

BEHAVIOR SETTING UTILIZATION BY EMOTIONALLY DISTURBED COLLEGE STUDENTS

by 4589

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Statement of the Problem

The general purpose of this study was to explore the relationship of selected personality variables to the utilization of behavior settings. Clinical judgments and personality inventory scales, which measure the extent to which an S is action-oriented (AO) versus inhibited and overcontrolled, were examined in relation to the use of behavior settings.

Background and Theory

For the purpose of this study, a behavior setting can be defined as a precise location in space in which behavior occurs. The location can be a natural setting, or a man-made one. Any physical location has the potential to be a behavior setting. This definition is simpler than Barker's. Barker (1968) describes a behavior setting as having both structural and dynamic components. Structurally, a behavior setting has one or more standing behavior and milieu patterns, with the milieu circumjacent and synomorphic to the behavior. Dynamically, the behavior-milieu parts of a behavior setting, the synomorphs, have a specified degree of interdependence with parts of other behavior settings. Barker has also developed an operational definition of a behavior setting which takes into account regularity of persons, time and activity. Barker's definition is not used as it is a precise description of the behavior setting that does not attempt to allow for the interrelationship of personality variables, behavior and behavior setting. While the present research's definition does not conflict with Barker's its major emphasis is placed on the setting, behavior and personality variable interrelationship.

The behavior setting must be considered a very real variable in the personality-behavior relationship. Much research has been devoted to the search for relationships between personality and behavior, but no adequate account has been offered as to the role the behavior setting assumes in the complex inter-

action of personality and behavior. This study will attempt to account for the behavior setting as it relates to personality and behavior by noting which type behavior settings, such as social or private, are used by individuals manifesting certain personality inventory scale scores.

AO Behavior. That personality should have a direct impact on behavior has never really been challenged. It is one of the psychological "givens". Explicit or implied in every personality theory and personality test is that knowledge of personality will enhance the understanding and prediction of behavior. The concept of AO behavior as developed here may be novel, but it is closely related to conceptions of behavior that go back many decades. AO behavior is that which introduces least delay in expression of impulses. Personality types which would seem to display AO behavior are those classified as hysterical, character disorders, impulsive or acting out individuals. Controlled behavior is that which introduces more delay between feeling and action. Individuals diagnosed as schizoid, schizophrenic and obsessive-compulsive display overcontrolled behavior. AO behavior is impulsive, extraverted, expansive and socially directed. Controlled behavior, on the other hand, is inhibited, constricted and socially constrained. It would appear that the concept of AO behavior is closely related to Carl Jung's concepts of extraversion and introversion (1933). However, the conception of AO behavior seems to be unique, though related to many other psychological theories.

The present study's psychological roots stem from many branches of research. Personality theorists, psychometricians and experimental psychologists all have concerned themselves with the prediction of behavior by knowledge of personality variables. As theorists theorized on the basis of clinical observations, experimentalists were busy trying to devise objective measures with which to assess personality dimensions. Intelligence was being assessed by objective measures and the IQ tests did a reasonable good job predicting how an individual would perform

in learning situations. This success appeared to give impetus to the quantitative personality assessment movement. In many instances the tests would attempt to measure a concept advanced by a particular personality theorist. The present study of AO behavior, then, is related to several areas of psychology: personality theories (psychoanalytic, personology, trait theories); measures which attempt to quantify these theories (personality tests, projective tests, factor analysis); and ecological psychology (methods of observing and recording behavior).

Psychoanalytic theories. The principal typological constructs of Freudian theory (Fenichel, 1945), whether they be related to character structure or psychopathology can be categorized as to whether they are predominately action-oriented or overcontrolled. Schizoid, depressive and obsessive-compulsive disorders are examples of the latter; hysteria, character disorders and manic states are examples of the former (Diagnostic and Statistical Manual, 1952).

Carl Jung, as was mentioned previously, recognized that every personality was characterized by one of two basic attitudes (1933). These attitudes, he claimed, were possessed by every individual in varying degrees, whether or not the individual was emotionally disturbed. The two major attitudes of the personality were introversion and extraversion. Jung stated that the introverted attitude is directed toward an inner, subjective world, while the extraverted attitude is oriented toward the external, objective world. The psychopathological groups which would be characterized by an extraverted attitude would be hysteria, character disorders and manic states. The psychopathological groups that would be characterized by an introverted attitude would be the schizoid personality, schizophrenia, depression, and obsessive-compulsive neurosis. While the terms extraversion and introversion are applied as representative of these psychopathological groups, it could be ventured that an introverted individual would display a low degree of AO while an extraverted individual would display

high AO. Jung further believed that only extraversion or introversion is dominant in the individual--the other attitude is present but it is unconscious or repressed. Jung held that the dominant attitude would govern the individual's behavior. The AO theory would deviate a bit here from Jungian theory. An individual could conceivably be intermediate on the AO continuum, and his behavior could best be described as "mixed". To rephrase the preceeding in Jung's terminology, the individual would not exhibit a dominant introverted or extraverted attitude. The concept of AO is not out of line with psychoanalytic theory. The typological constructs of Freudian theory can be, for the most part, dichotomized as to either high AO or low AO. Also high AO groups probably exhibit an extraverted attitude and low AO groups predictably would exhibit an introverted attitude.

The twenty needs Murray (1938) cites to account for motivation can likewise be categorized in AO terms. Among high AO needs are: achievement, affiliation, aggression, autonomy, counteraction, dominance, exhibition, nurturance, play, sentience and sex. Among low AO needs are: understanding, succorance, rejection, order, infavoidance, harmavoidance, deference, defendance, and abasement. Murray considers these twenty needs as motivation for specific behavior. AO behavior can be predicted by the needs an individual possesses. These twenty needs are the basis of the Edwards Personal Preference Schedule, an attitude inventory (Guilford, 1959). It can be ventured than an individual's score on the inventory would predict his AO. However, an objection to the Edwards' is that subjects tend to give themselves high marks on socially desirable items and low marks on the less desirable items--in other words, it is readily fakable. So while the Edwards Personal Preference Schedule would seem to be a test to indicate extent of AO, it probably would not be unbiased enough to be an adequate representation of behavior.

There has been some research that was concerned with assessing individual behavior in everyday tasks as a means of identifying personality variables. The concept of AO is an unique means of describing and rating behavior, but it is related to measures Allport and Vernon implemented to study physical expression because both methods attempt to link behavior traits to personality traits.

Allport and Vernon (1933) studied expressive behavior as a means of discovering sources of motivation and conflict in the individual. The subjects were involved in many tests providing measures of: drawing circles, squares and other figures; handwriting measures; strength of handshake (palm and finger pressure); length of stride; estimation of distances; speed of counting and reading; degree of motion during speech; voice intensity, and many other similar measures.

Allport and Vernon, in short, were measuring many behavior ways individuals have to express themselves. They found remarkable consistency among the various measures tested in the individual. In other words, individuals have certain characteristic ways of expressing themselves which would be called a "style". This style manifests itself in almost every way an individual expresses himself. Allport and Vernon offer three group factors they consider responsible for the intercorrelation of "expression" measures. The first factor was called the areal group factor, which included these variables: total writing area, area of foot squares, over-estimation of angles. The second factor is the centrifugal group factor and included: verbal speed, over-estimation of distance from body with legs, underestimation with arms; and underestimation of weights. This factor is interpreted as one of a general outward tendency of freedom of expressive movement.. The third factor is the group factor of emphasis and includes: pressure of hand, tapping pressure, voice intensity and movement during speech.

All three factors in this expressive movement study could be viewed as

corresponding to the A0 dimension. An individual ranking high in the areal group factor, the centrifugal group factor and the general outward tendency factor probably would display high A0. On the other end of rankings in these three factors, individuals displaying low A0 quite possibly would be found. Studies such as Allport and Vernon's support the theory that A0 is a dimension that can be relevantly applied to many other personality and behavior theories.

There are projective techniques for assessing personality that employ graphic expressive movement methods. Such a test is the Bender-Gestalt Test (Bender, 1946), which is related in theory to Allport and Vernon's expressive movement research in that personality structure is inferred from physical expression or products of physical expression. The relation of such techniques to A0 is the common belief that behavior study is a means to gain knowledge about personality structure.

