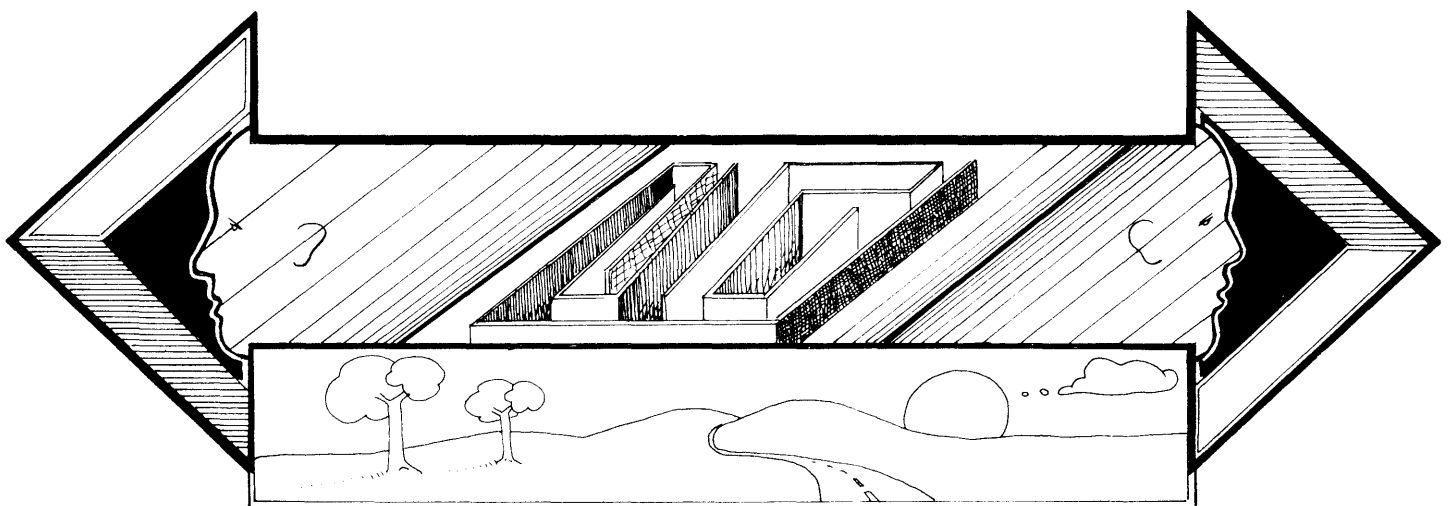


DEVELOPMENTAL DISABILITIES  
PROJECT ON RESIDENTIAL  
SERVICES AND COMMUNITY  
ADJUSTMENT

Project Report No. 15

ENVIRONMENTAL  
CHARACTERISTICS  
OF RESIDENTIAL  
FACILITIES FOR  
MENTALLY  
RETARDED PEOPLE

Lisa L. Rotegard  
Robert H. Bruininks  
Bradley K. Hill



The Developmental Disabilities Project on Residential Services and Community Adjustment is conducting a nationwide study of mentally retarded persons in residential programs. Information is being collected on (a) the administrative and general characteristics of residential programs for mentally retarded individuals, (b) the behavioral and physical characteristics of mentally retarded people in residential programs, (c) factors related to admission of former residents of state residential facilities to community residential settings, and (d) community adjustment.

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ON RESIDENTIAL SERVICES AND  
COMMUNITY ADJUSTMENT

Project Report No. 15

# Environmental Characteristics of Residential Facilities for Mentally Retarded People

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## ABSTRACT

The movement toward deinstitutionalization of residential living arrangements and the philosophies of normalization and mainstreaming have promoted an interest in the relationship between environmental variables and the behavior of mentally retarded people. Attendant to this goal, the Developmental Disabilities Project at the University of Minnesota assessed characteristics of the treatment and physical environments of a national sample of 75 public and 161 community residential facilities selected to be representative in size and geographic location of all such facilities in the United States.

A revision of Jackson's Characteristics of the Treatment Environment (1969) was used to measure levels of autonomy and activity afforded to residents in the facilities chosen for study. Community residential facilities (CRFs) were reported to encourage more client autonomy than did public residential facilities (PRFs). A one-way analysis of variance indicated that these differences were statistically significant ( $p < .001$ ). CRFs also promoted more resident activity than did PRFs ( $p < .01$ ).

The characteristics of facilities' physical environments were assessed on a five-item measure that rated the dining room, living room, bedroom, bathroom, and yard. Scores ranged from one to five--one denoting a very homelike environment and five reflecting a less homelike environment. An average score was derived for each facility. Data from this portion of the analysis indicated that CRFs (mean=2.3) were generally

more homelike than PRFs (mean=3.53). A one-way analysis of variance showed this difference to be statistically significant ( $p < .001$ ).

Environmental ratings were compared in four size categories of CRFs to determine whether significant environmental differences existed between large and small CRFs. Physical environments were significantly less homelike in larger facilities ( $p < .0001$ ). Even the largest CRFs (64 or more residents), however, were more homelike than PRFs ( $t(104) = -4.12$ ,  $p < .0001$ ). CRFs with six to 15 residents showed the most positive total score on the Characteristics of the Treatment Environment (CTE), followed by CRFs with one to five residents, 16 to 64 residents, and 64 or more residents.

Just as an early mail questionnaire survey had indicated wide variations in facility size and available services (Bruininks, Hauber, & Kudla, 1980), this survey showed that the physical and psychosocial environments within facilities varied to a considerable degree. Although this study was primarily descriptive, further analysis of all data from the national survey may reveal relationships between environmental characteristics of residential facilities and one or more other variables.

## ACKNOWLEDGMENTS

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## CHAPTER I

### Introduction

There is abundant evidence that many of the behavioral differences found in test performance are dependent upon differences in the environments in which individuals have lived as well as upon inherent differences in individuals themselves. In other words, there is a growing belief that environments have predictable social and psychological effects on individuals. This belief has fostered the demise of trait theories of personality, which emphasize the dominant and unchangeable influence of genes on the limits of an individual's behavior. What has developed concomitantly is the refinement of interactive theories which stress the interdependence between behavior and environment.

Kurt Lewin and Henry Murray have been most influential in promoting considerations of the environment in understanding human behavior and development. However, there are few theoretical approaches that fully conceptualize a broad range of environmental variables and systematically relate them to behavior. Moos and Insel (1974), in an historical overview of systems for assessment and classification of human environments, reviewed six methodologies of environmental study: 1) ecological variables, 2) behavioral settings, 3) organizational structure, 4) average background characteristics of individuals, 5) psychosocial characteristics, and 6) organizational climate.

Wohlwill (1970) described three forms of the relationship between behavior and environment from an interactionist's point of view. It was his contention that behavior necessarily occurred in particular environmental contexts which imposed major constraints on the range of behaviors permitted in them. Environmental contexts frequently served to determine particular aspects or patterns of behavior. This relationship can be understood in the study of behavior settings which have been defined as ecological environments which are shared by several persons (Gump, 1971; Wicker, 1972). Each setting has an identity and viability of its own and can be identified in terms of intrinsic structural and dynamic properties. The concept of behavioral settings encourages study of how inhabitants, en masse, are actually interacting with their environments.

The clearest finding derived from behavior setting analysis was from research done in a small town by Barker and Schoggen (1973). They found more of the behavioral settings in the town were open to people as they grew up. The behavior settings became part of the territory over which or within which a person had some control. When the number of positions of responsibility in a behavior setting were held constant and the population was great, there were less opportunities for any one individual to gain a position of responsibility or control.

Institutions for the developmentally disabled do not, as a rule, allow for the expansion of behavior roles. Institutions may typify overmanned ecological environments which deprive persons of responsible participation. The current movement towards normalization is probably based in part on an intuitive understanding that the ecological

environments provided for residents of large institutions are likely to be overmanned ecologies carried to an extreme.

The second type of relationship between behavior and environment postulated by Wohlwill (1970) was that certain qualities associated with a particular environment may have a generalized effect on behavior and personality. This area of study includes the effects of institution-alization, crowding and sensory deprivation on individuals. Mentally retarded people, while having the same needs for variety and control of their physical space as other people do, may be even more affected by the physical environment than are non-handicapped people who possess greater social skills to alter situations.

In a third type of relationship, behavior was seen as being instigated by and directed at particular attributes and characteristics of the physical environment. This relationship can be understood in the study of the motivational force of environmental stimulation. For example, people go to a favorite part of a room or house to engage in certain feelings or activities. Approach-avoidance and behavioral adaptation are other responses which may be determined by environmental attributes. The relationship of behavior to the physical environment, as postulated by Wohlwill, suggests a few questions: How does the physical environment affect the psychosocial environment of institutions and community residential facilities? What kind of behaviors result? The answers to these questions may be too complicated to predict from available information. However, part of the answer, as it applies to facilities for mentally retarded people, may help to explain the development of the normalization philosophy.

Normalization is a heuristic concept for considering the interaction of environmental characteristics with the behavior of mentally retarded people. In its broadest sense, normalization is the "utilization of means that are as culturally normative as possible in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible" (Wolfensberger, 1972, p. 28). In applying this principle to mentally retarded people, both opportunity for independence in the physical environment and special assistance with social skills must be offered so that individuals learn to use the environment to satisfy their needs and develop certain coping skills. Deviant behavior among the mentally retarded may be related more to restrictive environments and lack of special assistance than to organic problems. Normalization affirms the importance of normal cultural roles, expectations, and daily rhythms; developmental as opposed to medical expectations; integration rather than segregation of activities and services; continuity of activities and services with those of the mainstream of society when integration is precluded by circumstance or handicaps; separation of handicapped individuals and their services from one another, and smallness of served congregations (Wolfensberger, 1972).

One result of normalization has been the removal of mentally retarded persons from large institutions, a process labeled deinstitutionalization. Smaller facilities with more normal physical designs are assumed to provide more homelike environments by virtue of their proximity to services and neighbors. Although deinstitutionalization has been a national policy for over ten years, it has not yet been

wholeheartedly accepted by all concerned. Perhaps this is reasonable inasmuch as the achievements of community-based facilities have not yet been objectively certified. Many past decisions on the policy of deinstitutionalization have been made with superficial knowledge, deeply felt emotion, moral obligation, or financial necessity. Additional study is needed to establish whether or not habitation and treatment in alternative community settings will actually increase social competence. Community care facilities offer a wide range of physical plants, types of supervision, and methods of care. Just as resident care practices do not necessarily improve in smaller institutions (Balla, 1976; Tizard, 1975), merely removing an individual from a large institution and placing him in a smaller unit does not necessarily assure normalization.

Of major interest in current studies of facilities for the mentally retarded is testing the efficacy of actions already taken. Has deinstitutionalization resulted in more homelike environments? If so, what behavioral outcomes can be shown to vary systematically with more or less homelike environments? More central is the question of which combination of the elements that comprise the total environment is most successful in optimizing each individual's potential? Several factors seem to be significant to the normalization process. These include extrafacility factors such as location, neighborhood characteristics, and available recreational facilities. Intrafacility factors, including the behavioral characteristics of residents, physical plant, layout and condition, and habilitative efforts are also important. They may all interact in a way that produces a particular treatment environment for

each facility. There has been some interest in determining a reliable way to assess the treatment environment of residences for mentally retarded people. The present study attempted to measure characteristics of both the physical environment and the treatment environment in community residential facilities and public institutions. Whereas earlier studies have used various instruments in small samples of facilities, there have been no attempts to provide national descriptive information about environmental characteristics in residences for the mentally retarded.

The purpose of the present study is threefold. First, it is designed to measure and describe the physical environments of a national sample of institutions and community facilities for the mentally retarded. Second, it allows for the description of treatment environments in these facilities as characterized by the levels of autonomy and activity afforded each resident. Finally, the study makes it possible to compare the physical and treatment environments among community residential facilities of various sizes (determined by number of residents).

## CHAPTER II

### Review of Literature

This review explores some of the salient issues involved in measuring treatment environments for mentally retarded people and in describing the major efforts to design, renovate or remodel the environment in an effort to provide normalized surroundings for its inhabitants. Most research on the physical aspects of environments for developmentally disabled people is methodologically unsophisticated, having been based upon vague notions of how to translate normalization into design with few specific desired behavioral outcomes in mind. Over the past twenty years there have been several attempts to determine objective characteristics of treatment milieus. For the most part methodologies have been developed and applied in residences for mentally ill people (Ellsworth, Maroney, Klett, Gordon, & Gunn, 1971; Jackson, 1969; Moos, 1970, 1972; Moos & Houts, 1968; Moos & Insel, 1974; Price & Moos, 1975).

#### Physical Characteristics of the Environment

Architecture and design have recently come to the attention of mental retardation specialists because of the concept of normalization and the importance of homelike living environments. The approach taken in defining architecture and design has been to operationalize aspects of man-built or man-modified settings and relate the resultant variables to human behavior. Researchers have been particularly interested in relationships between human behavior and such architectural features as

the rooms of the buildings in which behavior occurs, the types of housing in which certain behavior occurs, and how the design of institutions may modify attitudes and behavior (Craik, 1970; Dwybad, 1970; Gunzberg & Gunzberg, 1973; Proshansky, Ittelson, & Rivlin, 1970; Sommer, 1969).

Man-built features of the environment have sometimes resulted in overcrowding, lack of sensory stimulation, and other undesirable consequences. In studying arousal and sensory stimulation, Kreger (1971) noted that many problems of severely retarded or behaviorally disturbed individuals result from functional retardation associated with environmental living conditions --conditions which produce more stress than residents are able to cope with. Kreger found bizarre behaviors of institutionalized people to be similar to those of normal individuals who have been sensorily deprived for a short period of time.

