

Psychological Environments

Expanding the Scope of Human Ecology

PAUL M. INSEL *Stanford University*
RUDOLF H. MOOS *Stanford University*¹

Like people, environments have unique personalities. Just as it is possible to characterize a person's "personality," environments can be similarly portrayed with a great deal of accuracy and detail. Some people are supportive; likewise, some environments are supportive. Some men feel the need to control others; similarly, some environments are extremely controlling. Order and structure are important to many people; correspondingly, many environments emphasize regularity, system, and order.

Henry Murray (1938) first conceptualized the dual process of personal needs and environmental press. He suggested that individuals have specific needs, the strength of which characterizes "personality." The environment potentially satisfies or frustrates these needs. Murray's model for studying behavior thus consisted of the interaction between personality needs and environmental press. Murray's concept of needs provided a point of entry for the development of a variety of measurement instruments to study personality; however, no parallel development in the objective measurement of environmental press was attempted until much later.

Stern, Stein, and Bloom (1956) expanded Murray's contribution. They demonstrated that behavior could be predicted much better when the setting in which the behavior occurred was clearly defined so as to include the social demands of the situation. Pace and Stern (1958) developed the concept of environmental press further by applying the logic of "perceived climate" to the study of "atmosphere"

at universities and colleges. They constructed the College Characteristics Index (CCI) which measured the global college environment by asking students to act as reporters. Specifically, students were asked to answer true or false to items covering a wide range of topics about their college, such as student-faculty relationship, rules and regulations, classroom methods, facilities, etc. The general logic of this approach suggests that the consensus of students' characterizing their college environment constitutes a measure of environmental climate, and that this environmental climate exerts a directional influence on their behavior.

Thus, one might infer a general principle to the effect that the way one perceives his surroundings or environment influences the way one will behave in that environment. While this principle has a commonsense ring to it, it is not usually applied in a practical way to the routine problems and tasks with which psychologists deal. For example, personality and projective tests are frequently administered and interpreted with the assumption that results will portray permanent and enduring qualities that transcend the environment, providing information that can accurately predict behavior regardless of the setting in which the behavior is likely to take place. This assumption is pervasive in spite of much evidence showing that properties of the environment may account for more of the variance in behavior than measures of trait qualities or even biographic and demographic background data (Douglas, 1964; Mischel, 1968; Wolfe, 1966). For example, Friedlander and Greenberg (1971) studied the job performance and retention of 478 hard-core unemployed workers and found that the sole correlate of their work effectiveness and ability to retain jobs was the extent to which they perceived their work environment to be supportive. Personality and background data were found to be unrelated to work effectiveness and job retention.

¹ The work reported in this article was supported in part by National Institute of Mental Health Grant MH16026, National Institute of Alcohol Abuse and Alcoholism Grant AA00498, and Veterans Administration Research Project MRIS 5817-01.

Requests for reprints should be sent to Paul M. Insel, Social Ecology Laboratory, Department of Psychiatry, Stanford University, Stanford, California 94305. Moos, also, is with the Social Ecology Laboratory, Department of Psychiatry.

Classifying Human Environments

The concept of environment has historically been somewhat ambiguous and amorphous. Formal and systematic study of environments is rooted in the biological sciences where the term *ecology* is most commonly applied to the natural habitats of animals. *Human ecology* is a more recent term extending to the domain of geographers and sociologists who are interested in the distributions of human populations. The term *social ecology* has evolved mainly from the efforts of psychologists and other behavioral scientists to direct their inquiries toward a more complete view of man interacting with both his physical and social environment (Moos & Insel, 1974).

The seeds of social ecology can be found in both ecology and human ecology. Because ecological phenomena may be considered as existing over the entire range of organisms and at a number of different levels of organization, the field of ecology has become fractionated and specialized.

Human ecology departs from animal and plant ecology in the nature of its regulatory mechanisms. Among the special regulatory mechanisms which operate in a human society are public opinion, punishment, rewards, competition, and supply and demand. Social cooperation is perhaps the most important regulatory mechanism in society, serving to mitigate the destructive and predatory elements found in the ecological evolution of other animal communities. Knowledge about the operation of the regulatory mechanisms which keep human societies in balance with the resources of their milieus is one of the concerns of social ecology.

