative that he adapt behaviors which allowed him access to privileges provided within the institution.

Beyond the advanced hypothesis, the data were collected such that a series of validity coefficients were calculated describing the relationship of Part I domain scores to the four age groupings. Overall results indicated that an increasing number of significant validity coefficients appeared from lower to higher levels of retardation: the profound level, three; severe level, six; and the mild-moderate level, eight. This finding indicated that despite the age level of the resident, the extent of possible systematic relationship between I.Q. and independent skills and habits increased as measured intellect approaches those units referred to as average intelligence. This analysis yielded additional understanding to the first hypothesis. The relationship between I.Q. and Part I domain scores was not greatly contributed by an increasing age of the male or female resident. Their possible correlation was more realistically attributed to overall increases in capacities and abilities.

As noted in the results section, Part II domain scores were not ameneable to such an analysis. The resultant ranges did, however, contribute considerably to the view of certain maladaptive problems evidenced within this institution. Findings from hypothesis two demonstrated the possible increase in kind and frequency of certain problems as measured intellect approached average intelligence. Replent within the literature of institutional existence was the contention that advances gained in the areas of training, education, and socialization are heavily weighted against by the seemingly inherent effects of the institution which produce passivity, compliance, and meager social ambition. It

may, therefore, be proposed that evidence of rebellion, psychological disturbance, antisocial behavior, and untrustworthy behavior might be in part the subtle signs of conflict between individualism and the rules of any institution. A note of some sadness may be cited in remembering that an inverse relationship was found on the stereotyped behavior and odd mannerisms scales - perhaps the individual was losing. Reference to Tables 7-12 enable the reader to determine the expected range of scores on these scales for male or female residents. Knowledge of such expectancies increases the information available to those in charge of planning therapeutic programming or placing individuals within programs. There was no intent to describe the institution as the sole reason why these maladaptions exist, or persist, only to point out that the conventional setting of the institution seems to do little to alleviate these problems.

From a theoretical standpoint this research has given additional credence to the concept of "specific abilities". As noted earlier, the traditional measures of intelligence, especially the Stanford-Binet, were heavily loaded with tests expressing the general function. This function was global and does indicate potential over a wide area of skills. However, the tests of measured intellect did not in every way describe the function of adaptive behavior. As reported from Part I, the rise in intelligence quotient does indicate a rise in abilities specific to independent skills and habits. The rise in intelligence quotients are not as efficient in predicting those abilities specific to maladaption. This inefficiency of prediction marked a certain degree of independency of adaptive behavior and demonstrated the necessity of using such scales as

a description of the resident's behavior. It would be difficult to believe that any traditional measure of I.Q. would ever have described the behavior problems of the institutionalized retardate as accurately as the Part II domain scales.

Based upon findings from this research, certain suggestions could be made to the institutional setting. Generally, those in the field of mental retardation must begin to accept that the phrase "social system perspective" has bearing on the institutions for the retarded, that the denial of this has produced environmental conditions not favorable to the care-taking or development of the retarded child's capacities. More specifically, the burden of having to adapt to a set of values with no real recourse in the event those values don't fit, has produced a passiveness which can not be viewed as desirable. A degree of passiveness does seem to aid the resident in acquiring badges. In recognition of the social system perspective, certain structural changes might be made within the institution, changes which make everyone aware of the interpersonal process of evaluation which exists. In general, the community setting should mean more than 30-100 residents living under one roof.

It was an educated guess to say that approximately 3 per cent of those within an institutionalized setting were more or less capable of living in the community. These people received some form of education and at about age eighteen were released into an environment they were, in fact, prepared to deal with. This leaves, for the institution in question, about eight hundred residents who required some form of care. Approximately 200 of those people could function adequately within a sheltered setting, perhaps a sheltered workshop. Examples of such work-

shops are the Good Will Industries and the Tulsa Educational Center. The latter acquires contracts with industries whereby residents perform menial labor tasks which are essential to the industry, yet difficult to hire personnel for on a continuing basis. After handling this 8 hours of gainful employment, these 200 people return to the institution where the other 16 hours are carried on. At the institution these individuals should live on the basis of private and semi-private rooms. This physical living situation increases the sense of personal space allowable to each. In doing so, it tempts autonomy, integrity, and the general adaptive function of socialization. It was remembered that socialization did not correlate with measured intellect in the present research. States such as Texas and Arizona are now engaged in such programs; they are referred to as regional centers and handle between 200 and 300 residents.

