

CHAPTER 10

Texture of Community: An Environmental Design Education

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Today, it is virtually impossible to read a daily newspaper, view television, or converse without mention of the environment or environmental issues. So pervasive are the problems that confront us in the spaces in which we live and work, locally and globally, that the condition of the environment has become a prominent concern. The physical and social disintegration of cities, the pollution of waterways with sewage and toxic chemicals, the destructive clearing of forests, the degradation of other natural habitats, and the crowding and overpopulation of communities are but a few contemporary environmental problems.

There is renewed interest among art educators in what I call environmental design. In environmental design, *design terms have been replaced by ecology, place, and biodiversity*, which reflect the changes that have occurred in conceptions of environment. The focus has changed from consumption to production and preservation. Justice, equity, ethnicity, class, empowerment, and gender are now legitimate environmental issues. These *socio-cultural changes in environmentalism have been joined to multiculturalism* and are increasingly potent forces in American society. The importance for environmental design education is that it need no longer be isolated; with these alliances it can become an increasingly powerful voice in pedagogy.

In this chapter, the view is emphasized that people, and especially children and youth, need to: (1) develop an awareness of the multiple and interconnected dimensions of their environment, (2) be concerned with local and global environmental integrity, and interpret the meaning of design broadly, and (3) act sensitively and responsibly in improving environmental conditions. Through heightened consciousness people should be encouraged to act, individually and collectively, within communities to improve their situa-

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tion and to recognize the social and ecological costs of failing to do so. The focus is not on humans *and* environments, but rather on humans *in* the environment.

The focus, then, is on developing changed views of environments and of design, and a socially responsible environmental design education. The chapter concludes with a set of propositions and activities for engaging children, youth, and teachers in a community-based environmental design education.

CHANGING VIEWS OF ENVIRONMENT, DESIGN, AND ENVIRONMENTAL EDUCATION

Environmental design education—those attempts to develop awareness and concern of and ameliorative action toward our surroundings—is very complex, involving views not only of environment but also of design and pedagogy. Assumptions that we hold toward these dimensions will be examined briefly preparatory to suggesting a community-based pedagogy.

New Meanings of Environment

Through the ages, environment represented all of the stuff with which humans contended in the game of survival. Now we have stepped back, having developed the constructs allowing for a more conscious approach to regarding our surroundings. Environment has been differentiated along several dimensions; most commonly, we talk about natural and built environments, which involve increasingly significant degrees of human alteration. Scientific/objective views of environment have developed around the natural sciences, forming the basis for much of environmental education in today's classrooms. The term *built environment* has developed as a designation for human creations such as architecture, cityscapes, or industrial design. In a sense, these objective views are part of the environmental problem, for the division between nature and humans has been institutionalized through language. Environment is often regarded as "something out there" over which humans exert control.

Increasingly, though, the human dimension of environments has been suggested. For example, Rapoport (1977) has recognized that

People must inevitably be considered as members of such groups with particular values, beliefs and ways of understanding the world. . . . People's membership in small groups, families, large social groupings and institutions, subcultures and cultures affects their roles, the ways in which they communicate, the relative im-

portance and ways of handling social networks, kinship systems, values and the many other group characteristics of humans. (p. 2)

Rapoport's comments anticipate the changing emphasis on culturally and community defined environments rather than on objective universal definitions.

Mistakenly, commonsense environmental definitions have assumed humans to be in a separate and dominating role over their surroundings rather than interacting on a more reciprocal basis. Gottlieb (1993) recognizes the broader multifaceted dimensions of postmodern environmental views as the basis for a contemporary environmental design education,

We live today in a period of great upheaval, when environmental issues increasingly reflect crucial social and economic choices, and when new opportunities for change are emerging both within the movement and throughout society. Such opportunities for change have turned out to be unexpected, broad in scope, potentially far-reaching, and radical in their implications. They involve questions of technology and production, decision making and empowerment, social organization and cultural values. (p. 308)

This recognition of social and cultural interfaces with environment represents the basis for developing a socially responsible environmental design education. Manzini (1994), like Gottlieb, recognizes environment as an intertwining of social, economic, political, and ethnic dimensions that question the prevailing global model of development and consumption. Manzini calls for "innovative solutions with a high level of radicalness . . . to propose solutions which contain . . . a new way of behaving and viewing the world" (p. 39).