The emerging discipline of social ecology grows out of this interaction of man with his environment. To this extent it transcends human ecology. It reflects the traditional concerns of ecology both in its emphasis on the measurement of objective physical characteristics of environments (e.g., temperatures, rainfall, air pollution, noise levels; the shapes, sizes, and physical arrangements of buildings) and in its inquiry into the short-term evolutionary and adaptive consequences of these environments. Social ecology, however, expands these concerns by systematically dealing with the social environment and its interaction with the physical milieu. And, unlike ecology and human ecology, social ecology has an explicit value orientation in that it is concerned with promoting maximally effective human functioning. Finally, social ecology touches the main currents of scientific thought in psychiatry, medicine, and epidemiology in its special emphasis

on the identification of maladaptive responses and their relationship to environmental variables.

Moos (1973a) suggested six different ways of conceptualizing human environments:

1. *Ecological dimensions.* These include (a) meteorological and geographical variables (this view of the environment suggests that society has been shaped by climate, topography, and other geographical features of inhabited regions), and (b) physical design variables. Here man's behavior is influenced by architecture and physical constraints which limit or even define the range of activities in which man can be involved.

2. *Dimensions of organization structure.* This view of the environment suggests that behavior is influenced by structural dimensions such as size, staffing ratios, salary levels, span of organizational control, etc.

3. *Personal characteristics of milieu inhabitants.* This view implies that the character of an environment depends on the nature of its members and that the dominant features of an environment depend on the typical characteristics of its members, such as age, sex, socioeconomic status, abilities, group memberships, physique, and other background data.

4. *Behavior settings.* This view of the environment originated with Roger Barker (1968), who emphasized the importance of studying behavior settings as natural phenomena. Behavior settings are conceptualized as ecological units which have both an environmental and a behavioral component.

5. *Functional or reinforcement properties of environments.* This view of the environment suggests that people vary their behavior substantially from one setting to another as a function of the reinforcement consequences for particular behaviors.

6. *Psychosocial characteristics and organizational climate.* This conceptualization encompasses both psychological and social dimensions of the environment in a framework of person-milieu interaction. The approach accommodates both an inside perception of what the environment is like as well as an outside observer's impression, although most of the work to date emphasizes the importance of climate as perceived by participating members of the environment.

Measuring Environments

As suggested earlier, a limited literature exists on the development of systematic approaches to measuring environments. This is partly because

"environments" are unwieldy and thus difficult to deal with as objects of investigation. This problem has been partially resolved by such investigators as Barker (1968), who focused on specific environmental units which have both a space and a time locus, and Moos (1969), who focused on subenvironments or subunits in which milieu occupants interact with each other on some regular and familiar basis.

Moos and his associates at the Social Ecology Laboratory at Stanford University have made substantial contributions toward developing an in-depth program of characterizing and assessing the psychosocial qualities of environments. They have extensively studied eight different environments and have developed perceived climate scales for each environment: (a) psychiatric wards; (b) community-oriented psychiatric treatment programs; (c) correctional institutions; (d) military basic training companies; (e) university student residences; (f) junior and senior high school classrooms; (g) work environments; (h) social, therapeutic, and decision-making groups.

Underlying Patterns of Differing Environments

Common dimensions have emerged from studies of the eight different kinds of environments. These have been conceptualized by Moos (1974d) in three broad categories: relationship dimensions, personal development or goal orientation dimensions, and system maintenance and change dimensions. These dimensions are similar across the eight environments mentioned although vastly different settings may impose unique variations within the general categories.

RELATIONSHIP DIMENSIONS

Relationship dimensions identify the nature and intensity of personal relationships within the environment. They assess the extent to which individuals are involved in the environment and the extent to which they support and help each other. As can be seen in Table 1, examples of relevant subscales in the eight climate scales are involvement, affiliation, staff support, peer cohesion, and spontaneity.

Personal development dimensions consider the potential or opportunity in the environment for personal growth and the development of self-esteem. The precise nature of personal development dimensions varies somewhat among different environments

and depends mainly on the goals of a particular environment. Examples of relevant subscales are autonomy, practical orientation, competition, and intellectuality.