The remaining 600 people are principally those within the profound and severe ranges of retardation. The move here should be to rid the institution of ward settings which include 30-40 ranging in intellect from < 20 to 49. These individuals are now almost totally deprived of a sense of personal space. States such as Colorado have a "house parent" program for dealing with this problem. One or two adults become responsible for the supervision of from six to eight children. Hissom Center in Tulsa, Oklahoma, has met this need with their present facilities by partitioning buildings such that a few adults supervise approximately fifteen people at a time. It was possible under these circumstances for each bed to have a cubicle of space and a sense of right to that space.

Obviously, the author is recommending that where problem solving

starts is with the physical plant of the institution, not the people or the programs available. This may seem like the last priority or the least directly relevant to the Adaptive Behavior Scales. However, the ecology of the institutional setting starts with the sheer and simple presence of its physical state. That rebellion, antisocial behavior, psychological disturbance, and untrustworthy behavior begin to reduce themselves when people have an appreciation for their own individuality. An individuality which starts when they recognize that some area of living, not objects of living, is truthfully privately theirs. The data suggested this fact when positive correlations were found to exist between increased levels of measured intellect and the above maladaptive behaviors. It would seem that as general capacities and abilities increased, behavior problems developed where no true recourse was allowed. The resident had no proof that any of his efforts were producing anything that was tangibly his. It is suggested here that as measured intellect increased the need or sensitivity to privacy increased. One need only recall a brief history of his own country to visualize the strivings made on the part of men and women for rights to land ownership to see the impact in such a goal. Passivity, compliance, and meager social ambition may be seen as results, not of failure to reach such goals, but as consequences of discovering that those goals are not really within the institution at all.

The Adaptive Behavior Scales gave the appearance of adding a good deal of useful information to any description of those being assessed for eligibility for services to the retarded. They describe rather clearly the positive as well as the negative aspects of the indi-

vidual in question. The information gleaned from such testing is in part totally new and readily useable to those charged with institutionalization, program planning, housing, and disciplining. Moreover, the Scales challenged the institution to experiment with such new and more effective methods of caring for and educating the people who were placed there.

Filmed as received

without page(s) 60.

UNIVERSITY MICROFILMS.

comparing such findings was that the Adaptive Behavior Scales seem to offer new and possible valuable information concerning the total assessment of retarded functioning. This value includes initial assessment, placement, program planning, and the sorts of living environments conducive to increasing an adaptive function.

BIBLIOGRAPHY

1. Achenbach, T. M. "Comparison of Stanford-Binet Performance of Non-retarded and Retarded Persons Matched for M.A. and Sex." Amer. Journ. Mental Deficiency, 74:488-494 (1970).

2. Alexander, W. P. "Intelligence, Concrete and Abstract." Brit. Journ. of Psy., 17 (1935).

3. Balthazar, F. E., Roseen, D. L., and English, G. E. The Central Wisconsin Colony Scales of Adaptive Behavior: Ambulant Battery. Madison, Wisconsin: Department of Health and Social Services, 1968.

4. Barker, R. G., Wright, B. A., Meyerson, L., and Gonick, M. R. Adjustment to Physical Handicaps and Illness. New York: Social Research Council, 1953.

5. Baumeister, A. A. "Use of the WISC with Mental Retardates: Overview." Amer. Journ. Mental Deficiency, 69:183-194 (1964).

6. Bell, D. "The Postindustrial Society," in Eli Ginzburg (Ed.) Technology and Social Change. New York: Columbia University Press, 1964.

7. Berreman, J. V. "Some Implications of Research in the Social Psychology of Physical Disability." Exceptional Children, 20: 347-350.

8. Clark, A. D. B., Clark, A. M., and Reiman, S. "Cognitive and Social Changes in the Feebleminded: Three Further Studies." Brit. Journ. of Psy., 49:144-157 (1958).

9. Conklin, R. C. and Dockrell, W. B. "The Predictive Validity and Stability of WISC Scores over a Four-Year Period." Psychology in the Schools, 4:263-266 (1967).

10. Currie, C. "Evaluating Function of Mentally Retarded Children through the Use of Toys and Play Activities." Amer. Journ. Occup. Therapy, 23:35-42 (1969).