In the Bender-Gestalt Test (Halpern, 1959), nine simple figures in line drawings are to be reproduced by the examinee. The reproduced figures are then studied for implications regarding personality. For example, a psychopathic person will tend to simplify the pattern to save himself effort. The psychopath's performance will be hasty and impulsive. He will also leave much space between the figures, which represents psychopath's lack of control when it comes to inhibiting himself. On the other hand, a too perfect performance in copying the figures indicates too much control in reproduction. This sort of performance is obtained from obsessive-compulsive, depressed and schizoid persons, trying very hard to control impulses and being very self-critical. If the gestalt is seen and reproduced as a number of separate entities, this represents a splitting or disassociative tendency possessed by schizophrenics. Ss who leave space at a point where lines should meet typically are unable to complete a task and experience self-doubt and anxiety. Rounded angles indicate emotional impulsiveness,

while sharpened angles indicate control that overlies insecurity and conflict. Faint lines point to considerable anxiety, while heavy lines which eat into the paper indicate aggression and hostility. Thus, in many ways, the Bender-Gestalt Test is like the present study in theory--both attempt to discover information concerning personality variables by observing and judging behavior. The psychopath's performance on the test would indicate high A0. The performance of schizophrenics and schizoids presentation on the test would, on the other hand, indicate low A0. It would seem that behavior and behavioral products really manifest personality structure, even if the behavioral task is copying a simple figure.

Raymond Cattell (1950) has identified fourteen or fifteen traits by means of factor analysis that can also imply A0 of varying degrees. Of these traits, Cattell has repeatedly confirmed six, each of which has a low A0 and a high A0 quality: Surgency (high A0) versus Desurgency (Low A0); Bohemian unconcernedness (low A0) versus Conventional Practicality (high A0); Cyclothymia (high A0) versus Schizothymia (low A0); Adventurous Cyclothymia (high A0) versus Withdrawn Schizophrenia (low A0); General Mental Capacity (high A0) versus Mental Defect (low A0); and Socialized Cultural Mind (high A0) versus Boorishness (low A0). Personality traits such as Cattell's and Allport and Vernon's are readily discussed in terms of A0. A0 in some ways, appears to have universal psychological meaning because of the versatility of its application.

Eysenck (1960) is another proponent of the factor analytic method of finding and naming dimensions of personality. Using this approach, he has distinguished between normal and abnormal subjects with respect to behavior and test performances over a two-dimensional grid. The two dimensions are neuroticism and extraversion-introversion. An individual high on neuroticism and extraversion would in all probability be diagnosed as hysteric; in terms of this study, such

an individual would be expected to exhibit high AO. An individual high on neuroticism and introversion, however, would be termed anxiety state or reactive depression and would likely possess low AO. Then an individual intermediate on the extraversion-introversion scale, but high on neuroticism will be termed mixed neurosis; such an individual would probably exhibit moderate AO.

J. P. Guilford has used factor analysis extensively in his research, sometimes as the basis for a personality inventory such as his STDCR (Guilford, 1959). The main objective of the STDCR factorial inventory is to provide scores for primary traits of personality (or separate factors). These traits can also be classified in terms of AO. The factors STDCR represent, and their AO quality are as follows:

- S Social introversion; seclusiveness (low AO)
- T Thinking introversion; reflectiveness (low AO)
- D Depression, unhappiness, pessimism (low AO)
- C Cycloid disposition; emotional instability (mixed AO; intermediate)
- R Rhythymia; carefreeness, happy-go-lucky (high AO)

The opposite of the R factor would be self-control and restraint, which would indicate low AO. The factors D and C reflect neurotic tendencies or emotional maladjustment and could represent any degree of AO. Then, finally, S, T, and R represent three varieties of introversion-extraversion.

The concept of AO behavior further illuminates the behavioral disposition of the above factor types. It becomes increasingly obvious that AO includes behavior of many forms and that numerous personality traits exhibit AO of varying degrees. None of the previously mentioned character dispositions would exclude the possibility of an AO dimension of personality.

On the basis of scores on personality inventories, such as the STDCR, predictions concerning the AO of an individual can be made. However, of all the

personality inventories, the MMPI is the most widely used in clinical practice (Guilford, 1959). At the time work was begun on the MMPI, its main purpose was to diagnose individuals in the various Krapelinian categories of pathology (Dahlstrom and Welsh, 1960). It was not expected that the score categories would represent pure traits, as it was apparent that most patients show mixtures of symptoms from different diagnostic categories. However, utilizing MMPI codes for description of individuals obtaining various test profiles provides a basis for objective personality evaluation. The MMPI scale scores can also be used to make AO predictions and evaluations. High scorers on the Hy, Pd, and Ma scales probably exhibit relatively high AO. On the other hand, high scorers on the D, Mf, Pt, Sc, and Si probably exhibit relatively low AO.

In none of the above personality theories or inventories are the interrelationships of behavior setting, personality, and behavior considered. The present study tries to explore the complex interrelationships of personality, behavior and the behavior setting. There is not a total void of research in this area, however, what little there is seems to give insufficient emphasis to the role of personality.

One study which attempted to ascertain the relationship of the setting to personality and behavior involved the development of a situational test. During World War II the Assessment Staff of the Army Office of Strategic Services (1948) was screening candidates for secret, difficult and dangerous missions. The situational test was one of the most frequently used to observe how individuals would respond under a certain set of circumstances. The situational test presented to the person being tested a life-like but contrived situation involving social interaction. The situations were selected because they were felt to bring out individual differences in personality. The persons being tested were aware that they were being tested, but they were not aware of what was being tested.

The rating of the behavior of the examinees was done by observers who took notes. There was little evidence to support the validity of the situational tests the OSS conducted. This is considered to be due to the fact that the military work required of the men involved was quite diverse and the circumstances were seldom replicated.

However, the theory behind situational tests is sound. To attempt to predict or assess behavior without first considering the effect of or demands of the behavior setting is unrealistic, just as is to attempt to predict or assess behavior without knowledge and understanding of personality dynamics (Goffman, 1956).

Ecological psychologists have emphasized the role of environment in the study of behavior. However, ecological psychology has not accounted for personality in the study of the relationship of behavior and environment. It is the purpose of the present study's A0 concept to integrate the assessment of personality variables and use of behavior settings to understand and predict behavior.

Present Approach

This study owes its emphasis on the behavior setting as a dynamic component in behavior to ecological psychology. Ecological psychology is concerned with the interaction of behavior and environment. Representative of research concerning physical environment effects upon behavior would be Roger Barker's dissection and description of real life environment in which behavior occurs. At the Midwest Psychological Field Station located in a small northern Kansas town, Barker and his colleague, Herbert Wright studied the behavior and living conditions of the children of the community in great detail (Barker, 1968). The continuous records of behavior record what Barker refers to as the stream of behavior of the individual. The amount of behavior observed and recorded necessitated developing of behavioral units. The major unit is termed the behavior setting. This study attempts to ascertain whether stylistic aspects of personality relate to the type

of behavior setting used and their frequency of use. It is felt that with the knowledge of use of behavior settings comes knowledge about personality structure; in particular, the individual's AO orientation.

Barker's research and techniques have been the impetus of other research trying to account for ecological variables in the observation of behavior. Willems and Vineberg (1969) have adopted Barker and Wright's technique of recording the behavior stream to observe actions of patients inside a mental hospital. Willems and Vineberg essentially wanted documentation of what is commonly assumed--namely that as a patient advanced in the course of treatment, his behavioral day becomes more diversified. Their findings confirmed the assumption. For instance, Willems and Vineberg found that "early" patients were twice as idle as "advanced" patients. Also advanced patients utilized many more behavioral settings than did early patients--the advanced patients functioned in a more diversified environment. Willems and Vineberg did not concern their research with the prediction of behavior of different psychopathological groups as this study does. Instead, they contrasted the behavior of more disturbed with less disturbed patients. From the results of their study it appears that more disturbed patients are less high on the AO continuum than are less disturbed patients.

Clinically oriented research has unfortunately neglected the interaction of behavior and environment outside of laboratories or hospitals for the mentally ill (Barker, 1968). While Barker and Wright's technique of directly observing and recording behavior of an individual for an entire day outside of laboratories and hospitals is undeniably thorough, it is undeniably impractical. The number of observers used is triple the number of people observed (Willems and Vineberg, 1969). This is necessarily expensive, severely limits the amount of people that can be observed, and makes extensive observations a very tedious, long and involved procedure. Also the knowledge that behavior is being

observed would have an effect on behavior whether the effect is conscious or unconscious.

Another method has been developed to obtain accounts of behavior which appears to be more efficient than Barker and Wright's (Sachson, 1970). This technique was developed to record behavior of students in an on-campus rehabilitation living unit at Kansas State University. This living unit was comprised of a group of emotionally disturbed college students residing with a group of normal volunteer students (Sinnott and Niedenthal, 1968). Staff members (Sachson, Rappoport, Sinnott, 1970) developed the Activity Record (AR) to record these students' behavior, as well as a group of control subjects living outside the living unit. The AR procedure is one in which an S relates not only his activities, but the setting, the number of people contacted, and the time spent engaging in the particular activity, from the time he awakens, to the time he goes to bed. The AR is valuably different from direct observations in that it can be used with Ss who cannot be observed directly. The Ss typically report the preceeding day's activities to the interviewer. The AR has been used to measure such variables as Ss number of contacts, time spent alone and time spent in conversation. However, the AR was designed so that use of behavior settings could also be investigated.