In summary, several changed dimensions have been added to our views. Environments are now regarded as: (1) *interactive* in the sense that they are shaped by humans and in turn influence human behavior; (2) *sharing with multiculturalism the defining variables of race, class, and gender*; (3) *experienced phenomenologically*; (4) *products of human interpretation*; and (5) *reflecting ideological orientations*. The meaning of environment in environmental design needs to be re-examined since the common anthropocentric view fails to recognize the complex interactive human/environmental relationships that characterize the contemporary world. The meanings of design as an integral part of environmental design also need to be examined so that we do not construct activities on false premises.

Changing Meanings of Design

Humans have always designed objects and environments to suit their particular needs; however, environmental design as a conscious discipline or

practice developed in more recent times out of design movements associated with the work of architects, urban designers, landscape architects, and other designers who often issued normative formalistic design manifestos destined to be followed by others. Elegant form was valued, which reflected the innovative use of materials, structural systems, and techniques more than it did the accommodation of social needs.

Among the critics of failed approaches was Paul Rudolph, noted architect and teacher, who as early as 1956 said of structures entered in *Progressive Architecture's* Design Awards, "Perhaps the most important single aspect of those designs as a group is the apparent lack of interest in the environment in which the building is placed. . . . This continual thinking in terms of individual buildings as gems unrelated to earlier works is disastrous, creating cities whose buildings tend to brutalize rather than refine" (Banham, 1974, p. 57). Even much earlier, Frank Lloyd Wright had recognized and advocated a more organic relationship between built form and nature.

Gradually, it was recognized that human behavior had been neglected in formulating environmental design. Behavioral scientists, such as psychologists, criticized the modernist movement for its limited design criteria, believing that the consideration of human behavior, including the use and perception of environments, would be reflected in more satisfying and functional human habitats. Basic psychological processes such as learning, perception, cognition, and emotion were viewed as important determinants in understanding human interactions within environmental contexts (Proshansky, Itelson, & Rivlin, 1970). Analysis of environmental psychological literature "shows that the topics subsumed under that label include perception theory, cognition, social and anthropological psychology, the study of social relationships, and the study of culture" (Lang, 1987, p. 21). It was also thought that human behavior could best be understood in the context of how space was used, such as in notions of privacy and *territoriality* (Schellen, 1976).

Lang (1987) makes an important distinction between the creation and use of information by behavioral scientists. Behavioral scientists build theories based on the description and explanation of phenomena, whereas planners and designers are concerned about the future. "Every act of an architect, landscape architect, or urban designer is an advocacy for one future rather than another" (p. 22). Designers rather than behavioral scientists determine the goals of design and in the process reflect a particular ideological orientation.

The quality of life also has been associated with human behavior in built environments. Experimental and descriptive studies were developed to study this phenomenon. It was assumed that an understanding of human behavior in particular environments was essential to the design process, but the results failed to offer comprehensive and workable solutions to urban and rural envi-

romental problems. Designers who based their work on a very limited model of human nature and behavior didn't understand the relationship between built environment and human behavior, and lacked an adequate theoretical basis of design (Lang, 1987).

Designers' limited understanding of human functioning resulted in additional problems of conceptualizing environmental design. At the 1970 Aspen Design Conference, *Environment by Design*, the French declined to participate, but offered a dissenting statement: "Problems of design and environment only look like objective ones. In fact, they are ideological ones" (Braham, 1974, p. 209). This recognition of an ideological basis of design was an important turning point in the conceptualization of design. Concerned with the importance of ideology in perceiving and valuing environments, I speculated that one's ideological perspective in perceiving environment is related to actions toward our surroundings (Nepertud, 1991). Environmental issues, such as land uses, cannot be solved without resolving conflicting ideological differences.

The point that I want to make after these brief surveys is that the meanings of design and environment have shifted, often in ways that parallel modern/postmodern changes in contemporary society. Hierarchical universal meanings created by experts have given way to a recognition of user meanings reflecting an interactive process in creating environments. Empirical psychological research, aimed at predicting environmental preferences and behavior, has not been completely successful in aiding the design process when it has ignored social/cultural variables that figure prominently in defining human/environmental relationships.