11. Doll, E. A. Vineland Social Maturity Scale: Manual. Circle Pines, Minnesota: American Guidance Services, 1947.

12. Erickson, M. T., Johnson, N. M., and Campbell, F. A. "Relationships among Scores on Infant Tests for Children with Developmental Problems." Amer. Journ. Mental Deficiency, 75:102-104 (1970).

13. Terman, L. M. and Merrill, M. A. Stanford-Binet Intelligence Scales: Manual for the Third Revision Form L-M. Boston: Houghton Mifflin, 1960.

14. Gardner, J. M. and Giampa, F. L. "Utility of Three Behavioral Indices for Studying Severely and Profoundly Retarded Children." Amer. Journ. Mental Deficiency, 76:352-356 (1971).

15. Glasser, A. J. and Zimmerman, I. L. Clinical Interpretation of the Wechsler Intelligence Scale for Children. New York: Grune and Stratton, 1967.

16. Gratton, L. "Object Concept and Object Relations in Childhoos Psychosis: A Pilot Study." Canadian Psychiatric Assoc. Journ., 16: 347-354 (1971).

17. Gunsberg, H. C. "Vocational and Social Rehabilitation of the Feebleminded," in A. M. and A. D. B. Clark (Eds.) Mental Deficiency: The Changing Outlook. Glencoe, Illinois: The Free Press, 1958, 334-364.

18. Halpern, A. S. and Equinozzi, A. M. "Verbal Expressivity as an Index of Adaptive Behavior." Amer. Journ. Mental Deficiency, 74:180-186 (1969).

19. Heber, R. A Manual on Terminology and Classification in Mental Retardation (2nd Edition). American Journal of Mental Deficiency, 1961 (Monogr. Suppl.), pp. 2-3.

20. Jordan, J. E. Attitudes toward Education and Physically Disabled Persons in Eleven Nations. East Lansing, Michigan: Latin American Studies Center, Michigan State University, 1968.

21. Kanner, L. A History of the Care and Study of the Mentally Retarded. Springfield, Illinois: Charles C. Thomas, 1964.

22. Kanner, L. "Itard, Sequin, Howe--Three Pioneers in the Education of Retarded Children." Amer. Journ. Mental Deficiency, 65:2-10 (1960).

23. Leland, H., Shellhaus, M., Nihira, K., and Foster, R. "Adaptive Behavior: A New Dimension in the Classification of the Mentally Retarded." Mentally Retarded Observer, 4:359-387 (1967).

24. Leland, H., Nihira, K., Foster, R., Shellhaus, M., and Kazin, E. "Conference on Measurement of Adaptive Behavior," in K. Nihira, R. Foster, M. Shellhaus, and H. Leland (Eds.) Manual: Adaptive Behavior Scale. New York: American Association on Mental Deficiency, 1969.

25. McCulloch, T. L., Reswick, J., and Weissman, S. "Studies of Word Learning in Mental Defectives: II. Relation to Scores on Digit Repetition, the Stanford-Binet, M., and the WISC Verbal Scale." Amer. Journ. Mental Deficiency, 60:140-143 (1955).

26. Mercer, J. R. "Social System Perspective and Clinical Perspective: Frames of Reference for Understanding Career Patterns of Persons Labelled as Mentally Retarded." Amer. Journ. Mental Deficiency, 75:268 (1965).

27. Nihira, K., Foster, R., Shellhaus, M., and Leland, H. Manual: Adaptive Behavior Scale. New York: American Association on Mental Deficiency, 1969.

28. Porteus, S. D. Porteus Maze Tests: Fifty Years Application. Palo Alto, California: Pacific Books, 1965.

29. Roszak, T. The Making of a Counter Culture. Garden City, New York: Doubleday and Co., Inc., 1969.

30. Silverstein, A. B. "Psychological Testing Practices in State Institutions for the Mentally Retarded." Amer. Journ. Mental Deficiency, 68:440-445 (1963).

31. Silverstein, A. B. "Deviation Social Quotients for the Vineland Social Maturity Scale." Amer. Jour. Mental Deficiency, 76:348-351 (1971).

32. Spearman, C. The Abilities of Man. New York: Macmillan, 1927.

33. Susser, M. Community Psychiatry: Epidemiological and Social Themes. New York: Random House, 1968, 273-352.

34. Tizard, J. Community Services for the Mentally Handicapped. London: Oxford University Press, 1964.

35. Warren, S. "A Psychological Evaluation of the Mentally Retarded." Pediatric Clinician in North America, 15:943-956 (1968).