Wohlwill (1970) pointed out that a physical environment can serve as a motivating force to an individual. There are three dimensions to this relationship: 1) affective and attitudinal responses to environmental features, 2) approach-avoidance responses to various attributes of the environment, and 3) adaptation to environmental qualities. As a result of his research with institutionalized mentally retarded people, Kahn (1974) suggested that a physical setting can either support or hinder goal-directed activity. If motive for reaching a goal is particularly strong, an individual will adapt the setting or his behavior to fulfill that need. If these options are impossible, as they are for many mentally retarded persons, a stressful situation will develop.

Altman (1975) has suggested that privacy is an important dimension for understanding the environment/behavior relationship. Privacy can be thought of as the central concept and regulatory process by which a person or group makes itself more or less accessible and open to others. Normalized environments in community facilities for retarded people should offer a wide range of spaces to satisfy the residents' and staff's needs. Studies reviewed by Altman (1975, pp. 134-136) have shown that some behaviors (i.e., bedwetting and aggression) may decline once retarded persons are given identifiable territories such as private spaces, sleeping areas, or eating areas.

Crowding can be used to describe social conditions in which privacy mechanisms have not functioned effectively, resulting in an excess of undesirable social contact. Spencer (1974) and James, Spencer, and Hamilton (1975) reported on the immediate effects of improved hospital environments on the behavior of mentally retarded patients in England. Residents were moved from three extremely overcrowded hospitals with inadequate facilities and minimal staffing to a hospital affording more privacy, personal affects, and rehabilitative and remedial activities. All patients improved in behavior after transfer to an improved physical environment.

In a series of experiments, Griffin, Landers, and Patterson (1974a,b) asked whether changes in the behavior of retarded people occur when social density is manipulated. Experimentation was done in a clear space with various numbers of retarded adolescents. Results implied that it was not how much living space was available, but rather how many people

occupied that space and their use of space that was critical. The authors felt that normalization procedures which advocated a more secluded or private living environment were not necessarily producing therapeutic effects because fewer people in a space did not always increase the positive social interactions among them.

Gunzberg (1973) discussed various therapeutic objectives to consider when designing physical environments. He suggested that if the physical environment was to support a rehabilitation program, it must be manipulated from the design stage right through to the actual time of usage to serve a particular training and educational philosophy. He expressed this philosophy as the interaction of three principles: socialization, personalization, and normalization.

In order to personalize a facility, its management would have to select from the wide range of "normal" ways of living those aspects which offered the best opportunities for furthering independence in residents. Gunzberg called personalization the key to creating a suitable physical environment.

Gunzberg defined socialization as the process of acquiring the skills which enable the handicapped person to participate more fully in ordinary life situations. In Gunzberg's scheme, normalization was an active therapeutic action in which the environment was purposely manipulated to achieve defined objectives. Normalization was necessary for socialization. Normalized physical environments would offer residents the chance to learn concrete lessons from the more practical and meaningful experiences found outside of the institutional or abnormal

environment. Gunzberg thought that a therapeutic physical environment could be judged to have been successful only when it had shown that the mentally handicapped person had learned to be himself or herself while fitting in with the requirements of his/her own community.

Gunzberg explained that a normal domestic atmosphere was created by the living habits practiced within it. Nevertheless, these living habits would have a better chance of being adopted naturally if the physical environment itself suggested a normal domestic outlook. Gunzberg prepared a checklist containing 39 steps to normalizing the physical environment that could be used in facilities for mentally retarded people. The checklist was concerned with environmental aspects that were related directly to physical features.

Cleland and Sluyter (1973) proposed a design for an environment to humanize and provide motivating circumstances for residents and employees alike. The design, which aimed at normalizing the ward residence of bedfast retarded individuals, was based on the assumption that traditional ward homogeneity was out of the question for a bedfast population of many ages and functional levels. The residents were all immobile. Cleland and Sluyter capitalized on the positive aspects of immobility as a basis for programming for bedfast patients. The National Aeronautics and Space Administration was consulted to explore the similarities of being an astronaut in space with being a relatively immobile ward patient. The authors' proposal, an exercise in creativity that included ideas such as mirrored ceilings, predicted that employee satisfaction would increase and turnover would decrease by introducing a degree of visual variation to the ward.

Reizenstein and McBride (1977) evaluated the physical environment of a small community-based residential setting for retarded people in order to discover if its design supported normalization. These researchers, an architect and a social scientist, supposed the major physical implication of normalization to be that the retarded should live in homelike environments. The degree of social contact, the degree of activity support, and the symbolic expression of values, goals and preferences were all used as indications of the effectiveness of the physical design in facilitating normalization. Reizenstein and McBride argued that normal social contact implied a continuum of physical spaces which allowed a range of interaction--from being alone to being in a large group. The house studied had no satisfactory intermediate area. Residents had to choose between a large public space or a private sleeping space. Activity support was thought to be important for improving an individual's self image by accomplishing a variety of daily tasks. With the exception of insufficient storage facilities and a few cleaning difficulties, the environment studied allowed a range of normal activity.

The house Reizenstein and McBride studied portrayed three conflicting images. Its symbolic identification for residents was as a home, only. Since the home was unique in many ways, however, it was also seen by other people as a model or showcase. Its third image, and possibly its best descriptor, was as a congregate living facility. Reizenstein and McBride pointed out that systems often physically shape themselves to describe what they wish they were. The message of a

system's spaces must always be tested against one's experiences within the system.

In another study, Levy and McLeod (1977) observed the social interaction patterns of residents and staff in one existing institutional facility and in the same facility redesigned to provide residents an enriched environment. Enrichment was defined as an environment which gave residents the freedom to choose to be part of a large group, a small group or to be alone. This definition is similar to aspects of the operationalized definition of normalization of physical environments used in other studies. Levy and McLeod also provided developmental toys in their enriched environment.

Results from a time sampling observation system indicated that an enriched on-ward environment succeeded in reducing neutral or stereotyped activity, increased purposeful movement, elicited new patterns of space utilization, and created an environment that could support and reinforce learning activities. Systematic observation of the use of space by the lowest functioning residents supported the assumption that as intellect decreases, so does ability to perceive and manipulate the environment. Levy and McLeod concluded that therapeutic and supportive environments for profoundly retarded people must provide both human and nonhuman initiatives. They also stated that institutions should be designed with physically active rather than physically passive environments.

In a highly methodical and in-depth report, Knight, Weitzer, and Zimring (1978) discussed the conclusions of a four-year longitudinal

study of the effects of environmental design on residents of Belchertown State School for the Developmentally Disabled. The project examined a community of residents and staff as they experienced physical design and programmatic changes that occurred during a transfer from traditional open-ward institutional facilities to renovated institutions and community placements.

The study permitted research on the change from a very abnormal environment to one of three more homelike ones. Three designs were used in the renovation: modular, corridor, and suite. The modular-style renovation incorporated four and one-half foot high partitions placed in 30-foot-by-40-foot rooms that had formerly served as dayhalls and sleeping wards. Partitions defined a small lounge and 12 modular units which each included a bed, a desk, and a dresser. The low height and the placement of the partitions offered limited privacy. At best, visual privacy was available when seated or prone. The corridor-style renovation resulted in two large terrazo-floored lounges furnished with couches, televisions, etc. The lounges were flanked with two long corridors, one for men and the other for women. The corridors contained double and single bedrooms with locking doors; each bedroom provided beds and dressers. The suite-style renovation subdivided the dayhalls into three bedrooms, each for two to four persons, surrounding a common lounge area. Bedrooms were furnished with beds, dressers, and chairs. The lounges were carpeted and had televisions, chairs, couches, lamps, and so forth. Experts agreed that the suites were more attractive and homelike than were the corridor-style renovations, and that the modular-style design was the least normal and homelike.

Three questions were asked focusing upon the relationships among the residents, staff, and designed environments. Did the staff and residents use, recognize, and respect personal space? Did staff-resident interactions improve in more normalized, renovated environments? What was the effect of renovation on resident social and solitary behaviors? It was expected that more normalized environments would beneficially affect resident and staff behavior patterns and that some environments would be more effective than others.

The results indicated that the normalization principle, as it relates to physical designs, had limited usefulness in predicting the impacts of renovated environments. A resident's use of newly provided personal or private space did not necessarily follow from its provision, nor did staff and other residents necessarily "keep out" of spaces designed for someone else's increased privacy. These conclusions were based on hundreds of thousands of observations submitted to statistical analysis.

The implementation of modular renovation had little effect on resident and staff behaviors. The suite renovation, felt by most observers to be most homelike and attractive, had less positive impact on resident and staff behavior than the corridor design. Overall, the renovated buildings did encourage staff and residents, even lower functioning residents, to use and respect private/personal spaces.

Some experts have claimed that people labeled "severely and profoundly" retarded are too mentally deficient to respond differently to various environments. Others have suggested that normalized

environments directly engender normal client behavior. Neither view was supported by Knight et al. (1978), who found that even low functioning residents with an average IQ of 20.3 exhibited improved social and solitary behavior in more homelike environments. However, the effects of the homelike environments were primarily mediated by staff responses to the physical settings, and by the extent to which residents were allowed to realize control over their environmental experience.

The role of staff was considered central in the Belchertown renovations. Levy and McLeod, in the previously discussed study, also concluded that the role of staff became increasingly more important as the clients' functioning level decreased. Residents were crucially dependent on direct-care staff, both because of the staff's direct power and because of their importance for training and modeling. If staff did not use the new physical settings for teaching or training, there were no increased positive interactions.

Knight et al. (1978) concluded that one cannot simply postulate a direct influence of environment on resident behavior. Opportunity for control of personal experience was clearly established as essential. Opportunity for control referred to the client's direct control over light, temperature, and noise, and the client's choice of different activities, space, and kinds of social interactions available to him or her. The concept suggested that clients be given a level of control suitable to their needs and suggested appropriate mechanisms for offering that control in various homelike environments. Social elements such as the staff's attitudes determined whether the offered opportunities for control would be used.

Knight et al. (1978) pointed out the need to specify appropriate levels of control in each physical design. Using this approach, an environment would incorporate a physical design based on client needs, staffing patterns, and community values rather than on more traditional guidelines. Rather than try to normalize environments for "the mentally retarded," it was suggested that architectural design should attempt to optimize each individual's environment.

#### Physical Settings and Psychosocial Climates

The design of physical plants for mentally retarded people has traditionally given primary consideration to durability, ease of maintenance, cost, and the building patterns prevalent in comparable facilities (Griffin, Landers, & Patterson, 1974a). The construction of these facilities has been predicated on building codes and voluntary guidelines for which no empirical justification is available (Zeisel, 1970). More recently, with the advent of normalization as a philosophy, physical environments have been designed with normalization in mind. Evidence has shown that within any social system the physical environments will play a significant role. Physical settings may be conceptualized as offering more or less opportunity for users to satisfy their needs and live more normalized lives. A facility's physical characteristics, however, may only be understood when viewed as part of a larger context. Because actors and their relative influence in any specific system may vary, every physical setting can be conceptualized as having a psychosocial character or climate as well.

The following three observational studies attempted to measure aspects of the physical, behavioral, and psychosocial environments in various types of facilities for mentally retarded people. Measurement was based on normalization criteria. These studies represent a necessary precedent to more sophisticated measurement of environmental characteristics which may eventually result in a physical typology of community care facilities.

A primary objective of a study by Bjaanes and Butler (1974) was to distinguish between facilities that encouraged behavior leading to normalization and competency as opposed to those that did not. Their study included four community care facilities: two board-and-care and two home-care. The environment of each facility was considered to be a total entity made up of attitudinal, supportive, physical, and behavioral components that were assumed to be measurable. The attitudinal and supportive aspects were measured by questionnaires and interviews, the physical component was measured by inspection, and the behavioral environment was measured by a highly definitive process called activity analysis.

In preliminary observations the facilities were tentatively divided into three kinds of environments: custodial, maintaining, and therapeutic. This could be considered an attempt to measure the psychosocial nature of facilities. A therapeutic environment was conceptualized as one that actively enhanced the normalization process and the development of social competence. Custodial residences were those in which little or nothing was done to achieve normalization, and in which a lack of organized and

structured activities could lead to regression by facility residents. In maintaining facilities, residents tended to remain at about the same level of competence.

Bjaanes and Butler coded and described all activities observed during four 2-3 hour sessions per subject. Coding was based on whether the activities were independent or dependent; spontaneous, planned, or routine; structured or not; obligatory or discretionary; and "passing" (at attempt by the retarded person to conceal his incompetency or history of institutionalization) or "natural." The frequency and proportion of time spent in each major activity, as well as the characteristics of the behaviors, were analyzed for the four categories.

The tentative conclusions were that social competence and independence were greater in the two large board-and-care settings than in the two small homes. Furthermore, from the observed differences in these four facilities, Bjaanes and Butler suggested that the geographic location of the facility and the involvement of the caretaker in the ongoing stream of behavior appeared to relate to the development of independent functioning and social competence in residents. Exposure to the community was seen as important to normalization. Of greater importance was the conclusion that different community facilities were associated with different outcomes and these differences appeared to be functions of variations in their psychosocial climates.

The objective of a second study by Butler and Bjaanes (1978) was to provide data on the factors important for developing effective habilitative programs and guidelines on which to base policy decisions. It was hoped

that this information would be of help in placing mentally retarded persons in optimum settings for enhancing their potential and their opportunities for more normal lives. The study used time sampling techniques, observation, in-depth interviews, questionnaires, data from official records, and statistical analyses to abstract information from 160 facilities.