Specific aims. It is this study's aim to explore how emotional disturbances or personality traits affect use of environment or vice versa. It is conceivable that a person's behavior in a particular environment may reveal much about his personality and psychopathology. Perhaps certain personality factors effect use of physical space. If the above is so, then it is possible that professional persons aware of a patient's psychopathology and well acquainted with him could predict his use of physical space. Groups diagnosed as schizoid, schizophrenic and obsessive-compulsive could be predicted to display relatively low movement in their use of physical space. For instance, these groups would

spend less time in socialization areas of the dormitory, campus and community, and more time in their rooms and watching television than would groups predictably displaying high movement. Among groups characterized by high movement, quite probably, would be individuals classified as hysterics, character disorders, and manics. The latter groups, predictably, are more likely to use a greater number of settings and are not so likely to spend great amounts of time in isolated areas as are predicted low movement groups.

It has been shown how personality variables and behavior can be described in the terminology of A0. While the concept of A0 is unique to this study, it can be applied to many personality theories and personality inventories to categorize behavior. In view of this, an effort to investigate behavior without allowing for personality variables and the effect of behavior settings would seem shallow. The approach of the present research is both exploratory and integrative. The general purpose of this study is to explore the relationship of selected personality variables to the utilization of behavior settings. The relationship of clinical judgments and personality inventory scales will measure the extent to which an S is A0, and this will be examined in relation to behavior setting utilization of typically social or private settings.

Method

Previous Work Done

In a pilot study (Sherman, 1969), differences were shown to exist between a group of normal college students and a group of emotionally disturbed college students' use of the same physical space as detailed by the AR. The differences were observed not only in utilization of dormitory space, but also in utilization of off-campus and campus settings. The trends that appear in all three groups of settings are: normal volunteers spend more time in areas where socialization occurs than do clients. For example, volunteers spend slightly more time than the clients in others' rooms, apartments and dormitories. They report more time on the telephone, in the union cafeteria, lobby and lounges. The clients, on the other hand, spend more time in their rooms, watching television, in class, in counseling, at home, in other towns, and at bars. Since the pilot investigation revealed that abnormal Ss utilize space differently than normal Ss, further investigation in which specific personality variables were related to behavior in the field was designed.

Subjects

The Ss were the 46 client members of the rehabilitation living unit of Kansas State University over six semesters which are: Fall 1966, Spring 1967, Fall 1967, Spring 1968, Fall 1968, and Spring 1969. This N includes the client group used in the pilot study. The abnormal Ss were selected to enable examination of differences between different diagnostic groups' use of the same physical space. Also a previous factor analysis showed a severity of disturbance factor accounting for a large part of the common variance. Hopefully the use of abnormal Ss only would eliminate this source of variation. The diagnostic classification of the Ss is given in Table 1. The Ss were asked to consider living in the unit by university psychotherapists who felt each would benefit

TABLE 1

Diagnostic Classification of Subjects

Schizoid personality	25
Latent schizophrenia	4
Residual schizophrenia	1
Schizophrenic reaction	1
Adjustment reaction	1
Anxiety reaction	5
Passive dependent personality	2
Obsessive compulsive personality	1
Hysteria	1
Infantile personality	4
Antisocial personality	1
TOTAL	46

from the situation. All Ss were in psychotherapy while a member of the living unit. All of the Ss are students. The N of 46 is composed of 25 males and 21 females. All Ss lived in two corridors of a high-rise campus residence hall and shared common facilities such as the dining room, recreation room, lounges and lobby.

Task and Procedure

Activity records. ARs were obtained three times a semester from each S at the beginning, middle and end. Activities for a weekday and a weekend day were recorded for each of the three time periods, yielding six ARs per semester for each S. ARs for six semesters were obtained. Each S reported to the interviewer individually. The procedure was that of a free response situation. The S was requested to report to an interviewer the activities for the previous day in order of occurrence from the time he awakened to the time he went to bed. The S was also requested to relate the amount of time spent in the activity, the setting in which the activity occurred, and how many people he was with. Appendix 1 contains a sample AR.

The Ss were told not to relate activities which took less than five minutes. The smallest unit of time recorded for activities was five minutes for this reason. At times it was necessary for the interviewer to remind the S that he had not mentioned where the activity occurred or the time elapsed, but the procedure was not one of a question-answer interview. For Ss unfamiliar with the procedure, ARs took as long as forty minutes. When Ss became accustomed to the method, the time to relate and record activities was approximately 15 to 20 minutes.

The mean percent of total waking time spent in each reported setting for each S's total ARs was obtained. Not every setting reported was included in data for analysis. Excluded were the settings that were not mentioned very

often (e.g., once a semester) or were not mentioned by many people (e. g., one person a semester). For example, Student Union Movie is a behavior setting not included for analysis because of low frequency reported. Other setting categories were combined. For instance, Tuttle Creek, Rocky Ford, Bluemont Hill, Park and Zoo were compiled to comprise the "Park" setting.

MMPI. The Minnesota Multiphasic Personality Inventory (Dahlstrom and Welsh, 1960) was administered to each S upon joining the living unit. The scores were obtained for each S on the commonly used scales, which are the eight clinical scales, Masculinity-Femininity, the validity scales and the Ego Strength scale.

Clinical judgments. Judgments were obtained from three mental health professionals (a Ph.D.-Clinical ABEPP, a counseling psychologist and a board psychiatrist). All were intimately involved with the living unit program and were familiar with the history and recent incidences of emotional disturbance, psychopathology and the treatment of the Ss. Js were given written instructions requesting judgments of client project members on a scale measuring the extent to which an S is AO as opposed to being inhibited. The presence of impulsiveness, hysterical features and acting out; versus withdrawn, obsessive-compulsive, depressive or schizoid features were considered in the judgment process. Js were instructed to consider Ss characteristic behavior while a member of the living unit. A history of isolated episodes of impulsiveness, while possibly influencing judgments, were not to determine an S's assigned value. The time span Js were asked to judge as to AO behavior was only the time spent in the project.

Using the direct magnitude estimation method as reported by Sinnott and Stone (1969), Js were requested to scale each S on a dimension of AO behavior. Js were cautioned to scale each S according to his characteristic

behavior while in the project. One S was selected to serve as a comparison standard and the modulus was set at 100. Js were instructed to place an S considered half as AO as the standard at 50, twice as AO as the standard at 200. The complete written instructions given Js are included in Appendix 2.

Factor analysis. A factor analysis was done using the method of principal components with unity in the diagonals and a varimax rotation (Harman, 1967). There were 46 cases and 45 variables. A complete list of the variables is presented in Table 2. They include MMPI scale scores, and the mean percent of waking time spent in a variety of behavior settings in the residence hall, on campus, and off campus.

Hypotheses. The major hypothesis of the present work is that behavior setting utilization of emotionally disturbed students is predictable by mental health professionals acquainted with the psychopathology of the students.

It is specifically predicted that on the AO behavior continuum:

- (1) Ss judged as less AO in behavior will spend more time in their rooms, less time in socialization areas than will Ss judged as more highly AO and vice versa.
- (2) Ss with higher MMPI scale scores on Ma, Hy, and Pd will be judged as highly AO and will spend greater amounts of time in socialization areas than Ss with negative MMPI scale scores on the same scales. This is because high Ma scorers tend to be overactive and display emotional excitement (Dahlstrom and Welsh, 1960). High Hy scorers are described as rather uninhibited in social situations and rather visible. High Pd scorers tend to display unpredictable behavior and repeated disregard for social customs. The Ss with high MMPI scores on Si, Mf, D, Pt, and Sc will tend to be judged as controlled in behavior, and this will be reflected in their use of behavior settings. This is

TABLE 2
Factor Analysis Variables

1. J_1 <u>AO</u> ratings	23. Movie off-campus, weekend
2. J_2 <u>AO</u> ratings	24. Library, weekday
3. J_3 <u>AO</u> ratings	25. Shopping, weekend
4. Geometric mean of <u>AO</u> ratings	26. Other dormitory, weekend
5. Diagnosis	27. Union cafeteria, weekend
6. Sex	28. Outside recreation, weekend
7. Room, weekday	29. Work, weekend
8. Room, weekend	30. Bathroom, weekday
9. Other room, weekday	31. Bathroom, weekend
10. Other room, weekend	32. MMPI <u>L</u>
11. Lounge, weekday	33. MMPI <u>F</u>
12. Lounge, weekend	34. MMPI <u>K</u>
13. Lobby, weekday	35. MMPI <u>Hs</u>
14. Lobby, weekend	36. MMPI <u>D</u>
15. Dining room, weekday	37. MMPI <u>Hy</u>
16. Dining room, weekend	38. MMPI <u>Pd</u>
17. Basement recreation, weekend	39. MMPI <u>Mf</u>
18. Classroom, weekday	40. MMPI <u>Pa</u>
19. Restaurant, weekend	41. MMPI <u>Pt</u>
20. Bar, weekend	42. MMPI <u>Sc</u>
21. Friend's apartment, weekend	43. MMPI <u>Ma</u>
22. Park, weekend	44. MMPI <u>Si</u>
	45. MMPI <u>Es</u>

predicted because according to Dahlstrom and Welsh (1960), high Si scorers deny impulse and temptation--their behavior is characterized by social introversion. High Mf scorers are usually inhibited and conflicted interferes with overt expression of feeling. High D scorers are described as slow in action and thought. They tend to be withdrawn and retiring. High Pt scorers tend to be tense, constantly worried, and very indecisive. Finally high Sc scorers are seen as constrained, and not interested in external events or other people.