Gottlieb's (1993) analyses of major environmental organizations, such as the National Audubon Society, the Wilderness Society, the Environmental Defense Fund, and others numbered among the mainline "group of Ten," indicate that since the mid-1970s alternative environmental movements formed that are more local, participatory, action-oriented, and critical of expertise and lobbying in deciding environmental policy than were movements in the past. Historically, these movements have their roots in the earlier industrial and urban movements, the new Left, countercultures, underrepresented constituencies, citizen empowered movements, and pollution reduction efforts. The "new environmentalists" have advocated the freedom of neighborhoods from toxicity and other pollutants, the exercise of environmental choices, and the overall quality of living conditions that have been correlated to race, class, gender, and other social and economic variables. Issues of empowerment, equity, and choice are as much environmental as they are multicultural.

In effect, contemporary environmental designers can no longer take comfort in simply planning the "well designed" building or cityscape without at-

tention to the many human issues that define the environment. Manzini (1994) suggests that the designer create form opportunities for "new types of behavior and new lifestyles in keeping with a new notion of social quality" (p. 43). *Humans have, indeed, been joined to environmental concerns and are not outside looking in, and are beginning to demonstrate the effectiveness of community-based environmental movements.*

Environmental Design in Art Education

It was the earlier views of environment, design, and environmental design, heavily weighted toward modernist perspectives, that provided the foundation for the expansion of art education to include environmental design education. Initially, art educators were intrigued with the idea that a universal approach to design and aesthetics applied to environments would somehow trickle down and alleviate environmental problems. It was assumed by art educators that the additional focus on environmental concerns would result in change. It came as a shock to discover that artists and art educators were little more concerned about their environments than anyone else, except in relation to the making of art objects. This view has changed substantially in recent years with the growing interest among eco-artists who have manipulated natural materials, forces, and processes to comment directly on environmental matters (Gablik, 1991).

Within the history of art education, environmental design education is of relatively recent origin, tracing its roots back a mere several decades. My own involvement goes back to the 1960s when I attended a conference sponsored by the Community Arts Study Program, University of Oregon, directed by June King McFee (1969). Inspired by the design literature to which I was introduced at this conference, I proposed that the qualities of human activities, as differentiated by social, ethnic, and cultural variables, be the focus of environmental aesthetics (Nepertud, 1973). McFee and DeGge, in their book *Art, Culture, and Environment* (1977), introduced environmental design as a legitimate concern for art educators.

Art educators drew from several disciplines ranging from architecture and city planning to anthropology and psychology. The contents of a symposium on environmental design held at a National Art Education Association Conference in St. Louis were later published as an issue of *Art Education* (November, 1978). It was disappointing to me that art teachers had not assumed an active role as visual critics of their environments.

My perspective of design and environment was further developed in observations of urban design in the United Kingdom, particularly during visits with the late Russell Thomson (1978), art/environmental design educator and activist, in the Glasgow area. Situated at what had been a center of the

Industrial Revolution, this area experienced earlier many of the environmental problems that industrial nations continue to experience today. The used and discarded buildings, slag heaps, abandoned mines, polluted areas, and wasted human potentials were reminders of the problems that were to be experienced later by other industrializing areas. Not far from this area are the Scottish *new towns*, such as Cumbernauld, completely new communities designed to alleviate crowded and blighted urban areas devastated by industrial excesses.

The earlier forms of environmental design in art education paralleled the prevailing conceptions of environment and design. Recent studies in art education have demonstrated a renewed interest reflecting changes in environmentalism based on ecology and issues of ideology, and empowerment. For example, Jan Jagodzinski (1990) postulates a "green aesthetics," set within the postmodern condition, that is "*an aesthetic ecology of deep ecology*" (p. 2). Jagodzinski believes that changes in the use of land, agriculture, and housing are to be found within the context of a green aesthetics that is strongly allied to ecofeminism. In a similar vein, Blandy and Hoffman (1993) argue that the environmental crisis can be remedied through a holistic world view "by enlarging the idea of community to include a bioregional perspective. The result is an art education of place" (p. 28).

