This address focuses on socialization, those processes specific to social settings which affect how persons learn to adapt to that particular setting, and the roles persons perform as they adapt to a setting. An ecological perspective is used, in which any change in the behavior of persons affects the style of living of the environment, just as changes in the operation of the social environment affect the lives of individuals. Two high school environments are being studied, longitudinally, for consequences for the students of the 2 demographically similar yet socially distinct schools. To date, the ecological thesis affirms that personal development can be accomplished if criteria for the socialization of competences are met. These include: (1) a diversity of formal and informal settings to encourage social interaction; (2) a variety of informal roles in the social environment to allow for spontaneous help-giving and for personal interactions across divergent roles; and (3) valuing varied competences and people who contribute these competences to the larger competences to the larger community.
The socialization of competence as an ecological problem 1, 2

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The topic of socialization is apt for the analysis of society's effects on the individual as well as the study of how individuals emerge as different persons (Brim, 1966; Inkeles, 1968; Clausen, 1968, and Smith, 1968). The public school system is a particularly critical setting for assessing how young people acquire skills, beliefs and dispositions to act since they spend, during critical developmental years, a major share of their lives in schools. In spite of the significance of the topic of socialization, there have been few research examples that illustrate how social processes within the social structure of the school affect students (Trickett, Kelly and Todd, 1972, in press). Repeated appeals for research to dig more deeply and more intensively into social processes to account for how persons acquire competences as a consequence of being a member of a particular social setting are now receiving increased response, and, as Inkeles and Smith have suggested, more studies of social settings and the socialization of persons are being developed (Inkeles, 1968; Smith, 1968).

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2The research described in the paper was supported by research grant MH15606-06 from the National Institute of Mental Health.
This morning I will present some ideas about the utility of the ecological perspective for the analysis of socialization, and an example of how a longitudinal study of coping preferences in two suburban high schools can help to clarify the socialization of competence.

In a paper presented at the 1965 Social Science Research Council's Conference on Socialization, Barbara Biber introduced her remarks with the following comments:

"Societies have long regarded their schools as primary institutions for the socialization of competence, created and sustained for the expressed purpose of inducting the child into his culture as a competent and skillful human being. As a crucial socializing force, the school shares its function with the family, the peer group, sometimes other institutions such as the church, but even more than the others its function is described directly in the realm of "competence"; to educate means, at the very least, to make competent.

Within the consensus that the school's function lies in this realm, however, there is a range of viewpoint among educators and in the environments and methods they have created. If we approach education with a research stance, we need to begin with the understanding that schools vary in their vision of what they are trying to accomplish for the child -- the scope of what they wish to undertake, the hierarchy of their goals, their cognizance of psychological development as it affects functioning, and the extent of their concern for the propensities, heritage and equipment the child brings with him into the learning situation." (Barbara Biber, 1965, p. 1)

The challenge of grasping the organizational life of a school system and defining how such varied social organizations affect how students learn to be competent in various roles is gigantic. The varieties of school administration, the variability within school faculties and the differences in the cultures of the parents of children generate a nagging, pervasive set of technical problems for understanding how youth acquire, avoid or defend against the values and vagaries of the school. Understanding the
effects of varied environments is also tied to the types of studies that are needed. If we are committed to our goal to reflect the spirit of an environment, studies should include designs for unconventional methodologies. Research that includes multiple methods to reflect the culture of the environment will be needed if our knowledge of social settings is to be genuinely useful for figuring out what to do about social conditions. The processes of socialization, e.g., how persons enter and adapt to a new environment, how norms for social participation evolve and how organizations establish social control over their members, are pivotal issues for assessing and changing social systems. 