System maintenance and system change dimensions assess the extent to which the environment is orderly and clear in its expectations, maintains control, and is responsive to change. Examples of the subscales one finds here are order and organization, clarity, control, and innovation. The three "basic" categories can best be seen as they fit into the framework of the four environments shown in Table 1.

The eight climate scales mentioned earlier can be classified into one of four types of environments: (a) treatment environments, (b) total institutions,² (c) educational environments, and (d) community environments. Treatment environment measures are the Ward Atmosphere Scale (Moos, 1974d) and the Community-Oriented Programs Environment Scale (Moos, 1974a). Total institutions environment measures are the Correctional Institutions Environment Scale (Moos, 1974b) and the Military Company Environment Inventory (Moos, 1973b). Educational environment measures are the University Residence Environment Scale (Moos & Gerst, 1974) and the Classroom Environment Scale (Moos & Trickett, 1974). Community environment measures include the Work Environment Scale (Insel & Moos, 1972) and the Group Environment Scale (Moos & Humphrey, 1973). A final technique, the Family Environment Scale, is being developed.

To give an example of the similarity of differing environments, let us compare the social environment of a psychiatric ward with the social environment of a factory. On the surface these two environments appear rather remote from each other. They have much in common, however. The instruments used to assess these two settings were the Ward Atmosphere Scale (WAS) and the Work Environment Scale (WES). The relevant relationship dimensions on the WAS are involvement, sup-

² Goffman (1961) suggested that "total institutions" take over the life processes of persons who live within their physical constraints. They differ from other environments in that they require large groups of unselected members to conduct their lives in a similar fashion and on a fixed schedule. These developing life-styles are purportedly designed to fulfill the aims of the institutions. Total institutions have two distinct groups of inhabitants: staff and inmates. These two groups interact on a restricted, often formally prescribed, basis. Goffman suggested that two different social and cultural worlds develop, which move alongside one another but have minimal contact.

TABLE 1

Similarities of Social Climate Dimensions across Environments

Type of dimension	Treatment environment		Total environment		Educational environment		Community environment	
	Ward Atmosphere Scale	Community-Oriented Programs Environment Scale	Correctional Institutions Environment Scale	Military Company Environment Inventory	University Residence Environment Scale	Classroom Environment Inventory	Work Environment Inventory	Group Environment Inventory
Relationship								
Involvement-affiliation	X	X	X	X	X	XX	X	
Spontaneity-expressiveness	X	X	X					X
Support	X	X	X	X	X	X	X	XX
Cohesiveness				X			X	X
Personal development								
Autonomy-independence (personal status)	X	X	X	X	X		X	X
Practical orientation (task orientation, academic achievement)	X	X	X		X	X	X	X
Personal problem orientation (self-discovery)	X	X	X					X
Anger and aggression	X	X						X
Competition					X	X		
Intellectuality					X			
Traditional social orientation					X			
System maintenance and system change								
Order and organization	X	X	X	X	X	X		X
Clarity	X	X	X	X		X	X	X
Control	X	X	X	X		X	X	X
Physical comfort							X	
Work pressure							X	
Innovation-student influence					XX	X	X	X

port, and spontaneity. Relationship dimensions on the WES are involvement, staff support, and peer cohesion. Program involvement on a psychiatric ward refers to how active and energetic patients are in the day-to-day functioning of the ward. Involvement in a factory setting refers to the extent to which workers are concerned and committed to their jobs. Support on a psychiatric ward indicates the extent to which patients are encouraged to be helpful and supportive toward other patients and how supportive the staff is toward patients. Staff support in a factory indicates the extent to which management is supportive of workers and encourages workers to be supportive of each other. The subscales of involvement and support are roughly equivalent in both settings. Spontaneity, however, is more relevant to a treatment or therapeutic environment in which people are often encouraged to

act openly and to freely express their feelings. This aspect of the climate in a factory setting can be seen more appropriately as part of both the staff support and peer cohesion components. On a psychiatric ward, staff support and peer support are one dimension since they correlate so highly with one another. But in a factory setting they are independent.