An example of art education that recognizes an ecological and multidisciplinary approach has been the work of Barbosa (1991) in Brazil. She advocates that "art educators should join with other specialists—sociologists, ecologists, scientists, geographers, as well as architects, urban planners, communications specialists, social psychologists, and anthropologists—in the search for the equilibrium between preservation and development that leads to a better quality of life and a better environment" (p. 60). Barbosa's educational efforts with the poor children of Sao Paulo have successfully combined art and ecology in the preservation of nature and humans in nature. These are but a few of the major changes in recent years that have had a profound bearing on how we view environmental design education theory and the practices necessary to make them an integral part of contemporary pedagogy. To be effective, I believe that educational programs must be teacher initiated with strong student participation set within local communities. How can art education respond to the problems centered on social, gender, and racial inequities as revealed through recent critical studies?

Types of Environmental Design Education

A survey of three prevailing types of environmental design education provides some indication of problems inherent in existing pedagogical approaches:

Many elementary, and some secondary, programs have included some

form of *environmental studies* in the curriculum. Usually, the focus is on the natural sciences; it may include an ecological orientation, but from an applied perspective that does not involve students in taking a particular stance with regard to preservation or other processes. This approach, just as the common value-free view of science, keeps environmental issues "clean and neat" so as not to offend anyone by the introduction of social, economic, political, or other significant issues. Topics such as ecological sensitivity, recycling, endangered species, and other similar topics are important, but if significant contextual issues are not addressed, ecological concerns result in little more than attractive art products.

Good design focuses primarily on objects, architecture, graphic design, industrial design, and urban and landscape architecture; it assumes that application of an objective form of evaluation and aesthetics can differentiate the "quality" of objects. The function of education is to prepare students to make aesthetic and good design judgments, usually through a study of formal design elements and structures. Many art educators still assume that the sensitive application of design principles to the environment is sufficient to improve their surroundings. *Good design, like science, is not apolitical; it merely is assumed to be so.*

Ecological studies assume that all natural systems in the world, such as biological and physiological, are interconnected. The term *deep ecology* was first used in the early 1970s by the Norwegian philosopher Arne Naess. Naess sought to distinguish between a radical, biocentric view of ecosystems—one that recognized the need to bring humans into harmony with the natural environment—and a shallow, anthropocentric view that placed humans at the center of the human-environment relationship (Gottlieb, 1993). Recent developments in art education environmentalism fit the description of deep ecology; however, most art education is still dominated by anthropocentric views that allow too comfortable a distance from the degradation of local and distant environments.

Art education, with its strong focus on aesthetics and design, remains the central and logical field for an environmental design education. The changed concepts of environment and design, and the emerging roles of teachers, have provided the foundations for environmental design education that actively seeks to involve teachers and students in transformative environmental activities through an engagement with community.

THE RE-EMERGENCE OF COMMUNITY

Community seldom has been mentioned in art education literature, especially in discipline-centered approaches. But as social considerations have entered the critique of schooling, it is much more frequently a consideration. Hicks

(1990) uses a reference to community that goes beyond geographic and demographic considerations in claiming, "We can only empower a student relative to particular communities of power. The process of empowerment involves a realignment of the individual from one community to another, or a relocation of that individual within a particular community" (p. 43). Her view is based on group membership, which is an important consideration in defining communities, as has been recognized by the "new environmentalists." It is quite likely that most students are members of several, often overlapping communities, a fact that argues against the application of simplistic environmental design curricula.

It is assumed that membership in a community or communities can contribute to empowered actions, and that such actions within some form of social organization are desirable in achieving democratic goals. Bowers (1987) recognizes that the added burden placed on schools by their assumption of socializing roles normally fulfilled by other institutions will be increased, "If teachers, as well as others, do not address the educational aspects of restoring a sense of community. . . . Education that contributes to the restoration of community will involve looking at the nature of teaching and the curriculum through a different set of conceptual lenses" (p. 141). Bowers suggests using the traditional curriculum in ways that strengthen bonding and participatory processes, while incorporating the relevant culture of the community into the curriculum. He does recognize the difficulties in this enterprise, as, for example, in the differences between the explanation of the work process in school and that encountered in work. "The symbolic knowledge—the words and concepts necessary for thinking about the nature and purpose of work—often oversimplifies the complexities of the work process and obscures the political issues requiring negotiation" (Bowers, 1987, p. 145).