The ecological axiom that varied social environments produce different personal adaptations has received substantial verification from ecological studies in biology. A small but increasing amount of research in the behavioral sciences, and perhaps some of our own personal experiences, suggest that we do in fact vary our behavior from place to place (Willems and Raush, 1969; Barker, 1968). If we spend enough time in one place we acquire, without always our awareness, specific and unique ways of carrying out our life's work that are consistent with the present setting. The ecological perspective can help to generate knowledge that focuses directly upon commonplace events that are specific to the local setting, and it provides a rationale for improvising our methods in order to affirm that social environments do vary in ways that affect their inhabitants.

Before describing the research example, I would like to comment on how I am using the concepts of socialization and competence and present ways in which the ecological perspective can be helpful in increasing our knowledge.
of socialization processes and competence. Socialization refers to those processes specific to social settings which affect how persons learn to adapt to that particular setting. For the study of the high school environment, patterns of social interaction between faculty and students, as well as social interaction within the student culture, are seen as sources of influence for how students learn to cope with everyday life events. Competence refers to the personal roles persons perform as they adapt to social settings. In the high school environment how students learn to influence persons in authority, how they participate in informal social situations and create and use resources are examples of competences that are expected to vary from school to school.

The ecological perspective is viewed as appropriate for the study of socialization because of the utility of the theoretical ideas, the variety of its methods, and the implications for change generated by the findings. A few brief comments will be made about each one of these points. The theoretical perspective derived from biological ecology emphasizes that persons and social settings have some very specific relationships and that any change in the behavior of persons affects the style of living of the environment as changes in the operation of the social environment affect the life of individuals. For the research investigator it means that he is simultaneously examining reciprocal effects of persons and social settings and is trying to locate those processes -- those events that are typical for the environment and those processes that affect social participation and the regulation of society.

The style of ecological research is however somewhat different. It requires involvement with a social environment over a sufficiently long period of time in order to know which aspects of the social setting are salient. The research process is active without arousing persons who are
members of the environment and distinct without attracting the preoccupations and attentions of multiple segments of the environment. This style of ecological research can enhance knowledge of socialization processes as the various methods focus upon the varied social settings. Research that begins with the premise that persons are related to the environment and employs methods that illuminate the culture of the social setting and allows the investigator to describe the varieties of social units and their impact on members. Such can also illuminate more sharply what new organizations and resources are needed for improving the quality of the environment.

Two High School Environments: A Case Example

The final portion of the paper comments on the initial stages of a longitudinal study of a group of high school students attending two demographically similar yet socially distinct high school environments. In the fall of 1961 when the students were in their eighth grade, a stratified sample of 60 boys at each of the two schools were selected on the basis of their preferences for exploring and engaging their school environment. The construct of exploration refers to a preference for initiating and becoming actively involved in the culture of the school. Selection was based on a multiple method battery of questionnaires, thematic, biographical data and peer ratings (Edwards, 1971a; McClintock and Rice, 1971; Rolstacher, 1971). Revisions were made in the selection battery in 1969 when the students were in their ninth grade. During the 1970-71 academic year when the students were beginning the tenth grade and their first year of high school, multiple methods including a biannual census (Edwards, 1971b), intensive structured interviews (Gilmore, 1971),
and a study of informal group behavior (Barbara Newman, 1971) concentrated upon assessing how these boys developed personal competences and social skills as they began high school. The study includes, then, students with varied levels of exploratory preferences who are attending two similar yet distinct school environments. The purpose of the research program is to assess the effects of the school upon exploratory behavior. It is the premise of this work that the social life of a particular social environment does have specific and differential effects upon students as they move through their school.

The two high school environments are similar in many respects yet they are also different, especially in their informal social structure. Table 1 presents an outline of several major differences.  