As mentioned earlier, some environments possess more than one aspect of the same property. For example, work environments have two distinctly different support elements. One element is called *peer cohesion* and accounts for the social and interpersonal relationships that develop among workers and their tendency to stick together and help each other. The second element, called *staff support*, accounts for the degree of friendship and communication between management and nonmanagement

personnel and the extent to which management encourages and helps nonmanagement personnel. These two elements identify a distinction between peer support and supervisor or staff support. In psychiatric and correctional environments, peer support tends to merge with staff support. In fact, it is difficult to find programs where these two support variables are not correlated positively. However, in a work environment, nonmanagement personnel frequently spend a great deal of time together maintaining a separate factor of cohesiveness.

PERSONAL DEVELOPMENT

The second category is personal development. Both settings have two subscales in common, namely, autonomy and practical or task orientation. Autonomy on a psychiatric ward involves how independent and self-sufficient patients are encouraged to be in making their own decisions about their personal affairs. For example, can a patient wear what he wants? Can he leave the ward without permission? In a factory setting, the issues are similar in that they are related to personal growth and independence. For example, are employees encouraged to learn more than one job? Can employees use their own initiative to do things?

The second subscale on a psychiatric ward is practical orientation. This component looks at the extent to which the patient's environment orients him toward preparing himself for release from the hospital. Such things as training for new jobs and setting and working toward goals are considered. In a factory the component of task orientation accounts for the extent to which the environment emphasizes good planning and efficiency and encourages workers to "get the job done."

SYSTEM MAINTENANCE

The third category for comparison is system maintenance, in which there are two identical subscales for both psychiatric ward and factory environments. These subscales are clarity and control. Clarity accounts for the extent to which both patients and workers know what to expect in their daily routines and how explicitly rules and policies are communicated. For example, do patients know when doctors will be on the ward? If a patient's medicine is changed, does a nurse or doctor tell him why? In a factory, do employees know when supervisors will be available? Do employees

know who to see when a problem arises? The second component, control, refers to the extent to which staff or supervisors use measures to keep patients or workers under control. On a psychiatric ward, can patients call nursing staff by their first names? In a factory, can employees be absent from work without an authorized or written explanation?

The foregoing hopefully conveys the similar threads that make up the fabric of remotely related environments. The importance of these threads can be seen more clearly in a situation in which a patient is discharged from a psychiatric ward and gains employment in a factory setting. Perhaps diagnostic work-ups could benefit from this type of "total milieu" approach. For example, instead of administering the MMPI or Rorschach and trying to predict from these tests what the most suitable treatment might be for the patient, the psychologist might ask the patient to respond to the ideal form of the Ward Atmosphere Scale. If the patient indicates his need for more support or more order on the WAS, the psychologist would then be in an advantageous position in recommending a ward that had a climate that emphasized support and order. The same approach might be used in a work setting if the climate of the work environment was known.

The three basic dimensions (relationship, personal development, and system maintenance) identified in treatment environments are also found in total institutions and educational and community environments. However, some environments have a unique component within a particular category which is peculiar to them. For example, work pressure is specifically and solely relevant to work environments where things like time pressure, deadlines, strain, urgency, and speed may dominate the job milieu. Another example, falling within the personal development category, is "traditional social orientation," a subscale on the University Residence Environment Scale (URES). This variable accounts for the emphasis on dating, going to parties, and other traditional heterosexual interactions that one finds in student housing programs.

The eight social climate scales discussed earlier were all developed at the Social Ecology Laboratory at Stanford University. Can relationship, personal development, and system maintenance and system change variables be identified in other organizational climate scales? The results of eight different investigators are utilized and summarized in Table 2.