Results

Judgments

The ranges of AO used to scale Ss for each of the three Js were: 30 to 350; 60 to 200; and 10 to 190, and the corresponding ratios of highest to lowest value were, respectively, 3:35; 3:10; and 1:19. Scatterplots of the three possible combinations of Js showed linear relations at the extremes and an absence of relationships for the middle values. The scatterplots are shown in Figs. 1, 2, and 3. Product-moment correlations calculated from interjudge comparisons were as follows: .59, .56, .34. With 44 df, the first two correlations are significant beyond the .01 level, the third beyond the .05 level. However, the nature of the scatter of the ratings suggests that most of the Js' disagreement is concentrated in the middle of the plots. In other words, there is stronger agreement as to who was the most or least AO in behavior. As the plots show, Js with the larger range ratings were divided into thirds, while the Js with the lesser range ratings were divided in half. Yule's Coefficient of Association (Moroney, 1951) was then computed on the extreme groups of these AO judgments. The results of these tests reflect the agreement among Js on extreme AO groups--.88; .89; and .78. With this indication of interjudge reliability, a single scale, based on all three judgments was derived by obtaining geometric means across Js for each S's AO rating. The geometric mean was used to reduce the effect of extreme values.

Factors

The factor analysis program employed included a cut-off point for percent of accounted variance at 70%. Ten factors emerged and selected rotated factor loadings $\geq + .30$ may be seen in Table 3. The rotated factor loading of $\geq + .30$ was selected as an arbitrary limit for identifying a significant loading of a variable on a factor. The cut-off point for naming and identifying the factors

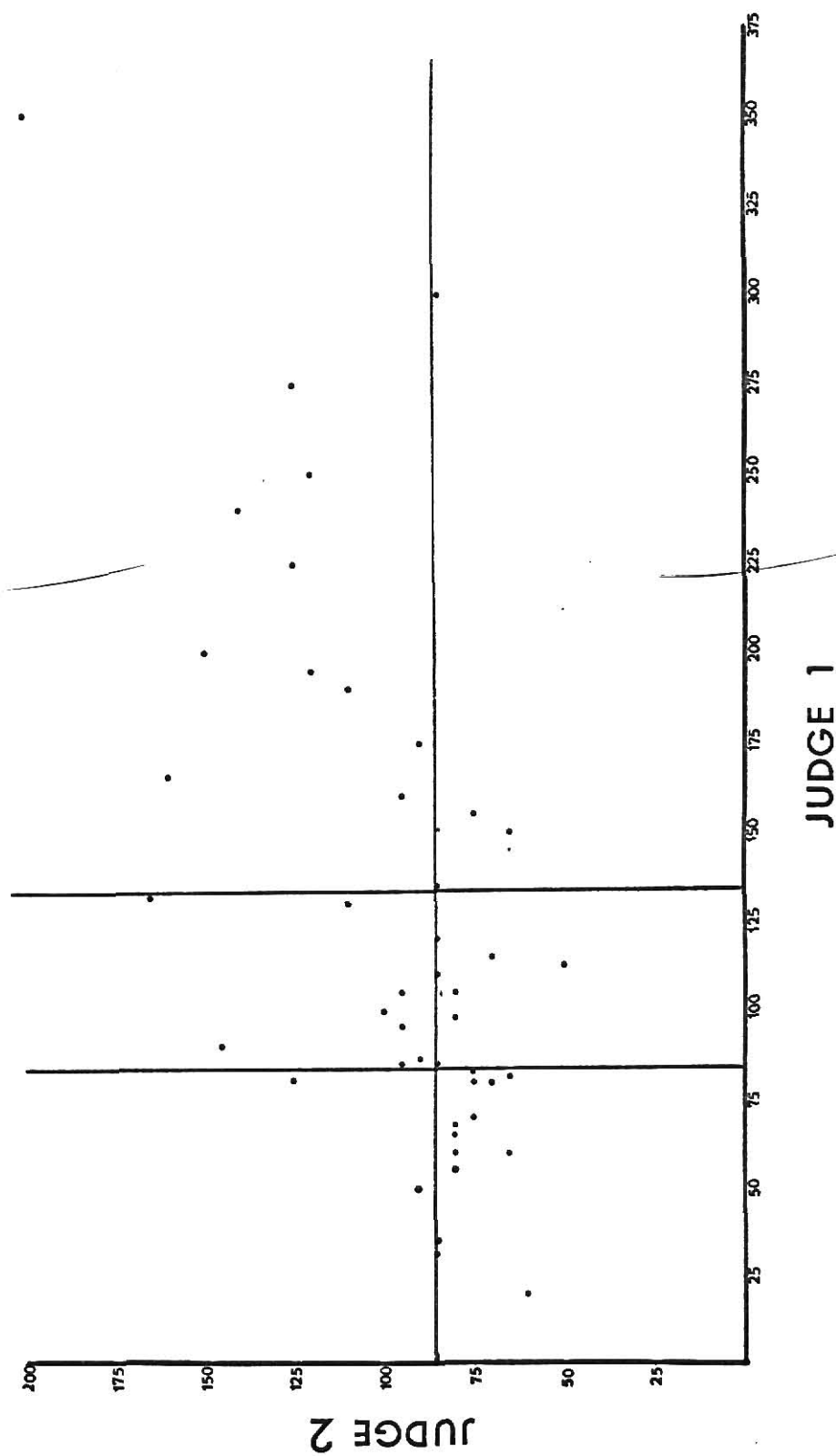


Fig. 1. Scatterplot of Judges 1 and 2 AO ratings.