At this point I would like to summarize in more detail some of the above findings about the socialization process at the two schools. Gilmore, employing a case study, interviewed a sample of 36 tenth grade boys (18 boys at each school, with six boys at each level of exploration preferences) (Gilmore, 1971). He was particularly interested in differentiating competences between students with preferences for different levels of exploratory behavior. He found that while the boys at School 2 reported a greater number of competences than the tenth grade boys at School 1, boys with high preferences for exploration behavior at both schools expressed their competences within the settings of the school. Both of these findings were clearly significant with F ratios at the .01 level for a two-way analysis of variance. The boys with

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3 Preliminary reports and studies of the social structure of the high schools have further substantiated the findings reported in Table 1. (Goldberg et al, 1967, Harriet Stillman, 1969, and R. Fatke, 1971).
TABLE 1

Differences between the Two High School Environments

(as presented in P. Newman, 1971, p. 59)

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
<th>School 1</th>
<th>School 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociocultural</td>
<td>Suburban-industrial</td>
<td>Suburban-residential</td>
</tr>
<tr>
<td></td>
<td>Middle class</td>
<td>Upper-middle class</td>
</tr>
<tr>
<td>Student Enrollment and Exchange Rates*</td>
<td>1963</td>
<td>2126</td>
</tr>
<tr>
<td></td>
<td>18.7%</td>
<td>8.0%</td>
</tr>
<tr>
<td>School Adults</td>
<td>Adults live in school district</td>
<td>Adults live outside of school district</td>
</tr>
<tr>
<td>Architectural Design</td>
<td>Multiple story heterogeneous design</td>
<td>Single story homogeneous design</td>
</tr>
<tr>
<td>Organization of Curriculum</td>
<td>Ability grouping 10th graders take English with upper-classmen</td>
<td>No ability grouping 10th graders take English with 10th graders</td>
</tr>
<tr>
<td></td>
<td>Comprehensive curriculum</td>
<td>College preparatory curriculum</td>
</tr>
<tr>
<td>Extracurricular Activities</td>
<td>Socially oriented</td>
<td>Task oriented</td>
</tr>
</tbody>
</table>

Formal Organization

<table>
<thead>
<tr>
<th>1. Principal</th>
<th>Autonomous Leader</th>
<th>School board directed Facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long tenure in position</td>
<td>Short tenure in position</td>
</tr>
<tr>
<td>2. Assistant principals</td>
<td>Clear division of labor</td>
<td>Similar responsibilities</td>
</tr>
<tr>
<td>3. Counselors</td>
<td>Division of students by grade &amp; ability</td>
<td>Division of students by sex</td>
</tr>
<tr>
<td>4. Faculty</td>
<td>Departmental organization Faculty Council</td>
<td>Interdepartmental organization Implementation Comm.</td>
</tr>
</tbody>
</table>

*These are the average rates of population exchange (number of students entering and leaving the school/total school population) for three years (1968-1971).
high exploration preferences also had significantly higher perceptions of their ability to influence their friends and their school environment and reported that they expected that parents and teachers would agree with their own ideals.

This relationship between exploration preferences and participation in school affairs found by Gilmore via structured interviews is strengthened by the independent results reported by Edwards (1971b). Edwards administered a comprehensive assessment battery to 195 boys in the total longitudinal sample. He found that high explorer boys express more identification with school, express more initiative, have higher self esteem and satisfaction with selves and say they know the principal of the school better than moderate or low explorer boys. Consistent with this pattern, they also report that they have fewer social problems, are less unhappy at school, chat with fewer number of students at informal settings in the school, and feel less watched and less uncomfortable in group situations (Edwards, 1971b). These findings represent significant F ratios beyond the .05 level and express a striking array of predicted relationships for the convergent validity of exploratory behavior. But we have a long way to go to account for much variance between exploratory preferences and the dependent variables. The Omega statistic ($\Omega^2$) (Hays, 1963, p. 382) employed by Edwards keeps our vanity low, for the above relationships account for between only four percent and 15 percent of the variance between exploratory preferences and other self-report personality measures. The follow-up phase of the longitudinal study will assess whether this initial involvement continues and is maintained in the same way at the two schools and whether different levels of preference for exploration has varied adaptations at the two schools.
A few comments should be made about the types of competences reported by the students in Gilmore's work. Between 61 percent and 71 percent of the first two competences mentioned in response to the question "What are some of the things you are good at and like to do" were recreation and sports. The relationship of exploration preferences and recreational competences at School 1 was positive and linear (45 percent, lo; 75 percent, mod; 92 percent, hi), while the relationship was more curvilinear at School 2 (83 percent, lo; 33 percent, mod; 67 percent, high). This finding suggests that competences in sports at School 1 is much more pervasive and defines the social conditions for being involved in the culture of school. The boys at School 2 are involved in acquiring alternative competences via academic work, jobs or hobbies. Of the first two competences mentioned at either school, only six percent at school 1 and three percent of the competences of School 2 were categorized as social competences. We will be particularly interested to see if the apparent more active social environment of School 1 will nurture increased social competences as the boys continue their high school careers.