TABLE 2

Dimensions of Organizational Climate Scales

Scale	Relationship	Personal development	System maintenance and system change
Organizational Climate Index (Stern, 1970)	Closeness, group life	Intellectual climate, personal dignity, achievement standards	Orderliness, impulse control (constraint)
College and University Environment Scale (Pace, 1969)	Community	Awareness, scholarship	Practicality, propriety
Institutional Functioning Inventory (Peterson, 1970)	Institutional esprit	Intellectual-aesthetic, extracurriculum, concern for improvement of society, concern for undergraduate learning, concern for advancing knowledge, meeting local needs	Freedom, democratic governance, self-study and planning, concern for innovation, human diversity
Learning Environment Inventory (Walberg, 1969)	Intimacy, friction, cliqueness, apathy, favoritism	Difficulty, speed	Formality, goal direction, democratic, disorganization, diversity
Organizational Climate Description Questionnaire (Halpin & Croft, 1963)	Esprit, intimacy, consideration, disengagement	Thrust, hindrance	Production emphasis, aloofness
Agency Climate Questionnaire (Schneider & Bartlett, 1970)	Managerial support, intraagency conflict, new employee concern	Agent independence	Managerial structure
Climate Questionnaire (Litwin & Stringer, 1968)	Warmth, support, conflict, identity	Responsibility, risk, standards, reward	Structure
Dimensions of Group Processes (Fairweather, 1969)	Group cohesiveness	Group performance	Leadership and role delineation

The basic logic and conceptualization appears to be consistent with the scales of other investigators. For example, the College and University Environment Scale (Pace, 1969) has five subscales: (a) *community* describes a friendly, cohesive group-oriented campus and is clearly a relationship dimension; (b) *awareness* describes a concern about personal, poetic, and political meaning, self-understanding and reflectiveness and is clearly a personal development dimension; (c) *scholar* describes an environment characterized by intellectuality, scholastic discipline, and academic achievement and is also clearly a personal development dimension; (d) *propriety* describes an environment that is polite,

considerate, mannerly, proper, and conventional and where group standards of decorum are important. To the extent to which this variable emphasizes order and clarity within the environment it belongs in the category of system maintenance; (e) *practicality* describes an environment characterized by organization, enterprise, material benefits, and social activities. This is also a system maintenance dimension, since its essential aspect reflects orderly supervision and organization.

The second test reviewed is the Institutional Functioning Inventory (Peterson, Centra, Hartnett, & Linn, 1970). This instrument also lends itself to studying colleges and universities and pro-

vides 11 variables judged to be important in American higher education. Institutional esprit is clearly a relationship dimension. The following belong to the dimension of system maintenance and system change: freedom (lack of restraint on academic or personal life), democratic governance (extent of opportunity for participation in decision making), self-study and planning (emphasis on continuous long-range planning for the total institution), concern for innovation (commitment to experimentation with new ideas for educational practice), and human diversity (heterogeneity of faculty and student body in background and attitudes). The emphasis of these variables is on system change, which generally tends to be more strongly prevalent in most university environments than is system maintenance. Finally, the other five variables belong to the personal development dimension, that is, intellectual-aesthetic extracurricular interests (availability of activities and opportunities for intellectual and aesthetic stimulation outside the classroom), concern for improvement of society, concern for undergraduate learning, concern for advancing knowledge, and meeting local needs (emphasis on providing educational and cultural opportunities for adults in the surrounding area).

Table 2 indicates subscales for two other organizational climate scales relevant to educational environments, that is, the Learning Environment Inventory (Walberg, 1969) and the Organizational Climate Description Questionnaire (Halpin & Croft, 1963). The elements identified by these two scales can be conceptualized as falling within the three basic categories.

From results based on both educational and industrial environments, Stern (1970) identified two major types of second-order factor dimensions using the Organizational Climate Index (OCI). He indicated that the OCI factor structure essentially replicates his former scale, the CCI. Stern reported that the OCI has been factored three times. One analysis was based on the responses of teachers in elementary, junior high, and senior high schools; a second on Peace Corps trainees; and a third on technicians employed in three different industrial sites. Six factors were extracted in a first-order analysis and two in a second-order analysis. Stern (1970) summarized his results as follows:

The first of the second-order factors describes a variety of press for facilitating growth and self-enhancement; the other reflects organizational stability and bureaucratic self-maintenance. These tend to confirm the hypothesized distinction drawn earlier between anabolic and catabolic press [p. 68].

Stern did not explicitly make a distinction between relationship and personal development dimensions. He also did not include system change dimensions in his category of control or system maintenance press. On the other hand, two variables which appear to be relationship dimensions were identified by Stern as closeness and group life. Three of Stern's variables appear to reflect personal development. He called these intellectual climate, personal dignity, and achievement standards. Stern's last two system maintenance factors are labeled orderliness and impulse control.