Shannon (1992) relates the notion of community to a practical process of educational and community renewal through design, development, and maintenance of community. Education is in "*the context of community*" (p. 2). "The concept of Education-Based Community Development (EBCD) is founded on the profound interdependence of learning and life, of education and society" (p. 3). There is a vital link between education and daily living in which education is not confined to schools alone, but involves a reintegrative effort between the entire community and schools.

Alienated youth and adults become community resources instead of community problems. Life-long, shared, and cooperative learning become a part of every citizen's life, young and old, student and retiree, lay and professional. Lives are changed by working with, serving, teaching, and learning from others in multicultural and intergenerational contexts. (p. 3)

Kids shouldn't have to leave school to get into the real community. Academic studies and authentic community work need to be linked more significantly than is currently the case. Education-based community development is one such approach through which environmental design education becomes situated within the texture of community.

Deconstructed modernist beliefs have recentered curriculum construction between teachers and students (May, 1989) and led to multicultural changes within education (Banks & Banks, 1993). Art and aesthetics have been recentered on meanings within the life of all people. These same changes in attitude recognize that an environmental design education must engage students, teachers, and others outside schools in a form of community-focused education.

While community-focused pedagogy is receiving renewed attention, one needs to return to the social reconstructionists of an earlier era to realize the full meaning of such attempts. Space does not permit an extensive examination of social reconstructionism, which emerged in the 1920s and continued through the depression years, but the major tenets of reconstructionist thought are examined as a basis for development of a vital environmentalism. Theodore Brameld, through his numerous papers, discussions, and, later, *Toward a Reconstructed Philosophy of Education* (1956), was a dominant force in reconstructionism. Chambliss (1988) indicates that Brameld was concerned that all dimensions of culture be reconstructed, not just the social dimension.

Advocates were viewed by many conservatives as a bit naive at best, and as an un-American influence on our educational system at worst (Stanley, 1985). Although reconstructionism had little apparent lasting effect on our educational system as a whole, more recent social educators have found a congruence among the issues addressed by reconstructionists, such as ideology, indoctrination, and relativism, and the changes prompted by postmodern thought (Cherryholmes, 1988; Giroux, 1981; Stanley, 1981). As can be seen from this brief examination of reconstructionism, some of its major tenets provide a means of connecting an active environmental design education to the lives of children and youth.

The reconstructionists accepted many of Dewey's views, particularly reflective inquiry, but argued that more was required for social education. Reconstructionists argued that if education was to result in social changes, it could not remain neutral.

1. The very nature of education involves a certain amount of imposition of values. *Education is not a neutral enterprise.* The bias inherent in education serves some groups, but not others. This leads to the issue of whose values are being served in education.
2. *Education serves the interests of certain dominant groups, but not others.*

Critical analysis reveals the dominant groups that are being served and perpetuated.

3. *Schools need to play a role in ameliorating social conditions by reconstructing our institutions and culture.*

Education must insist on those values that lead to democracy and social and economic justice, a position that is heard more frequently than in the past among some art educators and environmental design educators.

The past two decades have seen advances in the critical examination of education and schooling as situated in a sociopolitical context (Apple, 1982, 1988). Several traditions have developed that reveal the socializing role of schooling and the meaning of the *hidden curriculum*. Among these positions, the social phenomenological approach—the new sociology—holds that meaning is constructed interactively. According to Giroux and Penna (1979), “the organization, distribution, and evaluation of knowledge are not absolute and objective; instead, they are socio-historical constructs forged by active human beings creating rather than simply existing in the world” (p. 24), a view in keeping with an active environmentalist position.

It is such a transformative environmental design education, developed on a sense of community, multicultural, and reconstructionist principles, that must become a legitimate part of social and art education content. Areas that are central to the redress of social problems, including environmental problems, through a reconstructionist approach include: (1) human/environmental relationships, (2) how humans differing by race, class, and gender are represented in environmental matters, (3) the hidden agendas of dominance and power embedded in visual and environmental phenomena that must be addressed by citizen empowerment, and (4) views of creative and aesthetic behavior that include not only the specificity, but the context, of objects, wherein lies the texture of community.