Criteria for the preliminary determination of facility type included eight factors: Habilitative Programs, Community Interaction, Recreational Activities, Sheltered Workshop Participation, Social Activities Participation, Resident Participation in Chores, Active Care-taker Involvement, and Daily Routine. From the assessment of these eight factors, a profile of each facility was formulated. Each facility was then determined to be one of the three types: therapeutic, maintaining, or custodial. This study utilized the concept of life space or total environment. For the purposes of the research design, the concept was divided into temporal space, physical space, and social space. Social space was thought of as having behavioral, attitudinal, and supportive components.

General conclusions drawn from results of the study indicated that to provide a normalizing environment, community care facilities must be activity-enriched with both internal programs and external contact and exchange. That is to say that the facility must be therapeutic as opposed to being a custodial or maintaining facility. Community facilities that had few or no internal and external programs were shown to be just as much total institutions as were large public institutions.

An ethological observational study by Landesman-Dwyer, Stein, and Sackett (1976) objectively described the group home program in Washington State according to the behavior of residents and staff, as well as to group home resources. The results showed that there was no inherent improvement in behavior or normalizing influence associated with small facilities or specially designed facilities. In their sample of group homes serving six to twenty residents (mostly mildly to moderately retarded young adults), they found that more positive social behaviors occurred in larger facilities, that specially designed new group homes were related to decreased community interaction, and that more homogeneous groupings of residents were associated with more positive social behavior. Of course, causal relationships could not be determined. Longitudinal follow-up studies could be conducted to support the reliability and validity of this study and other similarly designed studies. In this study, for example, comparisons made between data from observations of resident behaviors and interviews about resident behavior with staff and administration showed sizable discrepancies.

#### Environmental Evaluation Studies

The Program Analysis of Service Systems (PASS) developed by Wolfensberger and Glenn (1973) is a device for the quantification of the quality of a wide range of human management service projects, systems, and agencies. Quality is quantified by the degree of social, physical, and structural integration; developmental growth orientation; and the nature of the surroundings. An average rating of quality is given based on several rater scores derived from documentation, site visits, and

interviews. One criticism of PASS has been that it was designed to measure the conformity of service systems to the normalization principle, whereas it has been suggested that the real issue is the effect of these systems on the individuals they are designed to serve.

In order to measure that effect, Eyman, Demaine, and Lei (1979) designed a study to investigate the relationship of factor-analyzed scores derived from PASS with changes in the adaptive behavior of residents placed in the community. A path analysis was used to relate resident characteristics--including age, IQ, and initial scores on adaptive behavior--to six PASS environmental ratings. Each resident's average annual change in adaptive behavior over a three-year period was analyzed.

Eyman et al. (1979) found that PASS sub-scores, which related to the degree of normalcy apparent in the physical environment and surroundings of a facility, were significantly associated with positive change in adaptive behavior for specified types of residents. In general, it was shown that older, less retarded residents improved in overall adaptive behavior regardless of where they resided. Significantly contributing to growth in adaptive behavior, however, were the four PASS ratings factors: Administrative Policies, Environmental Blending of the Facility with the Neighborhood, Location and Proximity of Services, and Comfort and Appearance of the Home. These results suggested the importance of a homelike facility where supportive encounters with adults and nonretarded individuals in the community were available. The results also suggested that factors such as Service Proximity and Neighborhood

Harmony were more complicated than just geographical location, because post-hoc comparisons between rural and urban locations indicated that the results reported generalized to both types of settings. Finally, it was noteworthy that the factor Application of Normalization Principles was not related to developmental change in any of the adaptive behavior domains. It would appear to be a possibility that a more prescriptive application of the normalization principle to facilities for mentally handicapped people does not guarantee the improvement of adaptive behavior scores of individuals residing within each structure.

The Alternative Living Environments Rating and Tracking System (ALERT) is another method for evaluating major aspects of physical settings (Budde, 1976). ALERT uses two continuums to appropriately match residents and environments. The first continuum includes four general service delivery models that range from least restrictive to most restrictive. Restrictiveness is determined by the amount of independence versus the amount of custodial care allowed to clients. The second environmental continuum includes nine specific service delivery models. Placement into one of the nine models depends on the apparent degree of physical and social integration within the system. This rating refers to the normalizing or institutionalizing aspects of an environment.

ALERT was developed for use by top management, advocacy groups, and parent organizations. It can also be used to describe and compare services for the retarded within a state, though it does not provide the means for evaluating service processes or the behavioral characteristics

of residents. ALERT is intended to describe improvement in an individual's life style over time by characterizing the environments through which he or she progresses.

Raynes, Pratt, and Roses (1979) have also developed techniques for evaluating the environments and quality of care in institutions. They identified four dimensions of care that included the management of daily events, staff-resident verbal interaction, community contact of residents, and the physical environment. These four dimensions were found to vary relatively independently, which suggested that global measures of the quality of care are of limited value.

Pratt, Luszcz, and Brown (1980) modified the techniques used by Raynes et al. in order to measure the quality of care in seven small community-based homes. The management of daily events in a facility was assessed by the Management Practices Scale. Originally developed by King, Raynes, and Tizard (1971) as the Child Management Scale, this instrument was designed to characterize the management of daily life in a facility as either resident-oriented or institution-oriented. It was based conceptually on Goffman's (1961) description of four characteristics of total institutions: rigidity of routine, block or group treatment of residents, social distance between staff and residents, and depersonalization of the residents. Pratt, Luszcz, and Brown also used the Index of the Physical Environment, an observational checklist of physical amenities. This index was designed to characterize the stimulation provided by the physical environment throughout a residence. It consisted of a checklist of furnishings and physical facilities

available in each room in a residence. Both the Management Practices Scale and the Index of the Physical Environment significantly discriminated between small community homes and large institutions.

#### Measurement of the Psychosocial Environment

The findings of studies presented previously indicate that living in the community does not alone have inherently normalizing effects on the behavior or competency of mentally retarded people in residential facilities. Normalization of the physical environment has been related to the opportunity for control of personal space. Other researchers have proposed that a physical environment that optimizes an individual's chances for positive social interaction represents the essence of normalization. Still others have called for personalization of the physical setting, or for therapeutic environments that encourage socialization of the residents. It is problematic, however, to accurately measure characteristics of environments and develop taxonomies of settings.

Frederickson (1972) identified two problems involved in the development of a taxonomy of environmental settings. The first problem was to develop a set of attributes or dimensions by which the settings could be characterized. The second problem was to classify these characteristics. Environmental attributes have been researched extensively in educational, correctional, and psychiatric settings. However, very little work has been done in facilities for developmentally disabled people.

Social ecology is concerned with human adaptation in physical and social environments. Social climate can be thought of as an indicator

of the interaction between physical and social environments. It is assumed that environments have unique personalities which can be measured (Moos, 1973). Moos and Insel (1974, p. 18) studied nine types of environments and developed perceived climate scales for each. The nine environments were psychiatric treatment programs in the community, psychiatric wards, correctional institutions, military companies, university residences, high schools, and junior highs, group environments, work environments, and family environments.

Moos conceptualized three dimensions to discriminate among different subunits in each of the nine environments. Relationship dimensions measured the extent to which individuals were involved in the environment and the extent to which they tended to support and help each other (i.e., support, involvement, affiliation). Personal development dimensions assessed opportunity afforded by the environment for self-enhancement and the development of self-esteem (i.e., autonomy, practical orientation, personal problem orientation). The third dimension, system maintenance and system change, included measurement of degree of order, organization, clarity, and control. Information about these three dimensions was generally obtained from the perceptions of participants in the system, but could have been obtained from outside observers. Moos found these dimensions to be conceptually similar to those used in other investigations. The reader is referred to Moos (1973, 1974) for a more complete review of relevant historical background on the measurement of environments.

Moos and Houts (1968) developed a Ward Atmosphere Scale (WAS) to assess the social environments of psychiatric wards. The scale was

shown to empirically differentiate among inpatient psychiatric wards, and showed high profile stability over several months. It was standardized on a national sample of 160 psychiatric wards (Moos, 1971). Items for the Ward Atmosphere Scale were derived from several sources, including observations of ward differences made by trained observers, popular and professional books about psychiatric wards, and interviews with patients and staff who had spent time on different wards.

In order to directly compare the perceived environmental characteristics of in-hospital and out-of-hospital psychiatric programs, the Community-Oriented Programs Environment Scale (COPES) was developed (Moos & Otto, 1972). This scale assesses the psychosocial environments of transitional community-oriented psychiatric treatment programs in a manner parallel to the Ward Atmosphere Scale used in psychiatric wards. COPES is also used to assess the social climate of facilities for mentally retarded people.

The choice of items used in COPES was guided by the general conceptualization of "environmental press" (Stern, 1970, pp. 6-12). The press of an environment, as the individual perceives it, defines what he or she must adapt to. Press can be objective or subjective and generally indicates the direction a person's behavior must take in order to remain adequately satisfied within the environment. There is a point at which an individual's private world merges with the private world of others. At this point, the participants tend to share a common interpretation of events. Operationally, press is a characteristic demand or feature of the environment as perceived by those who live in it.

COPES was designed and developed to measure the features of press. For example, an emphasis on program involvement could be inferred from the following items: "Members put a lot of energy into what they do around here," "This is a lively place." An emphasis on autonomy could be inferred from these items: "Members are expected to take leadership here" and "Members here are very strongly encouraged to be independent."

Several later versions of COPES were developed, including a 130-item COPES Form B, and a 102-item COPES Form C (Moos, 1972). COPES Form C has 10 subscales:

1. Program Involvement: measures how active members are in the day-to-day functioning of their program.

Members put a lot of energy into what they do around here.  
Members here really try to improve and get better.

2. Support: measures the extent to which members are encouraged and supported by staff and other members.

The healthier members here help take care of the less healthy ones.  
Staff [members] go out of their way to help members.

3. Spontaneity: measures the extent to which the program encourages members to act openly and express their feelings openly.

Members say anything they want to the staff.  
Members are encouraged to show their feelings.

4. Autonomy: assesses how self-sufficient and independent members are encouraged to be in making their own decisions.

The staff act on members' suggestions.  
Members are expected to take leadership here.

5. Practical Orientation: assesses the extent to which the member's environment orients him towards preparing himself for release from the program.

This program emphasizes training for new kinds of jobs.  
Members are encouraged to plan for the future.

6. Personal Problem Orientation: measures the extent to which members are encouraged to be concerned with their personal problems and feelings, and to seek to understand them.

Members tell each other about their personal problems. Staff are mainly interested in learning about members' feelings.

7. Anger and Aggression: measures the extent to which a member is allowed and encouraged to argue with members and staff, to become openly angry, and to display other aggressive behavior.

Members often gripe. Staff here think it is a healthy thing to argue.

8. Order and Organization: measures how important activity planning and neatness is in the program.

Members' activities are carefully planned. The staff make sure that this place is always neat.

9. Program Clarity: measures the clarity of goal expectations and rules.

If a member breaks a rule, he knows what will happen to him. Staff tell members when they are getting better.

10. Staff Control: assesses the extent to which the staff determines rules.

Once a schedule is arranged for a member, the member must follow it. Everyone knows who's in charge here.

The Program Involvement, Support, and Spontaneity subscales measure a "relationship" dimension. The next four subscales, Autonomy, Practical Orientation, Personal Problem Orientation, and Anger and Aggression, assess a "personal development" dimension. The last three subscales, order and organization, program clarity, and staff control assess a dimension related to the goal of keeping programs functioning in an orderly, organized, clear, and coherent manner.

Pankratz (1975) administered the Community-Oriented Programs Environment Scale (COPES) to residents and staff in two halfway houses for retarded people. The houses were similar in physical aspects as well as in general organization. Both were large, older homes whose residents were mildly and moderately retarded. One house was for men and the other house was for women. The study attempted to determine whether mildly and moderately retarded persons could respond meaningfully to the scale and whether the results would be meaningful in relationship to existing norms. COPES items were read individually to each resident.

Results of the study indicated that residents and staff were in agreement about the nature of their programs. People who were well acquainted with the program felt that the results described the programs for the mentally retarded well and accurately. It was apparent to Pankratz that COPES allowed valid feedback by the retarded individuals themselves as to the nature of their treatment environment.

McGee and Woods (1978) administered a slightly modified version of the Ward Atmosphere Scale to staff and students at a residential center for mildly and moderately retarded adolescents. The results of this administration also provided evidence for the applicability and usefulness of the instrument with this population. Differences between staff perceptions of the environment and their image of an ideal environment, and between staff's and students' perceptions of the school environment were regarded by the school director as accurate. These differences in perceptions pointed to problems in the school's organization that had not previously been well articulated. Feedback to staff concerning the

scale results allowed for the enhancement of morale and interaction. Areas in which the perceived environment fell short of the staff's ideals and in which staff's and students' perceptions were markedly discrepant became focal points for concerted efforts at change.

COPEs and the Ward Atmosphere Scale have only begun to be used in facilities for mentally retarded people. There are several possible applications of the scales. Because the ten dimensions assessed by COPEs are conceptually similar to the ten dimensions assessed by the Ward Atmosphere Scale, it would be possible to compare the psychosocial environments of institutions and a variety of community-based residences. It would also be possible to compare the perceived characteristics of the same psychosocial environments over time, with other environments (Moos, 1972), or cross culturally. Repeated measures of any system process over time could provide the opportunity for self-analysis and evaluation at the individual program and institution levels, and could thus be used to help direct planned social program change and system design or to monitor the evolution and function of a system over time. Regular feedback of process data could assist in identifying oscillations in resident or staff performance and in helping to bring about desired changes in program goals. In this connection, Pierce, Trickett, and Moos (1972) successfully used the Ward Atmosphere Scale to help staff change the treatment environment in an inpatient psychiatric ward. The change was consonant with staff goals, but retained the overall direction and ideology of treatment.