Stern's conceptualization is based on factor solutions and closely coincides with our conceptualization, strongly supporting the notion that there is a limited number of underlying patterns which can characterize a rather large and varied group of social environments.

Two more examples (Table 2) show similar conceptualizations. The Agency Climate Questionnaire (Schneider & Bartlett, 1970) and the Climate Questionnaire (Litwin & Stringer, 1968) were both constructed to assess industrial environments. The ACQ is primarily for insurance agencies and has subscales such as (a) managerial support (managers take an active interest in agents as individuals), (b) managerial structure (managers require that agents adhere strictly to budgets), and (c) agent independence (agents receive an accurate picture of job potential when they are contacted). Some of the Litwin and Stringer dimensions are (a) warmth (the feeling of general good fellowship that prevails in a work group atmosphere), (b) support (the perceived helpfulness of the managers and other employees in the group), (c) identity (the feeling that the employee belongs to the company and is a valuable member of a working team), (d) responsibility (the feeling of being one's own boss and not having to double check all of one's decisions), (e) risk (the sense of riskiness and challenge in the job and in the organization), and (f) structure (the feeling that the employees have about the constraints of the groups in terms of rules and regulations). Both scales are strikingly similar in basic dimensions to those identified by the Social Ecology Laboratory in very different environments.

Finally, an example is provided by an assessment of group processes conducted by Fairweather, Sanders, Cressler, and Maynard (1969) in which they compared a ward-based with a community-based psychiatric treatment program. They found three dimensions which characterized group processes and labeled these dimensions (a) group cohesiveness

(cohesiveness, morale, attraction to group, satisfaction with leader), (b) group performance (performance, reward, problem input, information input), (c) leadership and role delineation (leadership, role clarity).

One may conclude from the work in this area that relationship, personal development, and system maintenance and system change dimensions must all be accounted for in order for an adequate and reasonably complete picture of the environment to emerge.

Environmental Impact on Individual Functioning

The study and assessment of environments are important because of their relevance to individual functioning. The "climate" of environments in which people function relates to their satisfaction, mood, and self-esteem and to their personal growth. Environments shape adaptive potentials as well as facilitate or inhibit initiatives and coping behavior. For example, environments that place an emphasis on relationship dimensions such as involvement and support usually have high morale (Cumming & Cumming, 1962). It has been demonstrated that psychiatric wards and correctional units that emphasize autonomy and personal problem orientation have patients and residents who like the staff and feel they can develop their abilities and increase their self-confidence (Moos, 1974c).

Social environments also have significant impact on more objective criteria of behavioral outcome. For example, Moos, Shelton, and Petty (1973) related the social environment of psychiatric wards to objective indexes of treatment outcome as assessed by dropout rates (how many patients left the ward before treatment was completed), release rates (how rapidly were patients released from the ward), and community tenure (how long patients were able to stay in the community after release from the hospital). Two independent studies found that patients and staff perceived wards that had high dropout rates to be low in involvement, support, order and organization, and program clarity. Wards with high release rates were perceived as strongly emphasizing practical orientation, but inclined toward "unexpressiveness," whereas wards that kept patients out of the hospital longest were perceived as emphasizing autonomy, a practical orientation, order and organization, and the open expression of feelings, particularly angry feelings.

Similar results can be seen in the environment of military basic training companies. Moos (1973d) found that military company "climate" was related to important indexes of outcome, such as total performance on graded tests at the end of basic training, the AWOL (absent without official leave) rate, and the rate of sick call. Companies which did best on total performance criteria were those that emphasized both peer cohesion and officer support. Companies with excessive sick call lists contained men who felt that the work was repetitious and boring, that there was no opportunity for leadership roles and no orientation to the company, and that they were ridiculed in front of others. Company environments had effects on men's moods. For example, companies with high scores on officer control and low scores on personal status had men who felt more anxious. Companies high on officer control and low on peer cohesion had men who felt more depressed. Companies high on officer control and low on both officer support and clarity had men who felt more hostility. Thus, one finds specific relationships between dimensions of basic training company environments and types of negative effects.