What about the social structure of the high school environment and its functions for socialization? What settings for socialization are these schools providing? In a carefully designed representative sampling of the faculty and students at both schools, P. Newman has found consistent differences in the quantity and quality of social interaction mentioned earlier, (P. Newman, 1971). Not only was the quantity of social interaction greater at School 1 than at School 2 but the interaction between students and school adults took place in more informal and formal social settings at School 1 than at School 2. Differences in the quality of the interaction were found to differ in the
following way. Students at School 1 perceived more personal interest from school adults and they felt more comfortable in informal interaction with school adults than students at School 2. School 1 was also found to encourage more active student involvement; norms were perceived as being clearer and consequences for norm violation harsher at School 1 than at School 2. Subjects at School 1 demonstrated a greater preference for the company of adults and a greater perception of socially-oriented norms at their school, while students at School 2 displayed a greater preference for the company of their peers than students at School 1.

These findings are also consistent with the work of Edwards who drew his data from a stratified sample in the longitudinal study (Edwards, 1971b). Edwards found in his sample of high, moderate and low explorer boys that all students at School 1 expressed more positiveness about the principal, believed that they had greater influence over fellow students and student government, and believed their school to be more excellent than the students at School 2.

Barbara Newman's work has provided further evidence of the differences in the cultures of the two high schools (B. Newman, 1971). She created an informal group setting in which nine boys from Gilmore's sample -- three high, moderate and low explorers -- at each school met for eight discussion sessions. Her interest was to assess the verbal and nonverbal behavior of boys within the group. Consistent with the findings of Edwards (1971b), P. Newman (1971) and Gilmore (1971), she found that there was more diversity in the responses of the boys at School 1. The boys at School 1 also were more expressive in their participation than the boys at School 2. The one statistically significant finding that differentiated the behavior of the boys between the two schools
was that the boys at School 1 asked the leader for information and sought her opinions more than did the boys in School 2 who were more cautious in their approach to the group and the group leader. We are interpreting these findings generated from this unstructured group setting as indicating that the culture of the schools is different in that School 1 serves as a more active and valued environment than School 2.

Further information was also obtained regarding differences in the expression of exploratory behavior from Barbara Newman's work. The high explorer boys at School 1 tended to be more expressive and involved in the group setting. The same was true for the low explorer boys at School 2. The high explorer boys at School 2 were less attracted to the group and less involved in group discussions. The findings of relatively less expressive behavior upon the part of the boys at School 2 suggests that the assessment of emotional behavior at School 2 will be more difficult in the future. If the boys with high exploration preferences at School 1 continue to be expressive, it will be a relatively easier task to learn about their adaptation.

One of the most striking findings in the work of Barbara Newman was the vast individual differences she observed in the behavior of the boys independent of their level of exploration. The boys at both schools showed differences in physical size, in their interests and verbal skills. From the accounts of the wide range of responses to the group we are beginning to subdivide the exploration groups to include categories of varied developmental levels. Exploration at a lower developmental level, for example, could be expressed largely via body movements. At more advanced developmental levels, exploration
could be channeled into more conceptual activities. If such distinctions can be assessed, the research program provides another opportunity to learn more about the interaction of social forces and developmental levels which affect coping preferences.