What I mean by the *texture of community* is that social and environmental problems are revealed not through abstract generalizations, but through the specificity of particular community contexts. The phenomenon of existence lies within the context of everyday life constituting our “eye upon the world,” which through our educated consciousness allows access to the deep ecology that defines a broad connected context. Without attention to the particulars of spaces within which we live and work, ecological matters have little connection to our daily being. Jagodzinski’s (1990) texture is situated within the lived experience of the home and community in his view of a “green aesthetic.”

Texture is the conversation with “things” to enable one to know them intimately. . . . Texture is our personal communication with Nature’s dialogue: it is

the experience of craft which intimately binds our consciousness with Earth’s (the Earth’s) material consciousness. . . . One cannot get closer to the Earth than through the touch of the hand. (p. 8)

This suggests that knowing the environment begins with the familiar, the close at hand, providing a base from which to move toward more distant spaces, measured from one’s body, in a knowing, understanding manner. Textures mean that there is a differentiation among things resulting not in a rejection, but in a dynamic tension and dialectic between and among things. The old is not discarded, but repaired and preserved, which in environmental terms results not in never-ending material consumption, but in use, repair, and preservation.

The environment is measured from that which can be touched to the more distant in Norberg-Schulz’s (1971) existential space. Space is measured by directional orientations such as the vertical and horizontal, above and below, and near and far. The ideas of both Jagodzinski and Norberg-Schulz support an examination and an environmental knowing that begin with the body and move outward to more distant spaces—objects, rooms, house, neighborhood, communities, and regions. Thus, the green aesthetic and existential space support an ordering of environmental orientations as a broad direction for environmental design studies.

Environmental design education must not only develop new awareness and understanding among children and youth, but also continue to engage them, long after they have left formal schooling, in an education based on social responsibility. In cooperative efforts among teachers and community members, questions such as these need be addressed.

1. What is meant by *environment*?
2. How have local environments been formed, including analyses of power, ideology, and economic and political forces that lie beneath the surface of one’s surroundings?
3. How have material and technological conventions contributed to the formation and shaping of local environments?
4. How are the poor, the rich, farmers, artists, businesspeople, and particular ethnic groups presented in visual material, recognizing that culture is embedded in environmental representations?
5. How do people create, shape, and make things “special” in their environments?

Art education, and environmental design education in particular, needs to build upon a reconstructive education. There have been recent attempts in art education to profit from these revelations, but much remains to be done (see

Freeman, 1994, for an issue of *Studies in Art Education* that focuses on reconstructionism in art education).

What I have suggested is that an art education, including a focus on environmental design education, founded upon reconstructionist principles and critical studies, can move us in the direction of alleviating social inequities. I agree with Kohl (1980) that we should not be naive enough to think that a new social order can be built solely through schools; however, I agree that "schools will be an essential part of a new order that is built through the cooperative effort of all of us: teachers, miners, factory-workers, professionals—all the people who believe in the social and moral imperative of struggling toward a new order" (p. 60). Together community members will become a revitalized dimension in environmental design education, as suggested by Shannon (1992).

Giroux (1983) agrees with the questions that Kohl raises, but suggests that while radical theorists have helped unravel the relations between schools and the dominant society, they have either succumbed to pessimism or have failed to establish a dialect between agency and structure. Giroux believes that

Struggles within the schools have to be understood and linked to alliances and social formations which can affect policy decisions relating to the control and content of schooling . . . excluded majorities who inhabit the neighborhoods, towns, and cities in which schools are located. . . working-class people, minorities of color, and women actively involved in the shaping of school policies and experiences. Rather than being the object of school policy, these groups must become the subject of such policy making. (pp. 237-238)

Giroux has pointed to important connections between schools and community that are essential to making an environmental design work—that is, a cooperative engagement of students, teachers, and community members.