Stressful environments have been shown to have cumulative long-term effects on those who function within them. Caffrey (1969) studied the environments of Benedictine and Trappist monks and found a prevalence of coronary heart disease in those environments characterized as competitive with a sense of time urgency. Sales (1969) suggested in his review that environments with work overload are implicated as precursors of cardiovascular disease.

In an extensive review of the literature, Kiritz and Moos (in press) concluded that the evidence supports the hypothesis that "social environmental factors have pronounced effects on human physiological processes." They suggested that

the social stimuli associated with the relationship dimensions of *support*, *cohesion* and *affiliation* generally have positive effects—enhancing normal development and reducing recovery time from illness, for example. Goal Orientation and System Change dimensions such as *responsibility*, *work pressure*, and *change* can increase the likelihood of stress and disease.

Toward an Optimum Environment

What are the criteria by which environment can be judged as favorable? Lewis Mumford (1968) viewed an ideal environment as "seeking continuity, variety, orderly and purposeful growth" as opposed

to an environment that "magnifies authoritarian power and minimizes or destroys human initiative, self-direction, and self-government [p. 221]." Mumford suggested that optimum environments are organic and the qualities that make them desirable have to do with people, not "machines."

There are, of course, no clear, well-defined criteria for an ideal environment that can meet everyone's requirements. Inhabitants of specific environments would undoubtedly have different criteria and different goals. The point is, however, that the likelihood of achieving an optimum environment is greatly facilitated when critical decisions about changing the environment are in the hands of the people who function within the environment. For an outsider to impose the kind of order and structure according to his own unique view of "Utopia" would undoubtedly result in strong resistance which can manifest itself in many subtle and disguised ways.

Moos (1974c) has presented a methodology for facilitating social change which is particularly relevant to small environments that have a moderate to high frequency of interactions among milieu members. The approach has four basic components:

1. Everyone involved in the environment is given the opportunity to report his view of how the current environment is functioning on the relevant dimensions discussed earlier. In addition, all participants are asked to convey information about their conceptualizations of an ideal social system. Thus, the goals and general value orientations of the milieu occupants are systematically assessed.

2. Individualized feedback is then given on the results of these assessments. Particular attention is paid to similarities and differences in the perceptions of various important groups within the environment; for example, in a hospital setting: patients versus doctors and nurses; in an industrial setting: workers versus management; in a classroom: students versus teachers. In addition, emphasis is placed on the similarities and differences between the "real" and the "ideal" social environment and the subsequent implications for change.

3. Practical planning of specific methods by which change might occur along specified dimensions is then instituted. This planning is usually done with the help of a social systems change "facilitator" who is experienced in the ways in which different types of social systems can change.

4. The change process itself is assessed by one or more reassessments of the characteristics of the

social environment. These results are continuously fed back to the participants providing an ongoing, systematic approach to achieving the kind of environment participants would like to have.

This methodology is linked with concepts of problem-solving, coping, and adaptive behavior. Many theorists have discussed each individual's active need for involvement and for the prediction and control over his own environment (White, 1959). The active propensities of man as scientist of different aspects of stimulation and variety-seeking motivation and of the importance of cognition and information seeking are central to planning effective social change methods. This approach is consistent with these important needs which include actively helping to mold one's social environment in desired directions. Its use may even help some individuals achieve a new competence, that of being able to change and control their own environment.