The work of Philip Newman concentrated on assessing the social structure of the schools by a representative sampling of the faculty and students' reports of the quality and quantity of social interaction at each school. Barbara Newman used social interactions during informal group discussions to further characterize the culture of the schools. Todd (1971) used still another approach to define the culture of the schools, namely, a case study of the helping behavior of two subcultural groups within School 2. His method involved a series of successive procedures including informal interviews, sample surveys, and an intensive study of the boys through daily log reports of helping acts. This intensive study of the help-giving process in two subcultures provided validation of the nebulous quality of the social structure when he found students at both schools knew very little about the details of the social environment that did not involve them directly.

The two subcultural groups that were selected illustrated quite distinctive qualities. One group was more visible within the formal social structure of the school, while the other group showed minimal involvement in the school and participated in an active life outside of school. In response to inquiries in the sample survey, Todd found that the non-school affiliative group, whom he called the "tribe," reported more reciprocal help-giving acts than the group he referred to as "citizens." When both groups of boys kept log reports of
their helping behavior, however, the citizens showed a tendency to engage in more reciprocal helping transactions and were involved in receiving and giving help with girls more often than the tribe members. The differences in response to the two research methods is encouraging rather than disconfirming. A marginal subgroup such as the tribe could be expected to present an image of solidarity to an outside research investigator, while the opposite would be true for a member of the citizen culture who takes "tests" more casually yet becomes more dedicated when contributing autobiographical log reports for his "diary" of help-giving behavior. The increased appearance of girls in the lives of the citizens, as reflected in their log reports, is interpreted as reflecting the significance of girl friends when they are forced to look closely at their personal accountings. The tribe members, on the other hand, live a more "routine" life, with girls strictly a commodity to deal with infrequently and on their own terms.

The dynamic interdependence between citizens and tribes was highlighted when two research methods were developed to assess the varied characteristics of the two groups. Todd's work has provided the research program with a provocative approach of funneling down to the social structure and revealing the clarity of the social environment without losing the authentic complexities of life. The choice of helping behavior, derived from the ecological perspective of the interrelationships of persons and natural settings, provides compelling findings for the subcultural groupings at School 2. We have learned that the socialization of help-giving competences does vary from high school to high school. We are now ready to examine in more detail the antecedents for these relationships.
Implications for the Ecology of Socialization

On the basis of the present data, it is possible to discuss the social environment of the first school as a location where there are a variety of informal settings within the school for students to actively express their ideas and to participate in school affairs. Students who vary in their mode of accommodating to the school can do so, it seems, if they actively have the principal’s approval and if extracurricular activities can absorb students with contrasting styles of living. There is a definite social organization working at School 1 which creates a forum for involving new resources. The social functions of the environment are intact; social settings for informal and formal interactions are available; and clear social norms are present to socialize new members. What is not so clear is how tolerant the setting is or how rapid organizational problems can be dealt with or how many extracurricular opportunities can be created that diverge from the principal’s values.

At School 2 it is expected that there are diverse viewpoints within the community, but this variety is relatively unknown to the school faculty. The norms generated by the faculty at the school in fact seem to operate to reduce the opportunity for outside resources to influence the school. At the present time the specific sources for this norm are unclear. One guess is that such school policies reflect the concerns of the local school board and community leaders so as to keep the school free from influences that may place new demands that the faculty and administration cannot meet. One of the consequences of this type of social environment is that the competences which may be present in the school and larger community go unnoticed. It appears that the second high school environment is not efficiently utilizing the resources that are available to them nor does the environment actively work to create
social norms that help to focus upon the planned development of students or
the social organization of the school. Instead, social norms operate to
reduce external influences affecting the school.