Assessments using psychosocial climate scales could serve as a valuable "quality control" function. Congruence between idealized views of a treatment program and perceptions of its actual operation could be determined. The extent of agreement between members and staff and/or among various groups of staff and administrators could also be determined. Congruence between the actual and ideal treatment environments may also be an important factor in effective system operation; whereas incongruence may point to a specific direction in which change could occur (Moos & Otto, 1972).

Analysis of the psychosocial environment could be used to identify those environmental factors which relate to favorable or unfavorable treatment outcomes, and to predict outcome based on the differential impact of milieu settings on specific groups of residents. Moos and Schwartz (1972) have studied this phenomena in facilities for the mentally ill. When the psychosocial elements of treatment environments are reliably dimensionalized and adequately validated, their differential effects on different people or types of people can be more adequately studied (Moos, Shelton, & Petty, 1973).

Along these lines, Jelinek (1974) devised a new instrument to measure the quality of long-term care facilities. This instrument assessed care independently of compliance to state regulations by matching the characteristics of the facility with characteristics of individual residents. This match was an indicator of the appropriateness of placement. The Community-Oriented Programs Environment Scale (COPES) was used along with a number of other instruments. A hierarchical system

of measurement was developed by deriving a formula to combine scores to create a global index of general characteristics of facilities.

Criterion scores were combined into eight specific objectives which were combined and reduced into three more general objectives. They were the psychosocial environment, the physical plant, and the professional services. These three objectives ultimately formed a single quality index which was shown to discriminate among facilities in meaningful ways and could be used to identify individual strengths and weaknesses of each facility.

Finally, COPES may identify those clients or staff who have deviant perceptions of their environment. Different types of people react differently to different milieus. There may be an important interaction effect between staff and environment, or residents and environment that in part determines treatment outcomes (Penk & Robinowitz, 1975).

The systematic assessment of the psychosocial environment of facilities for mentally retarded people has a variety of practical applications for the specification and change of ongoing systems and for the enhancement of person-environment fit. COPES is one of two scales that has been used to assess the treatment environments of facilities for mentally retarded people. A second scale was designed by Jackson (1969) after he made successive attempts to objectify the theoretical concepts of Schwartz concerning the attributes of the treatment environments for the mentally ill. The original scales (Schwartz, 1957) were described in terms of patients' pathologies or symptoms that would be alleviated by the appropriate environmental state. The six scales

described environments in terms of their ability to develop patients' initiative and creativity, increase patients' self-esteem, reduce patients' distortion of reality, and increase patients' participation and ability to participate. Scale composition, although based on authoritative literature in social psychiatry, rested almost entirely upon assumptions or unsupported hypotheses rather than definitive evidence.

Jackson (1969) conducted a factor analytic study which resulted in a new scoring system for Schwartz's scale. Five factors composed of 72 items were identified:

Factor I. Active Treatment. The degree of staff activity directed toward patient welfare and improvement.

Factor II. Social-Emotional Activity. The degree to which the environment permits or encourages normal socio-emotional relations or activity among patients.

Factor III. Patient Self-Management. The degree to which the environment permits or encourages patient responsibility for the management of self or other patients.

Factor IV. Behavior Modification. The degree to which staff attempts to influence, demand, or control specific behaviors of patients.

Factor V. Instrumental Activity. The degree to which the environment permits or encourages normal choice or rational problem-solving activity by patients.

The factors were derived from data from the administration of the questionnaire to 840 staff members in four large mental hospitals. The factor based scales were oriented not toward patients and their symptoms (as were the earlier ones) but toward the treatment environment and its characteristics. Jackson, after quantifying Schwartz's theoretical notions, concluded that the Characteristics of the Treatment Environment

(CTE) could not be interpreted as an indication of how therapeutic the environment was, but only as an objective measure of various treatment environment characteristics.

Allon, Grahm, Lilly, and Friedman (1971) conducted another factor analytic study of the Characteristics of the Treatment Environment. Respondents included both patients and staff members. Allon et al. accepted a five-factor solution for the staff members and a four-factor solution for the patients, but they observed that the factors in the two solutions did not correspond closely and that both differed from Jackson's factors.

A more recent factor analytic study of the Characteristics of the Treatment Environment was undertaken by Silverstein, McLain, Hubbell, and Brownlee (1977). The conflicting results of previous studies had raised questions as to the adequacy of the scales' scoring system. Silverstein et al. (1977) also wished to adapt the scale for use in residential facilities for mentally retarded people.

A series of factor and cluster analyses led to the decision to accept an oblique solution with two factors identified as Autonomy and Activity. Thirteen items did not enter into the scoring of either factor subscale. The new subscales did not correspond in any clear way to the scales proposed by Jackson or to those suggested by Allon et al. (1971). In order to make the scoring of the hospital and community versions comparable, only items appearing on both forms entered into the scoring of the two factors. The best five items in each subscale were:

## I. Autonomy (total of 36 items)

Patients are encouraged to make their own decisions in spending their personal money.

Patients are encouraged to start projects with other patients to improve the physical environment of the ward.

The staff encourages patients to take over management of their own affairs whenever possible.

Patients are not encouraged to take very much responsibility for maintaining their own quarters.

Whenever a patient is transferred from one unit of the hospital to another, the reasons for making the change are always explained to him.

## II. Activity (total of 23 items)

Patients are kept busy on the ward by frequent social, intellectual, or recreational activities, conducted by members of the staff.

Patients have many opportunities to express themselves in music, painting, hobby-work, or other creative activities.

All members of the staff participate regularly with patients in positive activities.

All patients are encouraged to participate in music, painting, handicrafts, or other creative or self-expressive activities.

Members of the staff are constantly seeking ways of expanding patients' freedom of movement (about the hospital, grounds, and community).

On two different occasions, McLain, Silverstein, Hubbell and Brownlee (1975) administered the Characteristics of the Treatment Environment and the Residential Management Survey, a version of the Child Management Scale, to 195 staff on selected wards of a hospital serving 1,800 mentally retarded persons. The Child Management Scale (King, Raynes, & Tizard, 1971) was devised in England for use as an interview and observation recording schedule in assessing the

management practices existing in various residential facilities for retarded persons. Each item has response choices which were expected to measure the extent to which management practices were institution-oriented or child-oriented. The authors of the scale believed that the organizational structure of a residential unit in large part determined the staff roles and role performances, and that staff behavior influenced the manner in which children behaved and the competencies which they acquired. McLain et al. (1975) found that treatment objectives of the institution's nine programs were formulated to meet the primary developmental and behavioral needs of the patients. Respondents received scores on both the Characteristics of the Treatment Environment factors and a total Residential Management Survey score. In each case high scores were associated with desirable treatment practices, low scores with undesirable practices.

The results of the study led to three conclusions, concerning the discriminative power of the instruments, the stability of the treatment environment, and the relationship of the results to staff characteristics. First, the Characteristics of the Treatment Environment and the Residential Management Survey differentiated not only among treatment programs with varying therapeutic goals, but among wards within programs as well. Second, the response of staff to the questionnaires were only minimally related to their length of employment at the hospital and on the ward. There was no significant relationship found between staff response and their age, sex, or job classification. Third, the two scales' mean scores for individual wards were relatively stable over a

ten-month period. The authors felt the modified Characteristics of the Treatment Environment appeared to be reasonably reliable. As with the Community-Oriented Programs Environment Scale, the validity of the instrument has not yet been clearly established.

Extending this line of research, McLain, Silverstein, Brownlee, and Hubbell (1977) administered the same two questionnaires to selected members of living unit staff in three additional state hospitals for the mentally retarded. This was done in an effort to characterize and compare various residential or treatment environments. The three new institutions were chosen for study because they appeared to differ from each other in terms of rather objective aspects such as location and physical plant. They also differed along more subjective dimensions such as their philosophy, purpose, and organization. The residential units of each facility were organized into administrative groups called programs, whose organizational bases differed among the facilities (i.e., demographic characteristics of the clients, developmental needs and treatment goals, geographic location of the family residence).

The design of this study permitted an examination of the discriminative power of the questionnaires within and among institutions. Since the questionnaires appeared sensitive to differences in staff management practices within and among institutions, they provided a means for determining the effects of treatment environments upon the development of retarded persons.

McLain, Silverstein, Hubbell, and Brownlee's most recent study (1977) was a further attempt to contribute to the data necessary for the

sound planning of services for retarded clients. More specifically, the authors hoped to provide a further test of the discriminative power of the Characteristics of the Treatment Environment and the Residential Management Survey in their ability to differentiate among staff management practices in hospital treatment programs and living units within programs. The study was designed to determine whether the questionnaires could distinguish in terms of management practices among nineteen state hospitals and three family residential facilities which differed in size, organization, and resident characteristics.

The results gave support to the position that treatment practices employed with retarded persons differ in various types of residential settings. Those differences could be viewed along the dimension of activity, autonomy, and staff orientation. The results further suggested that in attempting to account for the differences among management practices in various facilities, one was not able to point to staff demographic characteristics or employment history. Just as in previous studies, staff responses to the questionnaires were only minimally related to these background variables.

The last three studies reviewed were not designed in a way that provided for a proper test of the influence of other variables such as client characteristics, facility size in terms of numbers of clients and staff, physical arrangement of living space, staffing patterns or staff attitudes. These factors, singly or in combination, might well have accounted for a substantial amount of the variance noted. However, the Characteristics of the Treatment Environment and Residential Management

Survey were found to be sensitive indices of the quality of care in various types of residential facilities. They appeared to show some promise in determining the differential effects of various treatment environments upon the development of retarded clients.

Brown and Guard (1979) administered the Characteristics of the Treatment Environment to 130 employees of eight nursing homes serving retarded people. The authors found that all eight homes fell short of the levels of patient autonomy and activity which the work done by McLain, Silverstein, Hubbell, and Brownlee had predicted for a therapeutic community. The size of the facilities was found to have little effect on either autonomy or activity levels, consistent with the findings of Balla (1976) and Zigler and Balla (1977). Brown and Guard discovered that autonomy and activity correlated strongly with each other and that both levels were greater in homes with larger proportions of supervisory staff, homes which included the family in planning treatment goals, homes where staff expressed greater approval of the policy of admitting retarded persons, and in privately owned homes as opposed to corporation owned homes.

In the past, facilities for mentally retarded people were usually compared in terms of readily observable indices such as number of clients, number of staff, staff/client ratio, average age or IQ of residents, type of ownership or location of facility. It can now be shown that there is a whole range of less observable dimensions which can also be used to differentiate environments. Treatment environment may be at least as important as more easily observed indices, and is probably more

meaningful as a measure of facility differences, a predictor of resident outcome, or as a program descriptor.

By way of summary, the following is a basic description of four steps in the systematic study of environments. The four steps make up the methodology which is currently and has in the recent past been fashionable among environmental psychologists and social scientists. This methodology has viewed the environment as being made up of a number of sub-environments with each sub-environment operating to influence the development of a specific characteristic.

For purposes of measurement, one could conceive of an environment for the development of independence or autonomy, and another for the development of intelligence, and so forth. Then the problem of measuring an environment is reduced to the identification and measurement of those aspects of the total environment that are likely to be related to the development of specific characteristics.

The first step in this process would entail the definition of an environment for the development of a specific characteristic. This construct would be drawn from relevant theory concerning the development of a particular characteristic. The second step would involve the identification of the specific environmental conditions and processes that are likely to directly affect the development of the characteristic. Again, this step involves the extensive use of theory coupled with previous research concerning the development of the characteristic under study. The third step would consist of the collection of evidence about the various environmental processes. Use of interviews and rating

scales are popular, but participant observation and other observational procedures can also furnish important information about an environment. Many of the procedures that have been developed to measure individual characteristics could be adapted and applied to the measurement of environments. The fourth step in measuring an environment would consist of treating environmental data through the use of psychometric procedures and systematically relating data about the individual to data about the environment. This is an extremely important step since it is only through this process that environmental information can give full meaning to data about individual characteristics. Furthermore, comparisons with control groups that are similar to the retarded population studied in group homes in size (large families), in functional abilities (elderly persons, small children), in socially deviant behavior (mentally ill, delinquents), or in transitional life stages (college students) must be made to assess whether certain principles of daily social behavior are related systematically and generally to certain environmental variables.

In addition to the four steps listed above, the same technical considerations about reliability and validity that have been of concern with the development of tests of individual characteristics must also be considered in assessing environmental qualities.

### Conclusions

With the advent of deinstitutionalization and normalization, research in the area of mental retardation has shown a growing concern for the evaluation of the quality of care in residential facilities, the

assessment of individual adaptive growth as it related to environmental criteria, and the differentiation and typing of various kinds of environments using physical, behavioral, and psychosocial criteria. One manifestation of these concerns has been a rapidly expanding literature aimed at the refinement and validation of instruments used to measure characteristics of the environment. Another area of inquiry has arisen from research in designing physical environments for mentally retarded people.

Several postulates can be formulated from the results of research in these areas. The provision of a variety of living spaces in a facility does not ensure their use. Mediation by staff in the form of training residents to manipulate and exercise control over aspects of their environments is necessary. This is particularly true for lower functioning residents who may require physical as well as human initiatives from their environments. Physical space must be designed with concern for the amount of individual control of the environment that each resident is capable of.