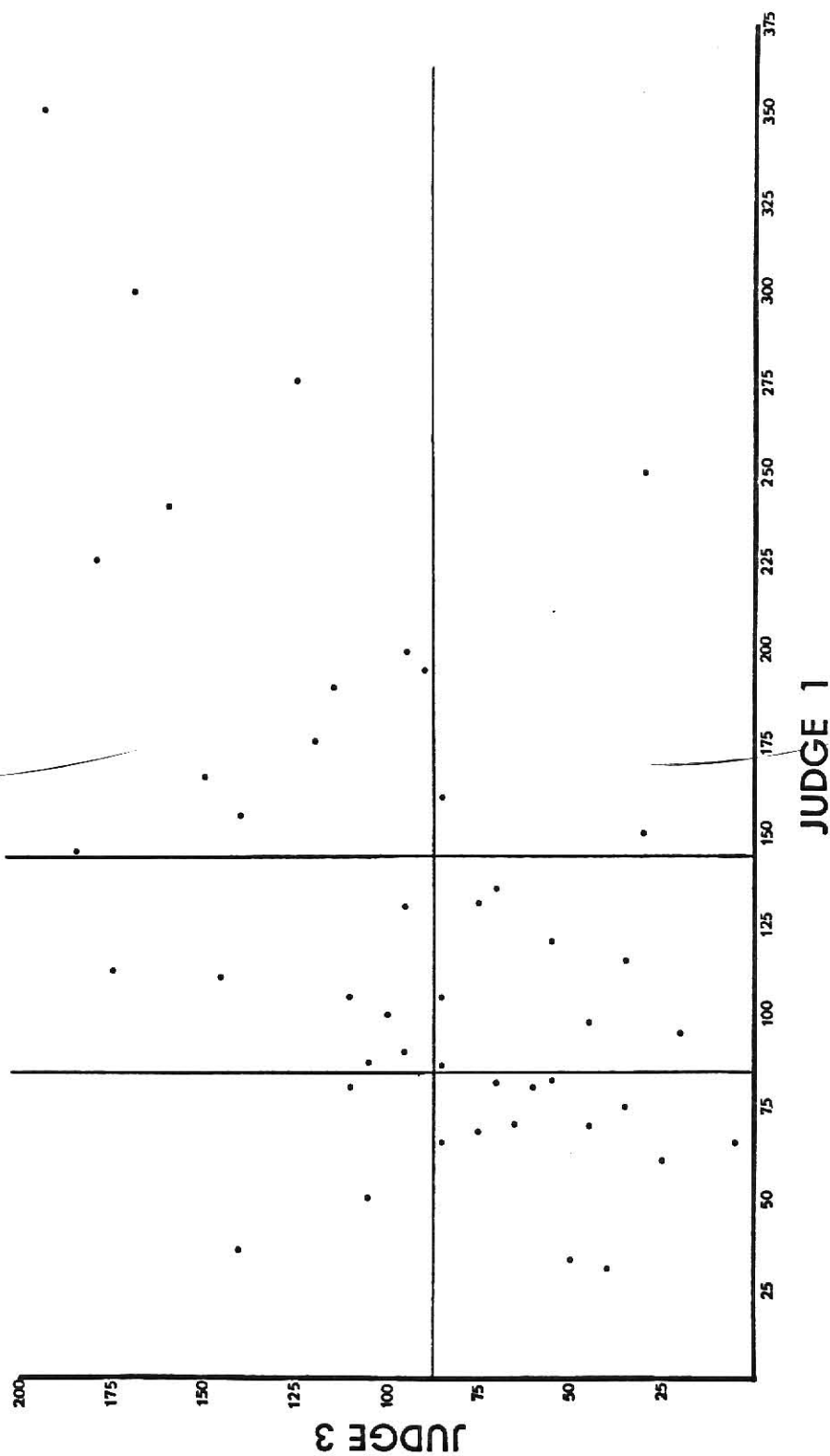


Fig. 2 Scatterplot of Judges 1 and 3 A0 ratings.

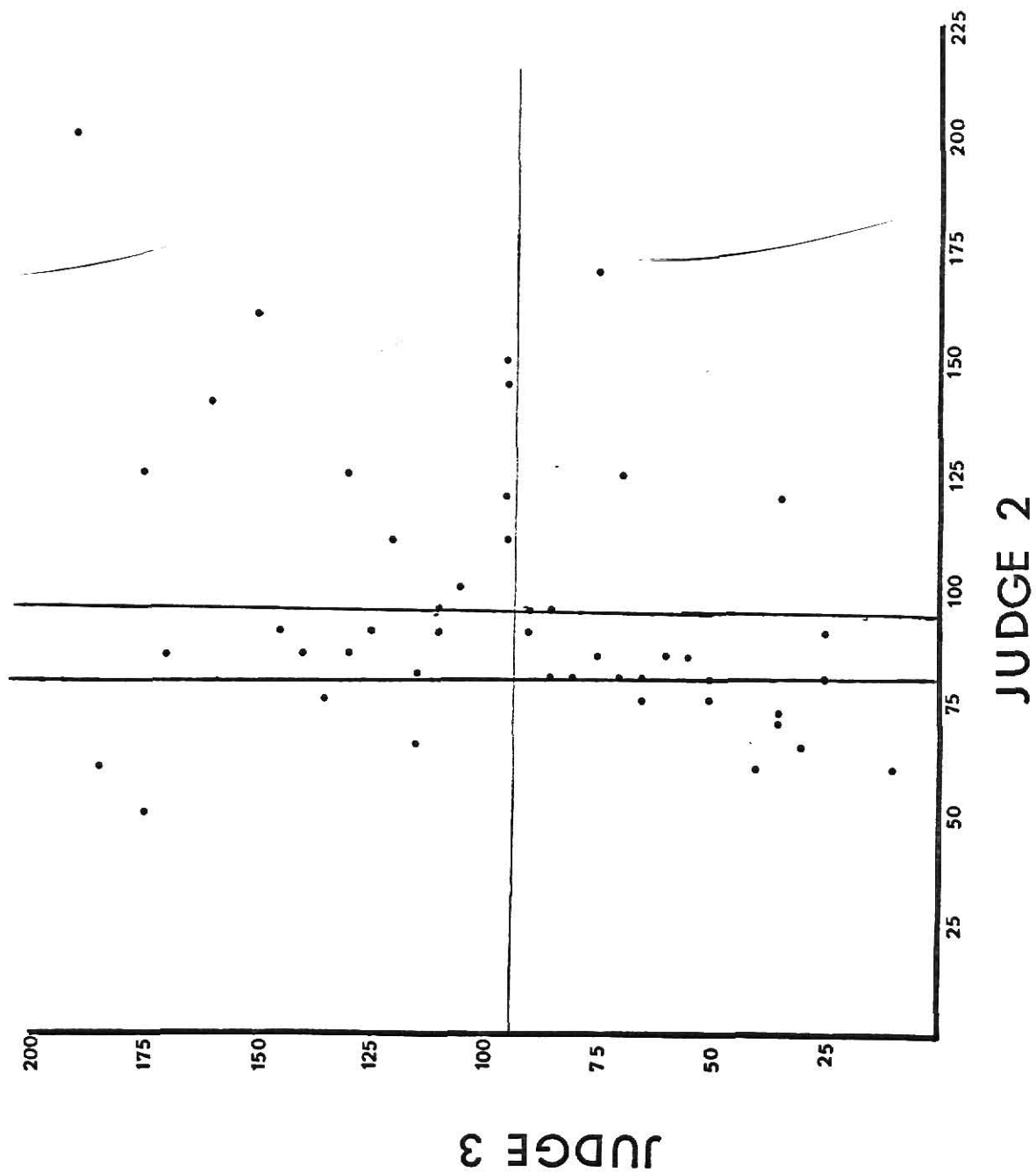


Fig. 3. Scatterplot of Judges 2 and 3 AO ratings.

Table 3, Continued

Rotated Factor Loadings of Variables $\geq \pm .30$ for Ten Factors Extracted

<u>Factor 3 (8.99% of variance)</u>	<u>Factor 4 (8.22% of variance)</u>
<u>Action-oriented out of living setting</u>	<u>Sex difference</u>
MMPI <u>Pd</u>80	Sex (Male=1, Female=2)75
Other dormitory, weekend . . .79	Diagnosis (Schizophrenic-Schizoid versus other) . .75
MMPI <u>Pa</u>72	Other room, weekday52
Outside recreation, weekend . .35	Other room, weekend52
MMPI <u>F</u>33	Shopping, weekend49
MMPI <u>Ma</u>33	Bathroom, weekend47
Diagnosis (Schizophrenic and schizoid versus other) . . -.30	Friend's apt., weekend44
Dining room, weekday . . . -.32	Bathroom, weekday41
Lounge, weekday -.43	J1 <u>AO</u> ratings39
Bar, weekend -.45	Restaurant, weekend34
Lounge, weekday -.53	MMPI <u>Pt</u> -.33
Dining room, weekend . . . -.54	Lounge, weekday -.36
MMPI <u>D</u> -.64	MMPI <u>Mf</u> -.80
<u>Factor 5 (7.04% of variance)</u>	<u>Factor 6 (5.38% of variance)</u>
Shopping, weekend45	Work, weekend53
Union cafeteria, weekend . . .38	Union cafeteria, weekend . . .34
Friend's apt., weekend31	MMPI <u>Es</u>31
Work, weekend -.30	Bar, weekend -.32
MMPI <u>Es</u> -.35	MMPI <u>D</u> -.33
Basement recreation, end . -.72	MMPI <u>Pt</u> -.46
Lobby, weekend -.72	MMPI <u>Hs</u> -.65

Table 3, Continued

Rotated Factor Loadings of Variables $\geq \pm .30$ for Ten Factors Extracted

<u>Factor 7 (4.85% of variance)</u>	<u>Factor 8 (4.47% of variance)</u>
Room, weekend.58	Sex.80
Room, weekday.57	Friend's apt., weekend. . . .54
Park, weekend. -.57	Bathroom, weekday.52
Lounge, weekend. -.59	MMPI <u>L</u>52
Bar, weekend. -.62	Shopping, weekend.44
Lounge, weekday. -.72	Diagnosis (Schizophrenic and Schizoid versus other). . .35
	MMPI <u>Mf</u> -.80
<u>Factor 9 (4.38% of variance)</u>	<u>Factor 10 (2.98% of variance)</u>
Library, weekday.53	Outside recreation weekend. .69
MMPI <u>F</u>53	Classroom, weekday37
Restaurant, weekend.44	Movie off-campus weekend. . -.62
Bathroom, weekday. -.30	
MMPI <u>Hs</u> -.33	
Dining room, weekend. . . . -.36	
Dining room, weekday. . . . -.72	

was arbitrarily set at 7.5% or less of the variance. This was because these smaller factors seemed difficult to interpret and obscure with respect to psychological meaning or importance.