**Implications for the Ecology of Competence**

Our findings at this point in time, suggest that one environment seems
to behave as if it were a "scout camp" while the other generates a great deal of
ambiguity. The research program is concerned with the consequences for
students attending the two different schools. At School 1 the question is what
happens to students who are not congruent with the modal social norms of the
environment, who care about their school and choose not to become a member of
the "scout camp." At the second school the concern is for students who care
about their school but who cannot locate the social supports for their activities.
Our guess is that these two requirements for adaptation will have divergent
effects upon students' future participation in school and their immediate and
long-term preference for adults' help-giving roles. The thesis of the study
is affirming that the quality and diversity of the social environment has
definite effects on the ways in which young people learn to cope with environ-
mental demands. If such effects are demonstrated, the study can provide con-
cepts and empirical data for defining types of interventions that can be applied
to social environments.

The ecological thesis affirms that personal development can be accomplished
if criteria for the socialization of competences like the following are met:
(1) a diversity of formal and informal settings encourage social interaction;
(2) a variety of informal roles in the social environment allow for spontaneous help-giving and for personal interactions across divergent roles; (3) varied competences are valued and persons contribute these competences to the larger community; (4) there are clearly recognized social norms for relating to the surrounding external environments; (5) there is a commitment to examine the impact of the social environment upon its members; (6) there is a value for designing a social environment where the dominant activities take into account the diverse cultures of members. Therapeutic interventions that are ecological should create conditions so that such criteria can be realized.

**Future Hypotheses**

As the study continues, future work will focus upon differentiating characteristics of the social environment which are specifically salient for boys with different levels of exploration. From here on our task is to differentiate the socialization processes by hypothesizing how students who are members of different school environments learn contrasting competences. If we are successful, we then can concentrate upon creating plans for change which derive from these ecological findings.

Our thinking is starting to move in the following direction. Students at School 1 are expected to be able to learn how to interact with adults in authority roles, initiate social interactions with strangers and feel optimistic about their own ability to influence the events of the school. Students at School 1 are expected to participate in hierarchical relationships to influence persons with power. What they are expected to learn as a member of School 1
is to extract, deal and engage those with influence. Students at School 2, on the other hand, are expected to be socialized to move on to their achievements without deviating from their objectives and without participating too actively in their immediate social settings. What the students at School 2 have, they keep and parlay for still greater achievements.

The students at School 1 are predicted to be involved and committed to make their world effective, while the students at School 2 are concerned with insuring that they maintain their valued position. In wondering about the potential strains for the different patterns of socialization, the students at School 1 are expected to be naive about the realities of social milieus except for social settings which are very similar to their own. Their view of the world is expected to be cognitively more simple than the world view of the students at School 2. Students at School 2, in contrast, are expected to have a more realistic, if not cynical, view of how social institutions function and are expected to lack the emotional investment to actively participate to bring about change. On the basis of these ideas the boys with high preferences for exploration of School 1 are expected to have a more personally satisfying and adaptive high school career than the boys with high preferences for exploration at School 2. The sign explorer students at School 2 will feel more psychic strain as they attempt to engage and participate in a more vague and unresponsive environment.

During the next two years of the research, increased attention will focus on the relationship between personal preferences, social structure and socialization. As we concentrate upon this task, our aim is to highlight the varieties of adaptive behavior of students who have the same predispositions to act. The hypotheses for our predictions will derive from our view of the
boys and from the environments where they are students.

Conclusion

The ecological thesis is that competences vary as a consequence of participating in different environments. The comments this morning have attempted to illustrate how a longitudinal study carried out in two high schools is an example of how the natural features of social environments can affect their members. At the conclusion of the research it is hoped that knowledge will be gathered to illuminate socialization processes. Equally important is the aim that the research will furnish cornerstones for the design of new social processes at the two schools. It is hoped that such new social settings can be authentic locales for the development of competences for dealing with future and unknown environments.
References