It has not been shown that there is any inherent improvement in behavior or normalizing influence associated with small facilities or specially designed facilities. Both intrafacility factors such as activity levels and involvement of caretakers and extrafacility characteristics such as geographic location, interact to produce more or less normalizing effects on individuals. In other words, there are psychosocial, behavioral, and physical interactions of environmental variables at work in each setting.

A vast array of instruments exists to measure characteristics of individuals. Environmental assessment, however, has just begun to be explored, particularly in facilities for mentally retarded people. Few instruments that assess characteristics of the treatment environment have been used more than once in facilities for mentally retarded people. From these studies, it has been determined that there is a great variation in treatment environments between community and public residential facilities as well as among facilities of each type. More positive treatment environments do not necessarily correlate with smaller facilities, facilities located in the community, or any other variable that has been manipulated in the past. Research has shown correlations between staff approval of facility admission policy, privately owned facilities, and homes where families participate in planning treatment goals with higher levels of client autonomy (Brown & Guard, 1979). However, these findings have not been replicated.

The literature reflects the complexity of the interaction between behavior and environmental characteristics in facilities for mentally retarded people. As a result, some simple suggestions for how to improve adaptive behavior and normalize environments have been dismissed. There is a need for environmental measures that can differentiate among facilities and predict behavioral outcomes from various environments. The present report describes a study that was designed to examine a national sample of residential facilities, their physical and treatment environments. The data allow for comparisons of environments in PRFs and CRFs and CRFs of various sizes. Descriptive information is

necessary for accurate analysis, future planning, and facilitation of further research on how to assure that residential facilities are nice places to live.

## CHAPTER III

### Methodology

There is widespread acceptance of the importance of accurate information in planning services for mentally retarded people. At the present time, however, little is known about the environmental characteristics of residential facilities across the nation. The Developmental Disabilities Project on Residential Services and Community Adjustment was initiated at the University of Minnesota in late 1976 for the purpose of providing local, state, and federal policy makers with information needed to improve the planning, management, and evaluation of residential and related community services for mentally retarded and developmentally disabled persons. A detailed description of the methodology of this study is contained in a report by Hauber, Bruininks, Wieck, Sigford, and Hill (1981).

#### Sample

The present study included 2271 retarded individuals living in 236 residential facilities. A two-stage probability sample design was developed in cooperation with the Sampling Section of the Survey Research Center at the University of Michigan's Institute for Social Research. The following criteria were used to define residential facilities:

A community residential facility (CRF) is any community-based living quarter(s) which provides 24-hour, 7 days-a-week responsibility for room, board, and supervision of mentally retarded persons as of June 30, 1977, with the exception of:  
(a) single family homes providing services to a relative;

(b) nursing homes, boarding homes, and foster homes that are not formally state licensed or contracted as mental retardation service providers; and (c) independent living (apartment) programs which have no staff residing in the same facility.

A public residential facility (PRF) is any state sponsored or administered facility which offers comprehensive programming on a 24-hour, 7-days-a-week basis.

Public facilities were selected from the 1977 updated Directory of Superintendents maintained by the National Association of Superintendents of Public Residential Facilities. Community facilities were selected from among 4,427 facilities that participated in a 1977 national mail questionnaire survey (Bruininks, Hauber, & Kudla, 1979).

In the first stage of sampling, facilities were selected in such a way that the probability of a facility's selection was proportionate to its size (number of residents) and so that the distribution of sample facilities across census regions and size classes were in close agreement with the distribution of the national resident population. Table 1 lists the size categories according to which facilities were sampled.

In the second sampling stage, a sampling fraction of residents within each facility was determined so that the total resident sample size would be approximately 1,000 PRF residents and 1,000 CRF residents. The overall sample design was intended to provide an unbiased representation of all public and community residential facilities and their residents in the United States in 1978.

#### Response Rate and Weighting

Table 2 presents a summary of facility response rates for this study. Several facilities that declined to participate or had closed after the

Table 1

## Size Strata for Facility Sample Selection

Facilities	Size Categories (number of residents)
PRFs	1600 or more
	1000 to 1599
	500 to 999
	150 to 499
	less than 150
CRFs	500 or more
	300 to 499
	200 to 299
	100 to 199
	50 to 99
	20 to 49
	10 to 19
	7 to 9
	6
	5
	4
3	
2	
1	

Table 2

## Response Rates by Facility Type

Facilities	Originally Selected	Participants	Replacement Facility	Final Participants
CRF	180	154	7	161
PRF	78	72	3	75

time of original selection were replaced by other facilities of the same size and from the same geographic region. At the time of the study, there were six community residential facilities in the United States that had more than 400 residents. Only one of these facilities agreed to participate in the study. After an extensive but unsuccessful effort to recruit these non-participating facilities, project staff decided to keep the one participating facility in the study, make no adjustment for non-response of the other large facilities, and report that CRFs with more than 400 residents are under-represented.

Data from each facility were weighted in proportion to the number of residents the facility represented. Therefore, large facilities housing many residents were weighted more than small facilities which housed only a few residents. All descriptive data presented in this report are weighted. Statistical analyses, however, were based on unweighted data in order to assure probability values based on actual sample size.

### Instruments

Many sources were used in the development and review of specific questionnaire items for the eleven instruments used in this study. Field procedures and interview content were tested in a sample of Canadian residential facilities. After some revision, a second field test was conducted in a group of United States facilities to assure optimal final survey instruments and procedures.

Information was gathered about each facility and its administrative characteristics including information regarding staff, finances, and the

physical plant. Personal records were reviewed to obtain certain demographic information about each resident. Detailed interviews about each resident were conducted with direct-care staff persons who had known the resident well for at least two months. Each interview, which lasted approximately one hour, covered resident program plans, day programs, leisure time activities, specialized services, family contact, and physical, health and behavioral characteristics. Although care persons sometimes consulted residents' records, they were not required to do so. Questionnaire items were designed to make maximal use of the care person's knowledge.

Each staff care person who was interviewed was also asked to complete a Care Personnel Self-Administered booklet which included nine items used to measure characteristics of a facility's treatment environment. These nine items were originally part of Jackson's Characteristics of the Treatment Environment (1969) and, more recently, were included in a revision of this scale made by Silverstein et al. (1977). Silverstein et al. (1977) identified ten key items from the Characteristics of the Treatment Environment (CTE) which exhibited the highest item-factor correlations with the scale's two factors: Autonomy and Activity. The scale items characterizing Autonomy asked whether staff encouraged residents to use initiative in responsible management of their personal affairs. Items from the Activity factor asked whether residents were provided with encouragement and opportunity to develop hobbies and participate in a wide variety of activities. Nine items were selected for use in the present study. Item numbers and item-factor correlations

listed below are from Silverstein et al. (1977).

I. Autonomy

- 72. Patients are encouraged to make their own decisions in spending their personal money. (.793)
- 53. Patients are encouraged to start projects with other patients to improve the physical environment of the ward. (.742)
- 62. The staff encourages patients to take over management of their own affairs whenever possible. (.733)
- 49. Patients are not encouraged to take very much responsibility for maintaining their own quarters. (-.725)
- 31. Whenever a patient is transferred from one unit of the hospital to another, the reasons for making the change are always explained to him. (.697)

II. Activity

- 24. Patients are kept busy on the ward by frequent social, intellectual, or recreational activities, conducted by members of the staff. (.794)
- 61. Patients have many opportunities to express themselves in music, painting, hobby-work, or other creative activities. (.727)
- 34. All members of the staff participate regularly with patients in positive activities. (.700)
- 14. All patients are encouraged to participate in music, painting, handicrafts, or other creative or self-expressive activities. (.689)
- 47. Members of the staff are constantly seeking ways of expanding patients' freedom of movement (about the hospital, grounds, and community). (.670)

Item 14 was not used because of its similarity to item 61. Item 49 was negatively correlated with the Autonomy factor because it was worded differently than other items--a high score on this item indicated a less autonomous environment.

Table 3 reports the item-factor and inter-item correlations obtained from the 1360 CTEs completed in the present study. All correlations were significant ( $p < .001$ ) and higher than those reported by Silverstein et al. (1977).

Table 3  
Inter-Item and Factor-Item Correlations  
for Characteristics of the Treatment Environment  
(N = 1360 completed CTEs)

Item	1	2	3	4	5	6	7	8	9	Aut <sup>a</sup>	Act <sup>b</sup>	Full Scale <sup>c</sup>
1	1.00	.67	.60	-.17	.48	.34	.40	.27	.36	.81	.42	.70
2		1.00	.62	-.20	.47	.40	.48	.39	.45	.82	.52	.77
3			1.00	-.20	.45	.36	.39	.39	.44	.80	.47	.72
4				1.00	-.14	-.11	-.12	-.15	-.17	-.49	-.16	-.38
5					1.00	.39	.38	.36	.41	.71	.47	.67
6						1.00	.66	.58	.51	.45	.83	.71
7							1.00	.54	.58	.49	.85	.74
8								1.00	.65	.44	.83	.70
9									1.00	.51	.82	.74
Aut										1.00	.57	.90
Act											1.00	.87
Full Scale												1.00

<sup>a</sup>Aut refers to the Autonomy factor; average score of the first five items of the scale.

<sup>b</sup>Act refers to the Activity factor; average score of items 6 through 9 of the scale.

<sup>c</sup>Full Scale is an average score of all nine items of the scale.

The number of CTEs completed in each facility ranged from zero (if the only staff member interviewed declined to complete the CTE) to 32. The number of staff persons interviewed in each facility depended on the number of residents sampled. In some cases, one staff person was interviewed regarding more than one resident. This frequently happened in small CRFs where one houseparent may have been most familiar with all sampled residents. The CTE, however, was only completed once by each staff person, on the assumption that even in large facilities, each staff member worked in a single unit. If more than one staff member was interviewed in a facility, they each completed one CTE because it was not assumed that all staff worked on the same unit or that all units had the same environmental characteristics. The exact wording and scoring of the items used in the survey are presented in Appendix B.

A separate section of the Care Personnel Questionnaire included five items designed to assess characteristics of the physical environment of a facility. Items for this section were developed after project staff had reviewed the theoretical and research literature on normalization.

Normalization, as related by Wolfensberger (1976), considered the effects of building design and atmosphere on "deviant" members of society. Wolfensberger and his colleagues developed PASS (discussed previously in this paper) to evaluate the quality of certain service delivery systems. In part, PASS evaluated environments according to the degree of physical integration of each facility into the community and the opportunities afforded within the facility for social

integration of clients or residents. Within a residence, more homelike environments could be perceived as less deviant. Within such environments it is expected that residents would be perceived as less deviant as well. Caretakers and other people are likely to have more normal expectations for residents, who in turn may respond more normally.

Normalization as a philosophy and practice has been expanded by others. Nirje (1976) relates the concept of normalization more specifically to the mentally retarded. More complete discussions of the applications of normalization appear elsewhere (Wolfensberger, 1972; Flynn & Nitsch, 1980).

The items of this study's Characteristics of the Physical Environment scale (CPE) were rated on a five-point basis (see Appendix B for the items as they appeared in the survey). A rating of one represented a very homelike environment, while a rating of five was given to non-homelike areas.

The physical environment of a facility was rated by the interviewer after a walking tour of the facility. A total of 1320 CPEs were completed and ranged from zero (when at least one item did not apply) to 25 for each facility. The number of CPEs completed within a facility was dependent upon the same criteria as the number of CTEs completed; the interviewer rated the physical environment after the first interview with each staff person in a facility.

Table 4 shows the correlations among all items and the total score from the Characteristics of the Physical Environment scale. All correlations were significant ( $p < .001$ ). High inter-item and full scale

Table 4

Inter-Item Correlations  
for the Physical Characteristics of the Environment  
(N = 1320 CPE scales completed)

Item	1	2	3	4	5	Full Scale <sup>a</sup>
Dining area	1.00	.68	.63	.62	.27	.82
Living room area		1.00	.68	.70	.34	.87
Bathroom			1.00	.76	.25	.86
Bedroom				1.00	.29	.87
Yard					1.00	.52
Full Scale						1.00

<sup>a</sup>Full Scale is an average score of items 1 through 5 of the CPE.

correlations provide evidence of the scales validity. Item 5, which asked the interviewer to rate the facility's yard, showed a smaller correlation with the full scale score and with the other items.

However, the nature of yards is such that a nice one may be found attached to a facility with an otherwise unpleasant physical environment, whereas a very homelike apartment may have no yard at all.

#### Procedures

The Survey Research Center of the University of Michigan employed trained interviewers to conduct the on-site facility surveys. Each survey included the interviewer's evaluation of the physical environment. Each interview also included a self-administered booklet to be filled

out by care personnel concerning the characteristics of the treatment environment. Project staff at the University of Minnesota collaborated with the University of Michigan in editing and coding questionnaires. More procedural detail is reported in Hauber et al. (1981).

## CHAPTER IV

### Results

Because several CPEs and CTEs were completed for most facilities, data were aggregated to obtain a single average score for each of the scale items for each facility. The facility data were then weighted, as described above, so that the descriptive information presented in this section is representative of the environments experienced by all residents in CRFs and PRFs in the United States. Analytical statistics, however, were based on non-weighted numbers. Tables 5 through 14 are arranged in a way that allows for comparisons between PRFs and CRFs.

#### Characteristics of the Physical Environment

Each scale item from the Characteristics of the Physical Environment (CPE) was rated on a five-point basis. A score of one was considered very homelike and a score of five was thought to be not at all homelike. Table 5 gives the average score for the CPE in both CRFs and PRFs. The table shows that, on the whole, CRFs had significantly more homelike environments than PRFs.