REFERENCES

- BARKER, R. *Ecological psychology*. Stanford: Stanford University Press, 1968.
- CAFFEY, B. Behavior patterns and personality characteristics related to prevalence rates of coronary heart disease in American monks. *Journal of Chronic Diseases*, 1969, 22, 93-103.
- CUMMING, J., & CUMMING, E. *Ego and milieu*. New York: Atherton Press, 1962.
- DOUGLAS, J. W. B. *The home and the school*. London: MacGibbon & Kee, 1964.
- FAIRWEATHER, G., SANDERS, D., CRESSLER, D., & MAYNARD, H. *Community life for the mentally ill*. Chicago: Aldine, 1969.
- FRIEDLANDER, F., & GREENBERG, S. Effects of job attitudes, training, and organization climate on performance of the hard-core unemployed. *Journal of Applied Psychology*, 1971, 55, 287-295.
- GOFFMAN, I. *Asylums*. New York: Doubleday, 1961.
- HALPIN, A., & CROFT, D. *The organizational climate of schools*. Chicago: Midwest Administration Center, University of Chicago, 1963.
- INSEL, P., & MOOS, R. *The Work Environment Scale*. Palo Alto: Social Ecology Laboratory, Department of Psychiatry, Stanford University, 1972.
- KIRITZ, S., & MOOS, R. Physiological effects of social environments. *Psychosomatic Medicine*, 1974, in press.
- LITWIN, G. H., & STRINGER, R. A. *Motivation and organizational climate*. Boston: Division of Research, Harvard Business School, 1968.
- MISCHEL, W. *Personality and assessment*. New York: Wiley, 1968.
- MOOS, R. Sources of variance in responses to questionnaires and in behavior. *Journal of Abnormal Psychology*, 1969, 74, 405-412.
- MOOS, R. Conceptualizations of human environments. *American Psychologist*, 1973, 28, 652-665. (a)
- MOOS, R. *Military Company Environment Inventory manual*. Palo Alto, Calif.: Social Ecology Laboratory, Department of Psychiatry, Stanford University, 1973. (b)

- Moos, R. *Community Oriented Programs Environment Scales manual*. Palo Alto, Calif.: Consulting Psychologists Press, 1974, in press. (a)
- Moos, R. *Correctional Institutions Environment Scale manual*. Palo Alto, Calif.: Consulting Psychologists Press, 1974, in press. (b)
- Moos, R. *Evaluating treatment environments: A social ecological approach*. New York: Wiley, 1974, in press. (c)
- Moos, R. *Ward Atmosphere Scale manual*. Palo Alto, Calif.: Consulting Psychologists Press, 1974, in press. (d)
- Moos, R., & GERST, M. *University Residence Environment Scale manual*. Palo Alto, Calif.: Consulting Psychologists Press, 1974, in press.
- Moos, R., & HUMPHREY, B. *Group Environment Scale technical report*. Palo Alto, Calif.: Social Ecology Laboratory, Department of Psychiatry, Stanford University, 1973.
- Moos, R., & INSEL, P. (Eds.) *Issues in social ecology: Human milieus*. Palo Alto, Calif.: National Press, 1974.
- Moos, R., SHELTON, R., & PETTY, C. Perceived ward climate and treatment outcome. *Journal of Abnormal Psychology*, 1973, 82, 291-298.
- Moos, R., & TRICKETT, E. *Classroom Environment Scale Manual*. Palo Alto, Calif.: Consulting Psychologists Press, 1974, in press.
- MUMFORD, L. *The urban prospect*. New York: Harcourt Brace Jovanovich, 1968.
- MURRAY, H. *Exploration in personality*. New York: Oxford University Press, 1938.
- PAGE, C. R., & STERN, G. G. An approach to the measurement of psychological characteristics of college environments. *Journal of Educational Psychology*, 1958, 49, 269-277.
- PAGE, R. *College and University Environment Scales*. (Tech. manual, 2nd ed.) Princeton, N.J.: Educational Testing Service, 1969.
- PETERSON, R., CENTRA, J., HARTNETT, R., & LINN, R. *Institutional Functioning Inventory: Preliminary technical manual*. Princeton, N.J.: Educational Testing Service, 1970.
- SALES, S. Organizational role as a risk factor in coronary disease. *Administrative Science Quarterly*, 1968, 14, 325-336.
- SCHNEIDER, B., & BARTLETT, C. Individual differences and organizational climate by the multi-trait, multi-rater matrix. *Personnel Psychology*, 1970, 23, 493-512.
- STERN, G. *People in context: Measuring person-environment congruence in education and industry*. New York: Wiley, 1970.
- STERN, G., STEIN, M., & BLOOM, B. *Methods in personality assessment*. Glencoe, Ill.: Free Press, 1956.
- WALBERG, H. Social environment as a mediator of classroom learning. *Journal of Educational Psychology*, 1969, 60, 443-448.
- WHITE, R. Motivation reconsidered: The concept of competence. *Psychological Review*, 1959, 66, 297-333.
- WOLFE, R. The measurement of environments. In A. Anastasi (Ed.), *Testing problems in perspective*. Washington, D.C.: American Council on Education, 1966.