Factor 1 appears to be a clear-cut AO factor. All three Js' ratings, and the geometric mean of all Js have the highest positive loadings (.73, .47, .67, .82). Also the time spent in the following behavior settings have positive loadings: Lobby, Weekend, .45; time spent in Park, Weekend, .38; and Time spent in Bar, Weekend, .36. Negative loadings on the AO factor as far as behavior settings are concerned are: Classroom, Weekday, -.38; Library, Weekday, -.43; Room, Weekend, -.44; and Union Cafeteria, Weekend, -.43. MMPI variables with positive loadings are: Ma, .53; Hy, .47; K, .43; and Pd, .33. One MMPI variable had a high negative loading on the AO factor; namely Si, -.53. It is of interest that the first and largest factor is comprised of variables from clinical judgments, behavior settings and test scores. Appendix 4 shows the significant correlations of Js AO ratings, the geometric mean with the MMPI variables.

It might appear that the AO factor is a product of contamination, since some of the Js had seen the MMPI profiles in the course of their duties. However, the correlations between personality variables measured by the MMPI, and behavior settings (Table 4) would not be subject to this source of possible contamination. There are 24 correlations significant at or beyond the .05 level of significance out of 703 possible correlations. Perhaps the most striking correlations are with the behavior setting of Other Dormitory, Weekend: Pd, .92; Pa, .74; D, -.65; and Hy, .35. Also of interest is that the setting of Room, Weekend, correlates with MMPI Si, .36; as does the setting of Library, Weekday, .33. The behavior setting of Dining Room, Weekend, correlates with the following MMPI scales: Pa, .30; Pd, -.37; F, -.38. The correlation of personality variables as measured by the MMPI and behavior settings strongly supports the AO factor as an independent concept.

Table 4

Behavior Setting and MMPI Variable Correlation $\geq \pm .30$.

<u>Room, Weekend</u>	<u>Other room, Weekday</u>	<u>Other room, Weekend</u>
MMPI <u>Si</u> .36	MMPI <u>Mf</u> -.38	MMPI <u>Mf</u> -.38
MMPI <u>Es</u> .33		
<u>Lounge, Weekend</u>	<u>Dining Room, Weekend</u>	<u>Basement Recreation, Weekend</u>
MMPI <u>D</u> .30	MMPI <u>Pa</u> -.30	MMPI <u>Es</u> .35
	MMPI <u>Pd</u> -.37	
	MMPI <u>F</u> -.38	
<u>Friend's Apartment, Weekend</u>	<u>Movie Off-campus, Weekend</u>	<u>Bathroom, Weekend</u>
MMPI <u>Mf</u> -.35	MMPI <u>Pt</u> -.30	MMPI <u>Mf</u> -.32
<u>Library, Weekday</u>	<u>Shopping, Weekend</u>	<u>Other dormitory, Weekend</u>
MMPI <u>Si</u> .33	MMPI <u>K</u> .34	MMPI <u>Pd</u> .92
	MMPI <u>F</u> .33	MMPI <u>Pa</u> .74
		MMPI <u>Hy</u> .35
		MMPI <u>D</u> -.65

Factor number two, accounting for 10.05% of the variance, appears to be a personality test factor, mainly expressing ego strength and neuroticism as measured by the MMPI: ten MMPI scales show significant loadings on this factor: Pt, -.79; Es, .79; Sc, -.69; Si, -.69; F, -.62; K, .59; D, -.58; Hy, -.40; L, .38; and Hs, -.36. Only three settings load on this factor: Work, Weekend, .45; Basement Recreation, Weekend, .43; and Lobby, Weekend, .31. Pt is comprised principally of items which have been included on the manifest anxiety scale. Further, Dahlstrom and Welsh (1960) have reported a factor identified as Factor A, having high loadings from scales Pt, and Sc, but high negative loadings from K. Welsh describes this factor as one of general anxiety and emotional upset. Reversing the signs of factor loadings makes the findings of this study congruent with that reported by Dahlstrom and Welsh. In particular, Factor A bears much resemblance in scale relationships to the current research's second factor.

Factor Three, which accounts for 8.99% of the variance is an AO out-of-living area factor which seems to indicate unconventional action or behavior. The extremely high positive loadings of MMPI scale Pd, .80; and Pa, .72; Other Dormitory, Weekend, .79; Outside Recreation, Weekend, .35; in contrast to high negative loadings on MMPI D, -.64; Dining Room, Weekday and Weekend, -.32, -.54; Lounge, Weekday and Weekend, -.53, -.43 and Bar, Weekend, -.45, suggest unconventional AO away from the residence hall settings. Other MMPI loadings on this factor are: F, .33; Ma, .33.

Factor Four accounts for 8.22% of the variance and would indicate sex differences. Being female, MMPI Mf, -.80, spending time in the Bathroom, Weekday and Weekend, .41 and .47; spending time Shopping, .49; behavior in Another's Room, Weekday and Weekend, .52 and .52; as well as a Friend's Apartment, Weekend,

.44; and spending time in Restaurants, Weekend, .34; all would seem to indicate a sex factor. The Lounge behavior setting, Weekday, $-.36$; and MMPI Pt, $-.33$, have negative loadings on this sex factor.

Factors five through ten are also presented in Table 1. However, both the small amount of variance accounted for and the absence of clear psychological meaning militates against any detailed consideration of the underlying dimensions.

Discussion and Summary

General Findings

The findings of this study support the conception of an AO dimension which is reflected in the use of physical space, expert judgments by mental health professionals, and personality test variables. Such a factor emerged as the first factor and it accounted for the largest amount of common variance in the measures employed. The present research also utilized relatively new methodology (the activity record and a psychophysical method, direct magnitude estimation, to scale AO) to examine the relatively unexplored relationship of personality variables and use of behavior settings.

Specific findings

Judgments. The geometric mean of the Js' ratings of AO would appear to be a valid predictor of an S's use of behavior settings.

Higher interjudge reliability would be desirable. Sinnett and Stone (1970) report higher interjudge reliability than does this study with the use of the same scale. However, they were measuring the adjustment of emotionally disturbed students. The concept of "adjustment" is perhaps a more familiar one to mental health professionals than is the concept of AO. Each of the Js commented on the difficulty of rating Ss who were characteristically overcontrolled, but who were subject to episodes of impulsiveness. In fact, most of the disagreement among Js as to the AO ratings was concentrated in the middle of the distribution of Ss. The cases of disagreement appear to involve the "mixed types". There was much higher agreement among Js on either end of the AO continuum. Future investigations should attempt to take this into account in categorizing by including a "mixed type" or perhaps limiting the study to relatively pure types. However, in spite of the uniqueness of the concept of AO behavior, and in spite of the "mixed types" Ss, the judgments proved to be an adequate predictor of behavior.

The direct magnitude estimation was suitable for obtaining AO judgments. The scale can be used with a minimum of instruction and appears to be versatile in that it can be used to assess more than one aspect of a person's behavior. For example, although adjustment and AO have been rated so far by this method, it is conceivable that it could have many other applications.

Barker (1968) has examined the environment of behavior as a phenomenon worthy of investigation for itself, not as a tool for unraveling the behavior of individuals. He views the environment as highly structured and feels that some aspects of behavior are more adequately predicted from knowledge of the behavior setting than from knowledge of behavior tendencies of particular individuals. Most of Barker's research has been concerned only with the precise description of behavior settings and the description of observed behavior within these settings. The position of the present research is actually going a step further than Barker in studying the interaction of individual personalities and behavior settings. While it is true that knowledge of the ecological environment can account for much behavior and is a most important variable, understanding of behavior can be even further enhanced and is more readily predictable when personality variables are also considered. The present study also built on the findings of Barker, his students and collaborators, in accepting the association between persons, settings and activities. It has been assumed in the hypothesis testing that settings are associated with certain behaviors. Other investigators might choose to investigate this association. In a sense the findings obtained which offer support for predictions from personality variables may provide a construct validation of this assumption. If behaviors were not related to settings, why would one expect a differential use of settings as a function of personality variables? The relationship is acknowledged as implicit but comprehension of the nature of the relationship is far from complete.