Table 6 reports the percentages of all PRF and CRF residents who resided in facilities rated in each of the five scale intervals of the CPE. Most CRF residents were represented in the two most homelike intervals while more than half of all PRF residents resided in facilities rated in the two least homelike intervals.

Table 5

Average Total Score  
for Characteristics of the Physical Environment by Facility Type

	<u>Facility Type</u>		F
	PRF (N=73)	CRF (N=156)	
M	3.53	2.30	155.70*
SD	.61	.96	

\*  $p < .0001$

Table 6

Characteristics of the Physical Environment  
Total Score by Facility Type<sup>a</sup>

Facility Type	Scale Intervals				
	1	2	3	4	5
PRF	0	7	38	54	1
CRF	27	34	30	6	3

<sup>a</sup>Figures are percentages of residents represented by facilities.

Table 7 gives the average score for each of the five items of the Characteristics of the Physical Environment (CPE) scale. CRFs showed significantly lower average scores (more homelike environments) than did PRFs. These differences were consistent for all living areas of the facility and the outside yard.

Table 8 shows that more than half of all CRF residents lived in facilities that were rated very homelike for all living areas and the

Table 7

Average Item Scores for Characteristics  
of the Physical Environment by Facility Type

Scale Item		Facility Type		F
		PRF	CRF	
Homelikeness of dining area	M	4.05	2.58	115.16**
	SD	1.18	1.27	
Homelikeness of living room	M	3.50	2.24	103.63**
	SD	.86	1.30	
Homelikeness of bathroom	M	4.02	2.30	203.52**
	SD	.70	1.20	
Homelikeness of bedroom	M	3.70	2.33	130.02**
	SD	.80	1.10	
Homelikeness of yard	M	2.49	2.20	6.60*
	SD	.80	1.18	

\*  $\underline{p} < .05$

\*\*  $\underline{p} < .0001$

outside yard. Generally, as the CRF rating on each item increased, the percentage of residents represented decreased. PRF residents were represented with increasingly larger percentages of residents in facilities rated in the least homelike intervals for all living areas.

Table 8

Scale Intervals for Characteristics  
of the Physical Environment by Facility Type<sup>a</sup>

Scale Item	Facility Type	Scale Intervals		
		1-2	3	4-5
Homelikeness of dining room	PRF	5	19	76
	CRF	50	27	23
Homelikeness of living room	PRF	14	33	53
	CRF	66	13	21
Homelikeness of bathroom	PRF	3	23	74
	CRF	62	18	20
Homelikeness of bedroom	PRF	11	30	59
	CRF	65	22	13
Homelikeness of yard	PRF	52	41	7
	CRF	70	16	14

<sup>a</sup>Figures are percentages of residents represented by facilities

Characteristics of the Treatment Environment

Three scores were calculated to summarize the nine questionnaire items on which care persons rated the treatment environments in their facilities. An average score for the first five items of the CTE represented the autonomy subscale (item 4 = 97 minus score because of its inverse wording). The last four items of the CTE were averaged to obtain a score for the activity subscale. The full scale CTE score was obtained by averaging scores from each of the scale's nine items. Scale scores ranged from 0 to 97. High scores reflected positive treatment environments within a facility.

Table 9 compares PRFs and CRFs on the Characteristics of the Treatment Environment (CTE) total score and its two subscales. CRFs showed a more positive treatment environment than did PRFs on all measures, although the difference was less pronounced on the activity subscale. Both PRFs and CRFs had, on the average, positive treatment environments as assessed by the three measures (i.e., all items' average ratings were "mostly true").

Table 9

Total Score and Subscale Scores for Characteristics  
of the Treatment Environment by Facility Type

Treatment Environmental Measures	Facility Type		F
	PRF	CRF	
Characteristics of the Treatment Environment: Total Score			
M	66.43	73.99	22.25**
SD	9.52	14.74	
Characteristics of the Treatment Environment: Encouraging Activity			
M	71.62	76.13	6.75*
SD	9.86	15.21	
Characteristics of the Treatment Environment: Encouraging Autonomy			
M	60.57	71.68	37.23**
SD	10.54	17.51	

\*  $\underline{p} < .01$

\*\*  $\underline{p} < .0001$

Table 10 gives the percentage of residents represented in each of five intervals of the CTE. The percentages of both PRF and CRF residents represented increased from the least to the most positive rating, though

a greater proportion of CRF residents than PRF residents were shown to reside in facilities rated in the extremely positive interval (80-97).

Table 10

Scale Intervals for Total Score and Subscale Scores  
of Characteristics of the Treatment Environment by Facility Type<sup>a</sup>

Measure/Facility Type	Scale Intervals				
	0-19	20-39	40-59	60-79	80-97
Characteristics of the Treatment Environment: Total Score					
PRF	0	2	43	53	2
CRF	1	5	15	42	37
Characteristics of the Treatment Environment: Encouraging Activity					
PRF	0	0	13	70	17
CRF	0	3	13	38	46
Characteristics of the Treatment Environment: Encouraging Autonomy					
PRF	0	0	21	73	6
CRF	0	3	13	47	37

<sup>a</sup>Figures are percentages of residents represented by facilities.

Tables 11 and 12 report the average scores for each item of the CTE. CRFs were shown to consistently promote higher levels of client autonomy and activity than PRFs. These differences were particularly large on the autonomy subscale as is shown in Table 11. Mean differences between CRFs and PRFs on the activity subscale (Table 12) were less pronounced. There were no statistically significant differences between CRFs and PRFs on items 6 and 7.

Table 11

Average Item Scores for Autonomy Subscale  
of the Characteristics of the Treatment Environment by Facility Type

Item	Facility Type		F
	PRF	CRF	
1. Residents are encouraged to make their own decisions in spending their personal money			
M	59.01	67.83	2.52*
SD	14.64	23.62	
2. Residents are encouraged to start projects with other residents to improve the physical environment of the home			
M	55.07	65.26	21.19**
SD	13.38	23.83	
3. The staff encourages residents to take over management of their own affairs whenever possible			
M	64.58	72.27	14.36*
SD	12.55	22.20	
4. Residents are not encouraged to take over very much responsibility for maintaining their own quarters <sup>a</sup>			
M	33.77	20.61	22.89**
SD	9.28	22.15	
5. Whenever a resident is transferred from one living unit to another, the reasons for making the change are always explained to him			
M	61.50	78.48	38.06**
SD	14.80	21.17	

<sup>a</sup>This item was worded differently so that a low score reflected a positive environmental rating

\*  $p < .001$

\*\*  $p < .0001$

Table 12

Average Item Scores for Activity Subscale  
of the Characteristics of the Treatment Environment by Facility Type

Item	Facility Type		F
	PRF	CRF	
6. Residents are kept busy in the facility by frequent social, intellectual, or recreational activities conducted by members of the staff			
M	73.19	76.0	.397
SD	9.61	19.71	
7. Residents have many opportunities to express themselves in music, painting, hobby-work, or other creative activities			
M	67.77	71.72	1.40
SD	11.84	21.86	
8. All members of the staff participate regularly with residents in positive activities			
M	72.16	78.25	13.49*
SD	10.95	16.93	
9. Members of the staff are constantly seeking ways of expanding residents' freedom of movement about the facility, grounds, and community			
M	72.86	78.2	12.93*
SD	10.44	15.03	

\*  $p < .001$

Tables 13 and 14 report the percentages of PRF and CRF residents represented in each of five scale intervals for each item of the two subscales. Table 13 shows that over 65% of all CRF residents sampled lived in facilities rated in the top two-fifths of the autonomy subscale. PRF residents, while showing large percentages in the positive scale intervals, were not represented by nearly as high a percentage in the top fifth of the scale (extremely positive).

Table 13

Scale Intervals of the Autonomy Subscale  
of the Characteristics of the Treatment Environment by Facility Type<sup>a</sup>

Item	Facility Type	Scale Interval				
		0-19	20-39	40-59	60-79	80-97
1	PRF	1	8	41	44	6
	CRF	5	9	20	29	37
2	PRF	0	14	51	33	2
	CRF	4	11	20	35	30
3	PRF	0	2	39	49	10
	CRF	3	3	21	29	44
4 <sup>b</sup>	PRF	8	61	30	1	0
	CRF	59	24	12	2	3
5	PRF	0	11	31	48	10
	CRF	2	3	16	20	59

<sup>a</sup>Figures are percentages of residents represented by facilities

<sup>b</sup>This item was worded in a way that caused a low score to reflect a positive treatment environment encouraging autonomy

Table 14 shows that over 70% of all CRF residents lived in facilities rated quite positively (60-97) on the Activity factor. The greatest percentage of CRF residents resided in facilities given the most positive rating (80-97). Over 75% of all PRF residents lived in facilities rated 60-97 on the Activity factor.

Table 14

Scale Intervals of the Activity Subscale  
of the Characteristics of the Treatment Environment by Facility Type<sup>a</sup>

Item	Facility Type	Scale Interval				
		0-19	20-39	40-59	60-79	80-97
6	PRF	0	0	9	65	26
	CRF	1	6	10	29	54
7	PRF	0	1	24	60	15
	CRF	2	7	21	26	44
8	PRF	0	0	14	62	24
	CRF	1	2	13	30	54
9	PRF	0	0	10	64	26
	CRF	0	0	9	40	51

<sup>a</sup>Figures are percentages of residents represented by facilities

#### Environmental Data by Size of CRFs

The CRFs sampled in this study were divided into four size categories for purposes of further analysis: a) 1 to 5 residents, b) 6 to 15 residents, c) 16 to 63 residents, and d) 64 or more residents. Table 15 reports the average score for the Characteristics of the Physical Environment (CPE) among the different size categories of the CRFs. There were statistically significant differences in average CPE scores among facility size groups. Physical environments were less homelike for larger facilities. However, even the largest CRFs, those with 64 or more residents, were significantly more homelike than the average PRF ( $t_{(104)} = -4.12, p < .0001$ ).

Table 15

Average Score for Characteristics of the Physical Environment  
by Size of CRF

	Size Categories				F
	1-5 N=38	6-15 N=55	16-63 N=30	64 or more N=33	
M	1.58	1.75	2.23	2.96	24.45*
SD	.63	.63	1.08	.71	

\*  $p < .0001$

Table 16 presents average scores for the CTE and its two subscales for four size categories of CRFs. CRF size 6 to 15 showed the most positive ratings on all three measures. As the size of the facility increased past 15 residents, the treatment environment became increasingly less encouraging of client autonomy and activity. Only CRFs with 6 to 15 residents scored significantly higher than PRFs on the CTE activity subscore ( $t(130) = 4.43, p < .001$ ).

Table 16

Average Total Score and Subscale Score for Characteristics  
of the Treatment Environment by Size of CRF

Measure	Size Categories				F
	1-5 N=32	6-15 N=52	16-63 N=31	64 or more N=33	
Characteristics of the Treatment Environment:					
Total Score					
M	76.52	79.70	71.41	70.30	3.99*
SD	15.15	12.96	14.01	14.41	
Characteristics of the Treatment Environment:					
Encouraging Activity					
M	76.96	80.70	72.06	74.42	2.47
SD	18.83	13.41	14.72	14.67	
Characteristics of the Treatment Environment:					
Encouraging Autonomy					
M	76.85	79.18	70.25	66.03	5.09*
SD	16.71	16.48	16.75	16.38	

\*  $p < .01$

## CHAPTER V

### Discussion

In this national sample of 236 residential facilities for mentally retarded persons, CRFs were found to be consistently and significantly more homelike than PRFs in physical qualities. This was not surprising in that CRFs are generally smaller in size and more recently established.

Although nearly all PRFs were large in size (number of residents) there was considerable variation in size of CRFs. Analysis of the environments of four size categories of CRFs showed statistically significant differences among categories. Smaller CRFs were more homelike than larger CRFs which, in turn, were more homelike than PRFs.

The literature on size of a facility generally relates size to resident outcome measures (i.e., adaptive behavior, client turnover) or to quality of care. Some quality of care indexes have included a measure of the physical environment, usually assessed in terms of normalization (Pratt, Luszcz, & Brown, 1980; Wolfensberger, 1976). Bjaanes and Butler found that more independent behavior in small facilities was related to the geographic location of the facility. O'Connor (1976) found that facilities housing fewer than 20 residents were more likely to be normalized than facilities where 21 or more residents resided. A normalized facility was defined by such factors as existence of personal effects and amount of privacy available to residents.

The problem of how to relate the physical environment to normalization criteria has been difficult. The present study developed an internally consistent set of items designed to assess the subjective "homelike" physical appearance of national samples of community and public residential facilities. Although this survey instrument had not been used in other studies, it was based on the normalization philosophy--a philosophy which, though highly evolved, has been difficult to empirically validate. Thus it appears to demonstrate both empirical and content validity.

In addition to appearing more homelike, CRFs were found to encourage more resident autonomy and activity than PRFs. The autonomy subscale of the Characteristics of the Treatment Environment was less different between CRFs and PRFs than the subscale. PRFs have been able to provide opportunities for residents to participate in various activities, particularly those which are group oriented and within the facility (Brown & Guard, 1979).

The analysis of CRFs showed that facilities with 6 to 15 residents scored highest on all CTE measures, followed by CRF size categories 1 to 5, 16 to 64, 64 or more, and then by PRFs. Bjaanes and Butler (1974) speculated that the smallest of homes may hinder individual autonomy because of over-protective staff or house parents. The opportunity for residents to individually control and participate in aspects of their environments is, of course, mediated by staff.