36. Wechsler, D. The Measurement of Adult Intelligence. Baltimore: Williams and Williams Co., 1944.

37. Wright, B. A. Physical Disability--A Psychological Approach. New York: Harper, 1960.

THE GRADUATE COLLEGE OF THE UNIVERSITY OF OKLAHOMA

ANNOUNCES THE FINAL EXAMINATION OF

ROBERT E. ARNOLD, JR.

B.A., Phillips University, 1968
M.S., Oklahoma State University, 1972

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Tuesday, July 3, 1973, 1:00 to 3:00 p.m.,
Conference Room, 618 N.E. 15th Street

COMMITTEE IN CHARGE:

Alan P. Chesney, Ph.D., Chairman
Alan S. Grubb, Ph.D.
Robert W. Ketner, Ph.D.
Wilson D. Steen, Ph.D.
Joseph E. Trimble, Ph.D.

OUTLINE OF STUDIES

MAJOR CONCENTRATION: Human Ecology

Ecology of Health, Principles of Preventive Psychiatry, Ecology of Mental Disorders, and Research Methods in Human Ecology.

OTHERS:

Social Psychology in Public Health.

BIOGRAPHY:

Born in Enid, Oklahoma, July 3, 1946. Graduated from Enid High School, Enid, Oklahoma, 1964. Received B.A. from Phillips University, 1968. Received M.S. from Oklahoma State University, 1972. From 1969 to 1971, Graduate Teaching Assistant, Department of Psychology, Oklahoma State University. Department of Human Ecology, College of Health, University of Oklahoma Health Sciences Center, 1971 to present. From 1973 to present, Associate to Dr. Frank L. Adelman, Psychiatrist, Parkview Medical Clinic, Enid, Oklahoma.

MEMBERSHIPS:

Phi Kappa Phi, National Scholastic Honor Society.

DISSERTATION

ADAPTIVE BEHAVIOR SCALES AS THEY RELATE TO LEVELS OF MEASURED INTELLECT WITHIN A STATE SCHOOL SITUATION

The relationship between the Stanford-Binet, Form L-M, and the Adaptive Behavior Scales was examined within an institution for the mentally retarded. It was hypothesized that: 1) scores on the Stanford-Binet, Form L-M, and scores from Part I of the Adaptive Behavior Scales would demonstrate a positive correlation, and 2) scores on the Stanford-Binet, Form L-M, and scores from Part II of the Adaptive Behavior Scales would demonstrate a degree of correlation.

The subject population consisted of 192 residents. The population considered was limited to those between the ages of 6 and 20 years. They were stratified by age, sex, and intellectual quotient. Within the age classification, there were four categories in years: 5 to 8; 9 to 12; 13 to 16; and 17 to 20. Within the sex classification, there were two categories: 96 males; and 96 females. The intellectual quotient included three ranges of Stanford-Binet scaled scores: profound (0-25); severe (26-49); and mild-moderate (50-75). Each resident received a recent evaluation of his intellectual quotient and was evaluated through the Adaptive Behavior Scales using an informate as rater. To support the contention that the Adaptive Behavior Scales were a measure of adaptive performance, a sub-sample of 40 residents were used to compare their adaptive behavior domain scores and the resident's placement on a badge system in use by the institution.

Scores on the Stanford-Binet, Form L-M, and scores from Part I of the Adaptive Behavior Scales yielded nine of ten significant comparisons. Validity coefficients ranged from + .73 to + .92. Their significance ranged from $p < .10$ to $p < .01$. Scores on the Stanford-Binet, Form L-M, and Part II of the Adaptive Behavior Scales yielded five significant validity coefficients ranging from - .784 to + .955. Their significance ranged from $p < .10$ to $p < .01$. The tests of association between adaptive behavior domain scores and the badge system were inconclusive.

Justification exists for the interpretation that a comparison of the Stanford-Binet, Form L-M, and the Adaptive Behavior Scales have led to both similarities and differences between the two instruments. The lack of correlation between Part II scales and intellectual quotients point to possibly valuable information on the resident not adequately covered by the traditional tests of measured intellect. This information aids in assessment, placement, program planning, and type of environment for the mentally retarded child.