As an individual's personality undoubtedly influences his behavior setting use, AO must then manifest itself in the utilization of settings. For example, intuitively, an individual who remains in his Room a good deal of the time would likely not be highly AO. Such a person would likely reflect his AO level in other behavior setting use--such as spending time in characteristically passive settings like the Library. What personality test variable correlates with these low AO settings? MMPI Si correlates with both of the above mentioned behavior settings. Of course, on the other end of the AO continuum, highly AO individuals are likely to utilize more dynamic behavior settings such as Lobbies, Lounges and various social settings. An AO person occupying this position on the continuum is also more likely to visit Other Dormitories as opposed to spending time in his own dormitory. MMPI Pd, Pa, Hy, and D all correlate to the behavior setting of Another Dormitory and further enhance the conception of AO. The Lounges in dormitories, however, are typically areas of socialization where an AO person could be expected to behave. This setting correlates with the MMPI D scale, which would not be predicted. It could be conjectured that depressed individuals seek the socialization areas readily available to them, i.e., Dormitory Lounge, in an effort to seek relief from depression through contact with other people. This relationship could further mean that the presence of depression does not necessarily point to absence of AO tendencies.

The correlations of behavior setting utilization and MMPI variables are strong indications that behavior setting use reflects personality variables and AO. This being so, behavior setting use predictions and/or AO judgments can be made on the basis of MMPI personality test variables scores.

Factors. This study provides a profile of AO. The first factor is a clear-cut AO factor and supports the major hypotheses of the study--namely that

AO is scaleable and predictable by professional judges and that different personality variables as measured by the MMPI are indicators of different AO levels. That AO is predictable in individuals is indicated by the loadings of all three Js' AO ratings and the geometric mean in this factor. Certain behavior settings also seem to be more sensitive indicators of AO than other settings. Behaving in the Lobby of the Dormitory on Weekends reflects a high degree of AO. The same is true for the behavior settings of Parks and Bars on Weekends. On the other hand, the use of the behavior settings of Room, Weekend; Library, Weekday; and Classroom, Weekday; all appear to be indices of low AO.

This AO factor highlights some rather interesting aspects of exploring college students' behavior setting utilization. For instance, campus life is so structured on weekdays that most setting variables loading positively on this factor are weekend behavior settings. It could be conjectured that this is because weekends are the only part of the week where students can engage in any activity of their choosing--not necessarily academic. However, the only weekday settings to load negatively on this AO factor are Class and Library. It may be that students high on the AO continuum do not attend Class and frequent the Library on Weekdays as often as do students lower on the AO continuum, but this factor does not shed light on where these high AO students behave during the week. It appears that the third factor listed in the rotated factor matrix does contain the information about where high AO students behave outside of the dormitory settings.

The AO factor contains information as to the personality variables underlying and interacting with the AO dimension. There appears to be a tendency for a person high on the AO continuum to be high on the Ma scale. Carson(1969) describes high Ma scorers as expansive, outgoing and enthusiastic. High Hy scorers are also likely to be high on the AO dimension. This Hy loading probably

reflects an individual uninhibited in social relations (Carson, 1969). The MMPI Pd scale also loads positively on the AO factor. This means that a person who exhibits AO will also likely be unpredictable in behavior and form shallow social relations. The MMPI personality variable Si has a negative loading. This points to a socially introverted person who will exhibit a low degree of AO. The individual low on the AO continuum will have a high Si score, be withdrawn, aloof, and very anxious when in contact with people (Carson, 1969).

The AO factor is the first factor and it accounts for the most common variance in the factor analysis. The first factor supported the idea of an AO dimension which is reflected in the use of physical space or behavior settings; expert judgments by mental health professionals and personality test variables as measured by the MMPI. AO has been shown to be a very real, empirically evident concept, testable or manifested in a variety of ways. The study of some pure types would be fruitful in pinpointing AO, but from this study a clearer conception of the emotionally disturbed college student possessing varying degrees of AO emerges. The individual high on the AO continuum is conspicuous, impulsive, expansive and physically quick and mobile. On the other hand, an individual low on the AO scale is introspective, withdrawn, quiet, inconspicuous and probably given to hesitation and uncertainty.

Of the other three major factors listed in the rotated factor matrix, only one is another AO factor. This factor deviates from the major AO factor in its specificity--it is an AO factor out of the living area. Nothing in this AO factor contradicts the information contained in the first factor. In fact, this factor seems to clarify exactly what behavior settings AO individuals utilize when not in the immediate living area. This AO factor could include a different kind of behavior. In view of the personality test variables that load on this factor, it could be conjectured that this factor represents behavior setting use

of an unconventional nature, or at least not of the normal, dormitory-setting-utilization variety. The differences of this factor from the first AO factor are highlighted when the variables loading on the AO out of the living area factor are examined.

The AO out of the living area factor lists almost all of the major socialization areas of the dormitory, but with negative loadings. These settings such as the Dining Room, Weekday and Weekend, and the Lounge, Weekday and Weekend, are typical dormitory socialization areas. In contrast to these settings, the setting of Another Dormitory has an extremely high positive loading. The behavior setting Outdoor Recreation also loads positively. As for the personality test variables, the MMPI scale Pd loads very high, which reflects a tendency for the scorer to be angrily dissatisfied with recognized conventions and very unpredictable in behavior (Carson, 1969). The Pa scale also loads high in the AO out of the living area factor. High Pa scorers (Carson, 1969) tend to be suspicious and brooding, harbor grudges, and generally feel they are not getting what is coming to them. The D scale loads high in a negative direction and would indicate that individuals AO out of the living area are not pessimistic about life and the future, and further are not depressed (Dahlstrom and Welsh, 1960). A low D score might be associated with high energy level and consequently high AO as high D scorers (depression cases) often have low energy levels. The above personality tendencies, as well as the behavior setting data, suggest that the AO out of the living area individual is rather dissatisfied with the status quo of the immediate living unit, and perhaps suspicious of his co-residents. It is feasible that an individual with such attitudes would then shun the conventionality and regime of the dormitory, but with no ensuing controlling or constriction of action.

Some of the same personality variables load on each of the two AO factors. MMPI Pd loads positively on each factor, but the loading is quite a bit higher on the AO out of the living area factor. The MMPI scale Ma loads on both variables but loads higher on the first, major AO factor. This would substantiate the conviction that more specifically deviant and/or unconventional personality patterns are reflected in the second factor, while more generalized AO personality tendencies are reflected in the first, major AO factor.

The second factor in percent of accounted variance was the personality test factor, and seemed to be an Ego-Strength--Neuroticism indicator by virtue of the loadings on the appropriate MMPI variables. The positive settings loadings are Work, Basement Recreation, and the Lobby (all Weekend settings). While not contradicting any of the AO factor data, it does not greatly expand the knowledge gained from the AO factors concerning the nature of this sort of behavior. There does not appear that there is much to be said about this factor, except to point out that the high positive loadings of MMPI variables Es and K and the high negative loadings of MMPI Pt, Sc, Si, F, D, and Hy are the reasons to label this factor a Neuroticism versus Ego-Strength one. As the settings of Basement Recreation, Work and Lobby have positive loadings as well as MMPI Es and K, it would seem that individuals who do not have personal inadequacies, tendencies toward mental disorder, or difficulty in self-control (Dahlstrom and Welsh, 1960), tend to be the "workers" of the tested group, and utilize these behavior settings. The above seems to be a reasonable deduction, given the variables loading on the factor--both behavior settings and personality test variables. This factor does not reveal much information about AO behavior. However, there are implications about AO because it is known that the only recreation the basement offers is television watching. Television watching would seem to be an isolated, withdrawn, passive type of behavior, and not of the same AO nature as "Work" and Lobby.

It could be conjectured that watching television offers a method of relaxation from work and to get away from people a little, which Work would not allow. The presence of the setting of Lobby in this factor really requires no explanation. It would be expected that individuals high in Es and low on the MMPI scales loading negatively, would seek out others in a major area of dormitory socialization such as the Lobby. The ego-Strength-Neuroticism factor mainly appears to be a result of the personality test variable scores. Neuroticism factors are rather commonplace findings in factor analytic studies of personality questionnaire variables. Eysenck, Cattell and Guilford have repeatedly isolated a neuroticism factor in their respective factor analytic studies. The factor A (Dahlstrom and Welsh, 1960) report as a major source of variance running through the basic MMPI clinical scales, has high loadings on Pt and Sc and a high but negative loading on the K scale. As in the present research, this combination seems to be indicative of personal discomfort, distress, and anxiety. This factor would appear to identify the general degree of disturbance.