The literature has shown the effects of size on resident care practices have been noticeable when the size difference is very large. There is considerable variation, however, among community based

facilities and even among living units within institutions (Balla, 1976; King, Raynes, & Tizard, 1971; McCormick, Balla, & Zigler, 1975; Zigler & Balla, 1977). It is reasonable to conclude from the present study, however, that on the average resident care practices are more individualized (more resident autonomy and activity) in small community based facilities than in larger CRFs or in PRFs.

#### Limitations

Studies like the present one are limited by their inability to describe every unit of every facility. Instead, the picture that develops is of an average facility. PRFs were not analyzed by size because there are so few small PRFs. Studies are also limited by the nature of the definitions they use. This study did not include state or county mental hospitals with units for mentally retarded people. The CRF sample did not include generic facilities such as board and care homes unless they were specially licensed for mentally retarded persons.

The environmental assessment tool used in this study was subject to limitations. Interviewers were required to subjectively note the homelike quality of facilities. Although every interviewer was carefully trained, some biases were no doubt present. The reliability of the Characteristics of the Treatment Environment (CTE) has been demonstrated in other studies (McLain, Silverstein, Hubbell, & Brownlee, 1975). The present study averaged several CTE and CPE scores for each facility, eliminating possible variation between units or staff shifts.

Implications

In a two-tailed test of Pearson's  $r$  ( $p \leq .001$ ), these sample data showed only a slight correlation between physical and treatment environments within facilities. The correlation among CRFs (.29) was slightly higher than among PRFs (.22); nevertheless, the variance explained in either case was low. It would seem that more positive treatment environments do not necessarily result from more pleasant or homelike surroundings. This finding implies that community homes are not necessarily predisposed to provide more client autonomy and activity.

Client outcomes of community care have often been predicated upon three types of variables: preplacement factors (i.e., degree of retardation), facility characteristics (i.e., size or location), or facility type (e.g., room and board, supervised living). Ultimately, the aim of further research would be to show that certain adaptive behaviors are predictable from certain treatment environment characteristics. Relationships might be found between staff/resident ratios, family involvement in the planning of treatment goals, staff satisfaction, and facility ownership, or a number of other variables reflecting characteristics of a facility and characteristics of the treatment environment.

The deinstitutionalization process has promoted the development of normalized community residential alternatives for increasing numbers of retarded people, and it is expected that this trend will continue. It is believed that environmental attributes, more psychosocial than physical, are responsible for the happiness, learning, and morale of

mentally retarded persons. However, if the aim is to scientifically translate behavior/environment relationships into living spaces, and then into desired individual outcomes, some greater understanding of our motives and refinement of our technique is necessary.

Research focusing on the environmental assessment of residential facilities has usually emphasized discrete components of the psychosocial or physical environment. This study employed a global assessment which might eventually lead to functional characterizations of PRF and CRF environments. Through further research, it is possible that environmental assessments can be refined and combined through appropriate intervention programs to improve the quality of life for retarded citizens.

## REFERENCES

- Allon, R., Grahm, J. R., Lilly, R. S., & Friedman, I. Comparison of factor structures of patient and staff responses on the characteristics of the treatment environment scale. Journal of Clinical Psychology, 1971, 27, 385-390.
- Altman, I. The environment and social behavior. Monterey, CA: Brooks/Cole Publishing Company, 1975.
- Balla, D. A. Relationship of institution size to quality of care: A review of the literature. American Journal of Mental Deficiency, 1976, 81, 117-124.
- Barker, R. G., & Schoggen, P. Qualities of community life: Methods of measuring environments and behavior applied to an American and English town. San Francisco: Jossey-Bass Inc., 1973.
- Bjaanes, A. T., & Butler, E. W. Environmental variation in community care facilities for mentally retarded persons. American Journal of Mental Deficiency, 1974, 78(4), 429-439.
- Brown, J. S., & Guard, K. A. The treatment environment for retarded persons in nursing homes. Mental Retardation, April 1979, 17, 77-82.
- Budde, J. F. Analyzing and measuring deinstitutionalization across residential environments with Alternative Living Environments Rating and Tracking System (ALERT). Lawrence, KS: University of Kansas, Affiliated Facilities Publications, 1976.
- Butler, E. W., & Bjaanes, A. T. A typology of community care facilities and differential normalization outcomes. In P. Mittler & J. deJong (Eds.), Research to practice in mental retardation: Care and intervention, Vol. 1. Baltimore: University Park Press, 1977.
- Butler, E. W., & Bjaanes, A. T. Activities and the use of time by retarded persons in community care facilities. In G. Sackett (Ed.), Observing behavior: Theory and application in mental retardation, Vol. 1. Baltimore: University Park Press, 1978.
- Cleland, C. C., & Sluyter, G. V. The heterobedfast ward: A model for translating normalization into practice. Mental Retardation, February 1973, 11(1), 44-46.

- Craik, K. H. Environmental psychology. In K. H. Craik (Ed.), New directions in psychology, Vol. 4. New York: Holt, Rinehart & Winston, 1970.
- Dwybad, G. Architecture's role in revitalizing the field of mental retardation. British Journal of Mental Subnormality, June 1970, 16 (30), 45-48.
- Ellsworth, R., Maroney, R., Klett, W., Gordon, H., & Gunn, R. Milieu characteristics of successful psychiatric treatment programs. American Journal of Orthopsychiatry, 1971, 41, 427-441.
- Eyman, R. K., Demaine, G. C., & Lei, T. Relationship between community environment and resident changes in adaptive behavior: A path model. American Journal of Mental Deficiency, January 1979, 83(4), 330-338.
- Flynn, R. J., & Nitsch, K. E. (Eds.). Normalization, social integration and community services. Baltimore: University Park Press, 1980.
- Frederickson, N. Toward a taxonomy of situations. American Psychologist, February 1972, 27, 114-123.
- Goffman, E. Asylums: Essays on the social situation of mental patients and other inmates. New York: Doubleday, 1961.
- Griffin, J. C., Landers, W. F., & Patterson, E. T. Behavioral architecture: Effects of the physical environment on the behavior of the retarded. Unpublished manuscript, Research and Training Center in Mental Retardation, Texas Technical University, 1974. (a)
- Griffin, J. C., Landers, W. F., & Patterson, E. T. Toward behavioral architecture: Effects of crowding on the behavior of the retarded. Unpublished manuscript, Research and Training Center in Mental Retardation, Texas Technical University, 1974. (b)
- Gump, P. V. The behavior setting: A promising unit for environmental designers. Landscape Architecture, January 1971, 61, 130-134.
- Gunzberg, H. C. The physical environment of the mentally handicapped VII: 39 steps toward normalizing living practices in living units for the mentally retarded. British Journal of Mental Subnormality, 1973, 19(37), 91-99.
- Gunzberg, H. C., & Gunzberg, A. L. Mental handicap and physical environment: The application of an operational philosophy to planning. New York: Macmillan, 1973.

- Hauber, F. A., Bruininks, R. H., Wieck, C., Sigford, B., & Hill, B. 1978-1979 in depth national interview survey of public and community residential facilities for mentally retarded persons: Methods and procedures. Minneapolis: Department of Psycheducational Studies, University of Minnesota, 1981.
- Hunt, D. E. Person environment interaction: A challenge found wanting before it was tried. Review of Educational Research, Spring 1975, 45(2), 209-230.
- Jackson, J. Factors of the treatment environment. Archives of General Psychiatry, 1969, 21, 39-45.
- James, F. E., Spencer, D. A., & Hamilton, M. Immediate effects of improved hospital environment on behavior patterns of mentally handicapped patients. British Journal of Psychiatry, June 1975, 126, 577-581.
- Jelinek, R. A methodology for the evaluation of quality of life and care in long term facilities. Springfield, VA: National Technical Information Service, U.S. Department of Commerce, 1974.
- Kahn, L. Fundamental processes of environmental behavior. In J. Long, C. Burnelle, W. Moleski, & D. Vachon (Eds.), Designing for human behavior. Stoudsburg, PA: Dowden, Hutchinson, & Ross Inc., 1974.
- King, R. D., Raynes, N. V., & Tizard, J. Patterns of residential care: Sociological studies in institutions for handicapped children. London: Routledge & Kegan Paul, 1971.
- Knight, R. C. Weitzer, W. H., & Zimring, C. M. Opportunity for control and the built environment: The ELEMR project. Amherst, MA: University of Massachusetts, Environment and Behavior Research Center, 1978.
- Kreger, K. Compensatory environment programming for the severely retarded behaviorally disturbed. Mental Retardation, 1971, 9, 29-32.
- Landesman-Dwyer, S., Stein, J., & Sackett, G. P. Group homes for the developmentally disabled: A behavioral and ecological description. In P. Mittler & J. deJong (Eds.), Research to practice in mental retardation: Care and intervention, Vol. 1. Baltimore: University Park Press, 1976.
- Levy, E., & McLeod, W. The effects of environmental design on adolescents in an institution. Mental Retardation, April 1977, 15, 28-32.
- McCormick, M., Balla, D., & Zigler, E. Resident-care practices in institutions for retarded persons. American Journal of Mental Deficiency, 1975, 80, 1-17.

- McGee, M. G., & Woods, D. J. Use of Moos' Ward Atmosphere Scale in a residential setting for mentally retarded adolescents. Psychological Reports, October 1978, 43(2), 580-582.
- McLain, R. E., Silverstein, A. B., Brownlee, L., & Hubbell, M. Measuring differences in residential environments among institutions for retarded persons. Psychological Reports, 1977, 11, 264-266.
- McLain, R. E., Silverstein, A. B., Hubbell, M., & Brownlee, L. Characterization of residential environments within a hospital for the mentally retarded. Mental Retardation, August 1975, 13, 24-27.
- McLain, R. E., Silverstein, A. B., Hubbell, M., & Brownlee, L. Comparison of the residential environment of state hospitals for the retarded clients with those of various types of community facilities. Journal of Community Psychology, July 1977, 282-287.
- Moos, R. The generality of questionnaire data ratings by psychiatric patients. Journal of Clinical Psychology, 1970, 26, 234-236.
- Moos, R. Revision of the Ward Atmosphere Scale (WAS). Palo Alto, CA: Stanford University, Department of Psychiatry, Social Ecology Laboratory, 1971.
- Moos, R. Assessment of the psychosocial environments of community oriented psychiatric treatment programs. Journal of Abnormal Psychology, 1972, 79, 9-18.
- Moos, R. Conceptualizing educational environments (Seaday Papers: On problems of development in Southeast Asia). New York: 1973.
- Moos, R. Systems for the assessment and classification of human environments: An overview. In R. H. Moos & P. M. Insel (Eds.), Issues in social ecology: Human milieu. Palo Alto, CA: National Press Books, 1974.
- Moos, R., & Houts, P. Assessment of the social atmospheres of psychiatric wards. Journal of Abnormal Psychology, 1968, 73, 595-604.
- Moos, R., & Insel, P. (Eds.). Issues in social ecology: Human milieu. Palo Alto, CA: National Press Books, 1974.
- Moos, R., & Otto, J. The community-oriented programs environment scales: A methodology for the facilitation and evaluation of social change. Community Mental Health Journal, February 1972, 8(1), 28-37.

- Moos, R., & Schwartz, J. Treatment environment and treatment outcome. Journal of Nervous and Mental Disease, 1972, 154, 264-275.
- Moos, R., Shelton, R., & Petty, C. Perceived ward climate and treatment outcome. Journal of Abnormal Psychology, October 1973, 82, 291-298.
- Nirje, B. The normalization principle and its human management implications. In R. Kugel & A. Shearer (Eds.), Changing patterns in residential services for the mentally retarded. Washington, DC: President's Committee on Mental Retardation, 1976.
- O'Connor, G. Home is a good place: A national perspective of community residential facilities for developmentally disabled persons. Monograph of the American Association of Mental Deficiency, 1976, 2.
- Pankratz, L. Assessing the psychosocial environment of halfway houses for the retarded. Community Mental Health Journal, Fall 1975, 11(3), 341-345.
- Penk, W., & Robinowitz, R. Interrelations among measures of environment and personality: COPEs and the MMPI. Dallas, TX: Psychology Service VET Administration Hospital, 1975.
- Pierce, W. D., Trickett, E. J., & Moos, R. H. Changing ward atmosphere through staff discussion of the perceived ward environment. Archives of General Psychiatry, January 1972, 26(1), 35-41.
- Pratt, M. W., Luszcz, M. A., & Brown, M. E. Measuring dimensions of the quality of care in small community residences. American Journal of Mental Deficiency, 1980, 85(2), 188-194.
- Price, R. H., & Moos, R. H. Toward a taxonomy of inpatient treatment environments. Journal of Abnormal Psychology, 1975, 84, 181-188.
- Proshansky, H., Ittelson, W., & Rivlin, L. (Eds.). Environmental psychology: Man and his physical setting. New York: Holt, Rinehart & Winston, 1970.
- Raynes, N., Pratt, M., & Roses, S. Organizational structure and the care of the mentally retarded. London: Croon-Helm, 1979.
- Reizenstein, J. E., & McBride, W. A. Design for normalization: A social environmental evaluation of a community for mentally retarded adults. Journal of Architectural Research, March 1977, 6(1), 10.
- Schwartz, M. What is a therapeutic milieu? In M. Greenblatt, D. J. Levinson, & R. H. Williams (Eds.), The patient and the mental hospital. Glencoe, IL: Free Press, 1957.