The fourth major factor is a sex difference factor, which is a statement of in which settings males and females typically behave. Females spend more time in Other Peoples' Rooms (Weekday and Weekend), Shopping (Weekend); and in the Bathroom (Weekday and Weekend). Males spend more time in the Lounge on Weekdays. The personality test variable information contained in this factor is scant--only two variables are listed, one being MMPI Mf. The other variable, Pt, has a small negative loading. It is apparent that males and females characteristically utilize different behavior settings. In other words, the sexes might express AO in different ways. However, this cut-and-dried generalization might not be warranted. As there was a high proportion of schizoid and schizophrenic personalities, the subjects were dichotomized between schizoid-schizophrenic

and other diagnoses. There was not enough of certain psychopathological states such as hysteric and manic to actually make valid comparisons between groups. So the high positive loading of Diagnosis, which means schizoid-schizophrenic versus other diagnoses, contrasted with the high negative loading of Mf, which means female, simply is a statement that the female subjects are not the schizoid-schizophrenic subjects--in this study the males are. Now the question arises as to whether or not this is truly an uncontaminated sex difference factor, or a schizoid-schizophrenic versus other diagnoses factor. In either case, some AO information is available. The behavior setting utilization data is as would be predicted--either for the male-female or schizoid-schizophrenic dichotomy. This is true except for one behavior setting--that of Bathroom. Females predictably would utilize the Bathroom setting more than males. This is for obvious reasons, such as washing and setting hair, applying make-up and other activities characteristically female contrasted with the activity of shaving for males. It would be difficult to explain why Ss diagnosed as "other than schizoid-schizophrenic" would spend more time in the Bathroom setting than the schizoid-schizophrenic group. For this reason, it is safe to conclude that this factor is primarily a sex-difference one. A further conclusion is justified--males and females manifest their AO in somewhat different patterns of behavior setting utilization.

The last six factors account for a small percent of variance. They appear to primarily be statements of where an individual behaves if he is not utilizing another behavior setting. Other than this generalization, the factors do not appear to be psychologically significant and do not warrant lengthy discussion.

Summary

This research has explored heretofore unexamined relationships of certain aspects of AO behavior and corresponding personality variables. An important

product of this research is that behavior setting use has been shown to be a sensitive indicator of not only the AO level of an individual but also information regarding personality structure.

One of the specific aims of this research was to examine how different psychopathological groups differed in their use of behavior settings. The type of behavior setting utilized is one obvious clue as to the psychopathology and AO degree of an individual. Unfortunately, there was not a large enough N of certain groups, e.g., hysterics, and too large an N in other groups, e. g., schizoids, to achieve this research aim. The alternative was to contrast groups with similar MMPI scores on specific variables. As was predicted, Ss with higher Ma, Hy, and Pd scores were judged higher on the AO continuum and do spend more time in socialization areas such as Lobby, Lounge, Others' Rooms, and Other Dormitories, and less time in settings such as Room, Class and Library. Exactly the opposite was found true for Ss with high MMPI scores on Si and D as predicted. It was predicted that high scorers on the Pt, Mf, and Sc scales would also display low AO and be judged low on the AO continuum. However, this did not materialize. In future studies, a sufficient number of various psychopathological groups should be obtained to further enhance and substantiate the theory of AO behavior advanced here.

The degree of AO can be scaled and predicted by professional judges acquainted with the Ss. The degree of AO can also be predicted by knowledge of certain MMPI variables, and as certain behavior settings and personality variables correlated are also loaded on the same AO factor, conversely, certain personality predictions can be ventured on the basis of knowledge of behavior setting utilization.

It is obvious that the behavior setting and subsequently behavior setting use will change given a new environment. However, there are certain relationships

suggested by this study. Individuals high on the AO continuum will utilize socialization behavior settings no matter what the particular settings are. Individuals low on the AO continuum will utilize their immediate, personal behavior settings. The important aspect of this study is that AO behavior has been shown to be predictable using the method of direct magnitude estimation, personality test variable scores, and by utilization of patterns of certain key behavior settings. Also highlighted by this research is that with information regarding an individual's AO and behavior setting use, certain predictions about an individual's psychopathology can be made.

In sum, this research indicates that the interactions of behavior, environment, and personality can be examined and predicted utilizing the novel concept of AO behavior with meaningful results. In short, the value of the present exploratory study lies in two areas:

- 1) The methodological, predictive techniques employed.
- 2) The finding of an AO behavior factor.

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APPENDIX 2

We are asking you to make judgments of these client project members on a scale measuring the extent to which each S is action-oriented as opposed to being inhibited and over-controlled. The presence of impulsiveness, hysterical features, and acting out, versus withdrawn, obsessive-compulsive, depressive or schizoid features should influence your judgment. We are interested primarily in an individual's characteristic behavior. A history of isolated episodes of impulsiveness, while they may influence your judgments, should not determine your assigned value. Since we have found that judgments are more reliable when we know more about an S, it has been decided to designate the pertinent time period as covering his behavior while in the project. Even if an S has shown considerable change during this time, try to judge him by his most characteristic behavior while in the project.

Compare each S with _____. His assigned value is 100, an S who is twice as A0 as he would be 200; those half as A0 as he would be 50. Or restated in terms of control, someone twice as controlled as he would be 50, someone half as controlled as he 200. Finer differentiations can, of course, be made: An S slightly more controlled might be 95 or 90, etc. There are no restrictions on the range of values which you may choose to assign an S.

Attached is a paper for recording your judgments and a list of 46 client project members. If you need to use clinical material to reacquaint yourself with the individual, request it and the files will be provided. Please write the client's name perpendicular to the scale base in the position you feel he should occupy and assign a numerical scale value. Numerically low values (less than 100) indicate control and overcontrol; numerically high values (greater than 100) indicate a more A0 person. Compare each S with _____, whose assigned value on this scale is 100.

APPENDIX 3

Comparison % time awake spent in settings by normals (n=17), schizoid-schizophrenic (n=31), and other diagnosis (n=15).

Location	Weekday median of $\bar{X}\%$'s			Weekend median of $\bar{X}\%$'s		
	Ns	SSs	Os	Ns	SSs	Os
<u>Dorm</u>						
Room	22.7	29.4	29	21.4	21.5	21.7
Other room	1.5	1.2	.5	.4	0.0	1.5
Lounge	5.0	5.6	5.9	4.4	3.0	9.6
Lobby	2.6	1.2	.8	1.7	.9	.6
Dining Room	7.1	7.7	8.6	5.1	5.0	7.1
Basement						
recreation	-	-	-	0.0	1.6	2.3
Bathroom	0.0	.3	1.1	0.0	0.0	.7
<u>On Campus</u>						
Class	13.9	16.4	17.1			
Library	.2	0.0	0.0			
Other dorm	-	-	-	0.0	0.0	.4
Union						
cafeteria	0.0	.6	0.0			
Outside						
recreation	-	-	-	0.0	1.2	2.8
<u>Off Campus</u>						
Restaurant				3.1	1.5	.9
Bar				0.0	0.0	.8
Friend's apt.				3.1	1.0	2.4
Movie				1.7	0.0	0.0
Park				0.0	0.0	0.0
Shopping				.5	2.0	1.9
Work				0.0	0.0	0.0

APPENDIX 4

Significant correlations of judges' AO ratings, geometric mean, and MMPI variables.

	<u>Judge 1</u>	<u>Judge 2</u>	<u>Judge 3</u>	<u>Geometric Mean</u>
MMPI <u>L</u>				
MMPI <u>F</u>				
MMPI <u>K</u>				
MMPI <u>Hs</u>				
MMPI <u>D</u>				
MMPI <u>Hy</u> .30				
MMPI <u>Pd</u>				
MMPI <u>Mf</u>				
MMPI <u>Pa</u>				
MMPI <u>Pt</u>				
MMPI <u>Sc</u>				
MMPI <u>Ma</u> .35			.46	.38
MMPI <u>Si</u> -.37		.36		-.37
MMPI <u>Es</u>				

BEHAVIOR SETTING UTILIZATION BY EMOTIONALLY DISTURBED COLLEGE STUDENTS

by

GAIL LYNN SHERMAN

B. A., Kansas State University, 1968

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ABSTRACT

In this study the interrelationship of experts' judgments of action-oriented behavior, personality test scores, and use of behavior settings were ascertained by a factor analytic approach. It was hypothesized that judges acquainted with the psychopathology of emotionally disturbed students could predict use of behavior settings in terms of an action-oriented behavior rating. Similarly personality variables were predicted to be related to use of social and personal space.

Forty-six emotionally disturbed college students were given action-oriented scale values by three mental health professional judges using the method of direct magnitude estimation. Actual behavior setting utilization of students was assessed by means of the Activity Record. MMPI profiles were available for all forty-six students.

Factor analyses of judges' ratings, MMPI scores, and mean percent of waking time spent in each reported behavior setting indicated that action-orientedness is a concept which involves not only use of behavior settings, but personality variables as well. Out of four interpretable factors obtained, two seemed to be fairly straight forward action-oriented behavior factors. Results showed that behavior setting utilization of the emotionally disturbed can be predicted by judges acquainted with their psychopathology and by personality test variables.