- Silverstein, A. B., McLain, R. E., Hubbell, M., & Brownlee, L. Characteristics of the treatment environment: A factor-analytic study. Educational and Psychological Measurement, 1977, 37, 367-371.
- Sommer, R. Personal space: The behavioral basis of design. Englewood Cliffs, NJ: Prentice Hall, 1969.
- Spencer, D. A. Redevelopment of a hospital for the mentally handicapped. Nursing Times, July 1974, 70(30), 1172-1173.
- Stern, G. People in context: Measuring person-environment congruence in education and industry. New York: Wiley, 1970.
- Tizard, J. Quality of residential care for retarded children. In J. Tizard, I. Sinclair, & R. V. G. Clarke (Eds.), Varieties of residential experience. London: Routledge & Kegan Paul, 1975.
- Wicker, A. W. Processes which mediate behavior: Environment congruence. Behavioral Science, 1972, 17(3).
- Wohlwill, J. The emerging discipline of environmental psychology. American Psychologist, 1970, 25, 303-312.
- Wolfensberger, W. The principle of normalization in human services. Toronto: National Institute on Mental Retardation, 1972.
- Wolfensberger, W. The origin and nature of our institutional models. In R. Kugel & A. Schearer (Eds.), Changing patterns in residential services for the mentally retarded. Washington, DC: President's Committee on Mental Retardation, 1976.
- Wolfensberger, W., & Glenn, L. PASS: A method for the quantitative evaluation of human services. Toronto: National Institute on Mental Health sponsored by the Canadian Association for the Mentally Retarded, 1973.
- Zeisel, J. Behavioral research and environmental design: A marriage of necessity. Design and Environment, 1970, 1(1), 50-51, 64-66.
- Zigler, C., & Balla, D. Impact of institutional experience on the behavior and development of retarded persons. American Journal of Mental Deficiency, 1977, 82, 1-11.

Phase I	Phase II	Phase III	
List of all public residential facilities for mentally retarded persons compiled by National Association of Superintendents of Public Residential Facilities for the Mentally Retarded	All public residential facilities surveyed, providing data on institution, client and staff characteristics (264 facilities surveyed, 100% response rate)	Interviews conducted with administrative staff of sample facilities. Data collected on facility characteristics, staff composition, rates of turnover, other institutional characteristics	One year follow-up on all administrators interviewed in Phase II (mail)
Identification of all known facilities potentially offering residential services to mentally retarded persons compiled from a variety of sources including state licensing agencies and other public and private agencies and organizations	Survey form sent to each identified facility (N=10,271) to determine if served mentally retarded clients and, if so, to collect data on facility, client and staff characteristics (4427 non-public [community] residential facilities surveyed, 88% response rate)	Stratified random sample of facilities drawn with stratification based on size and location;	Interviews conducted with direct-care staff assigned to residents randomly selected within facility. Data collected on staff and resident characteristics and staff
	75 public residential facilities; 161 community residential facilities		One year follow-up on all direct-care staff interviewed in Phase II (mail)
			One year follow-up on all residents in Phase II (mail)

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RESIDENTIAL FACILITIES FOR  
MENTALLY RETARDED PEOPLE**SURVEY RESEARCH CENTER**  
INSTITUTE FOR SOCIAL RESEARCH  
THE UNIVERSITY OF MICHIGAN  
ANN ARBOR, MICHIGAN 48106

Interviewer's Label

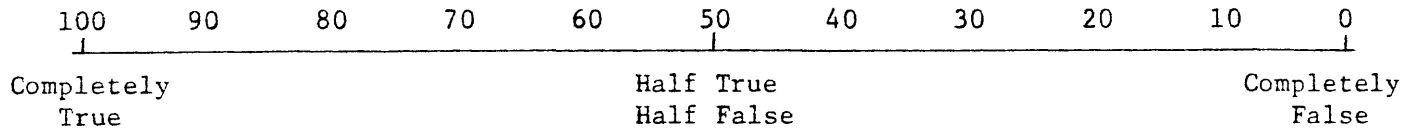
Facility ID: \_\_\_\_\_

Respondent ID: \_\_\_\_\_

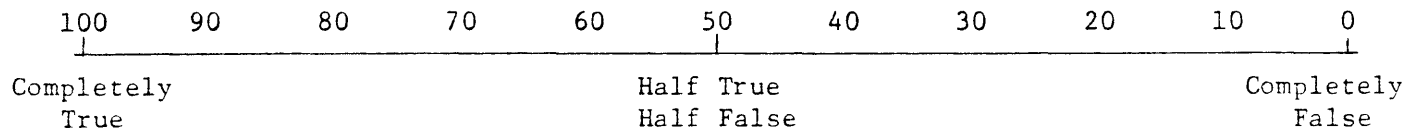
**CARE PERSONNEL**  
**SELF ADMINISTERED BOOKLET**



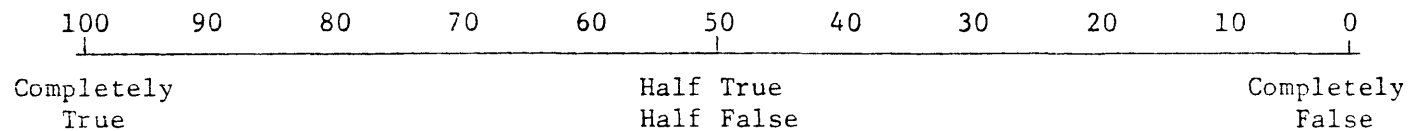
4. Residents are not encouraged to take very much responsibility for maintaining their own quarters.



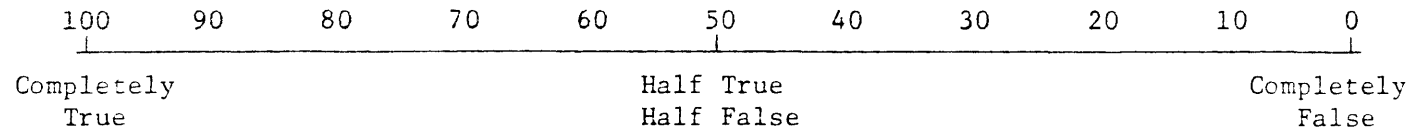
5. Whenever a resident is transferred from one living unit to another, the reasons for making the change are always explained to him.



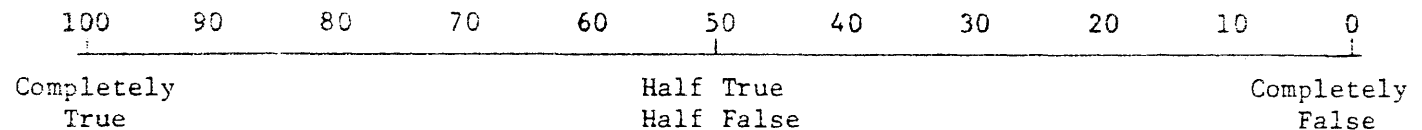
6. Residents are kept busy in the facility by frequent social, intellectual, or recreational activities conducted by members of the staff.



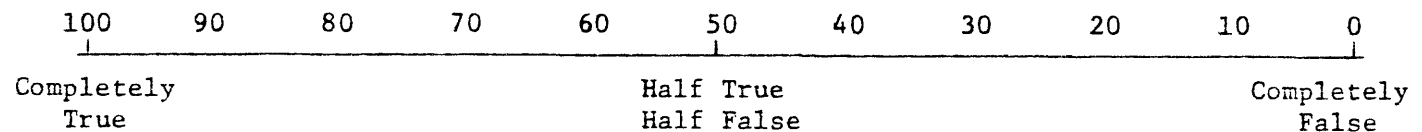
7. Residents have many opportunities to express themselves in music, painting, hobby-work or other creative activities.



8. All members of the staff participate regularly with residents in positive activities.



9. Members of the staff are constantly seeking ways of expanding residents' freedom of movement (about the facility, grounds and community).



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RESIDENTIAL FACILITIES FOR  
MENTALLY RETARDED PEOPLE

Project 12  
Fall, 1978



**SURVEY RESEARCH CENTER**  
INSTITUTE FOR SOCIAL RESEARCH  
THE UNIVERSITY OF MICHIGAN

1. Interviewer's Label

2. Facility ID: \_\_\_\_\_
3. Resident ID: \_\_\_\_\_
4. Care Person ID: \_\_\_\_\_
5. Your Interview Number: \_\_\_\_\_
6. Date of Interview: \_\_\_\_\_
7. Length of Interview \_\_\_\_\_  
(minutes)
8. Additional time for Forms: + \_\_\_\_\_  
(mins)
9. Total Time: \_\_\_\_\_  
(minutes)
10. Length of Edit \_\_\_\_\_  
(minutes)

## CARE PERSONNEL QUESTIONNAIRE

THE FOLLOWING STATEMENT MUST BE READ

Your participation in this research is completely voluntary.  
If we should come to any question you feel you can't answer  
just let me know and we'll go on to the next question.

INTERVIEWER: YOU MUST HAVE THE COMPLETED PERSONAL RECORD SHEET  
FOR THIS RESIDENT BEFORE TAKING THIS INTERVIEW.

SECTION L: PHYSICAL ENVIRONMENT IN AND AROUND FACILITY

INTERVIEWER: ASK CARE PERSON TO SHOW YOU AROUND THE LIVING QUARTERS OF THIS RESIDENT (FIRST INTERVIEW SUBJECT FOR THIS RESPONDENT) AND COMPLETE THE FOLLOWING SECTION UPON YOUR OWN DIRECT OBSERVATION.

L1. DINING AREA

1	2	3	4	5
<u>VERY HOME-LIKE</u>			<u>NON-HOME-LIKE</u>	
<p>Small dining area like that you would find in a typical family home. Seating for fewer than 8 available. Furnishings and dishes are designed for use in private home. Residents eat family style.</p>			<p>Large dining area with capacity to seat 25 or more. No attempt is made to subdivide the space in any way. Complete meal is brought to residents, or residents pick up complete meal cafeteria style. Furniture and dishes are designed for use by large numbers of people.</p>	

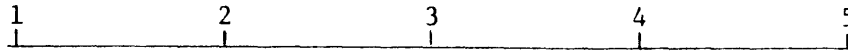
L1a. COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

L2. LIVING ROOM AREA

1	2	3	4	5
<u>VERY HOME-LIKE</u>			<u>NON-HOME-LIKE</u>	
<p>Living room is like that found in typical family home. Furniture is comfortable and designed for use in private home. Personal touches such as plants, books, magazines, TV, stereo or piano are present.</p>			<p>Large area with few or no furnishings. Furniture is designed for use by large numbers of people. No attempt at decoration or personal touches. TV or stereo may be kept locked or behind glass.</p>	

L2a. COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

L3. BATHROOM



VERY HOME-LIKE

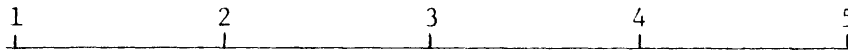
NON-HOME-LIKE

Private bathroom similar to that in a family home. Bathtub with shower, toilet, average-sized sink, medicine cabinet or other storage area for toothpaste, etc. Personal towels and storage for toothbrush, shampoo, etc.

Large in size and designed to accommodate several residents at one time with no provision for privacy in using tub/shower or toilets, sinks. No provision for personal storage of toothbrush, shampoo, etc.

L3a. COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

L4. BEDROOM



VERY HOME-LIKE

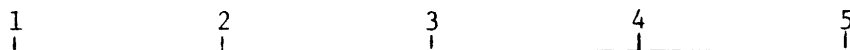
NON-HOME-LIKE

No more than one (for adults) or two (for children) persons share a bedroom. Private closet or storage space. Personally decorated, evidence of personal possessions. Rugs or carpet on floors. Evidence that other activities besides sleeping occur in the room, such as book on nightstand, a sewing basket, a desk, or a comfortable chair, etc.

More than 4 residents per room. Minimal furnishings and furniture is designed for use by large groups. Area is crowded. Locker or open closet. No personal closet. No personal possessions in evidence. Evidence that room is used only for sleeping.

L4a. COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

L5. YARD



VERY HOME-LIKE

Well landscaped with flowers, shrubs, trees. Equipment appropriate to age of residents is available.

NON-HOME-LIKE

No landscaping, no lawn or outdoor equipment. Also equipment is inappropriate for age of residents served. Poorly maintained.

CHECK HERE IF NO YARD AVAILABLE:

L5a. COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

L6. NEIGHBORHOOD: Look at the structures in the neighborhood immediately surrounding the facility and check as many boxes as apply.

- |  |  |
|--|--|
| 01. VACANT OR AGRICULTURAL LAND                    | 08. APARTMENT HOUSE (5 OR MORE UNITS, 3 STORIES OR LESS) |
| 02. TRAILER  | 09. APARTMENT HOUSE (5 OR MORE UNITS, 4 STORIES OR MORE) |
| 03. DETACHED SINGLE FAMILY HOUSE                   | 10. APARTMENT IN A PARTLY COMMERCIAL STRUCTURE           |
| 04. 2-FAMILY HOUSE, 2 UNITS SIDE BY SIDE           | 11. WHOLLY COMMERCIAL OR INDUSTRIAL STRUCTURE            |
| 05. 2-FAMILY HOUSE, 2 UNITS ONE ABOVE THE OTHER    | 12. PARK   |
| 06. DETACHED 3-4 FAMILY HOUSE                      | 13. SCHOOL OR OTHER GOVERNMENTAL BUILDING                |
| 07. ROW HOUSE (3 OR MORE UNITS IN AN ATTACHED ROW) | 97. OTHER (SPECIFY): _____<br>_____                      |