Issues to be addressed include student and teacher roles essential to achieving a new texture of community. Giroux (1983) points to several things that teachers can do in the struggle toward the ideological and cultural conditions necessary for a transformation of society through engaged citizenship in the public sphere. He sees the need to reformulate the dialectic between the sociocultural realm of society and the state. In effect, formal schooling is state dominated, whereas education occurs outside schools. Teachers can play a number of roles in these struggles: (1) developing an understanding of political and economic interests outside of schools that affect the processes of schooling through policy statements; decisions on how resources are distributed, and awareness of tax matters; (2) actively engaging minorities, working class people, and women in the shaping of school policies and experiences; thus broadening the opportunities for community support of teachers; (3)

bringing the concrete back into radical pedagogy by taking seriously the "specific needs, problems, and concerns of everyday life" (p. 238); (4) producing experiences, beyond the classroom, that deal with concerns that promote dialogue and democratic forms of communication "to work with adults around issues directly related to their lives, their cultural capital" (p. 239); and (5) developing alliances with other teachers within schools to prevent isolation, which allows for hierarchical decision making and authoritarian control. These suggest some ways that community can be achieved as the context supporting a new environmental design education.

A COMMUNITY-BASED ENVIRONMENTAL DESIGN EDUCATION

To realize the roles that Giroux suggests, it is apparent that art teachers must be actively engaged in creating their own curriculum materials and teaching activities, hopefully through a real dialogue with their students as well as with other teachers. If an environmental design education is to be developed around the texture of community, that is, particular places and students, teachers must recognize their own and students' environments and avoid pre-packaged curricular materials contradictory to their own situations. What, then, are the more specific goals of an environmental design education?

An environmental design education based on the texture of community should allow students to

1. Develop an interactive view of *environment* as reciprocally affecting and being affected by them.
2. Understand the ecological nature of environment in which all things are related and affected by overlapping processes, resulting in a valuing of biodiversity.
3. Realize that their classrooms and schools are their environments which they should have some voice in shaping and maintaining.
4. Develop a feeling of empowerment with respect to the environments of which they are a part, and in the communities of which they are members; issues of land use, preservation, input in design solutions.
5. Understand the ideological meanings of environments and work toward those positions that respect class, gender, and ethnic differences, realizing the epistemism of *balance* as a solution to conflicting issues.
6. Become sensitive to their own interpretation and valuing of environments as a legitimate form of evaluation.
7. Discuss, weigh, and adjudicate issues of private/proprietary ownership versus public use and control of environments.
8. Develop a socially situated and responsible view of aesthetics as opposed

- only to formalistic considerations, and understand the interaction of environmental specificity and social dimensions.
9. Develop an awareness of and concern for environmental issues ranging from within one's communities to more distant ecological issues.
 10. In evaluating and making decisions about environmental actions, give attention to aesthetic, qualitative versus only economic values.
 11. Realize that all environmental concerns, issues, and problems are contextually situated.
 12. Understand that all environmental matters are historically situated.
 13. Become involved in developing creative, imaginative solutions to environmental problems, both in an ideational and material sense.
 14. Develop a sense of empowerment to recognize, improve, and reconstruct neglected environments through individual and communal actions.

If these goals seem heavily weighted toward qualitative, socially aware, public versus private ownership, and multicultural sensitivity, it is intentional. It may be recalled that a socially reconstructive education is not neutral, but rather recognizes and holds to particular values. So-called "balanced" approaches invariably condemn socially responsible values so that desired proprietary views, representing the balance, are little if at all changed. As critical theorists have pointed out, no educational force is ideologically neutral. I have outlined some goals for socially responsible environmental design education. It also should be recognized that teachers, together with their students in particular community settings, are the final arbiters of goals, emphases, and activities. *The curriculum resides not in curriculum guides or expert specifications, but in the texture of each community.*

In these discussions, teachers have not been designated as art, elementary, or social studies teachers, for teachers at any level or subject designation can have an effect through the texture of community. Ideally, a cohort of teachers in a school might address environmental issues most effectively, each with his or her own strengths and concerns. At the middle school, junior high, or high school level, the art teacher might be the leader, calling upon social studies, history, biology, and other teachers to provide support and assistance. At the elementary school, any teacher with strong environmental interests could be the organizer, working cooperatively with her or his cohorts. It is also important that each group, or teacher if working alone, develop contacts within each community to make environmental efforts not only a schooling effort, but a true educational experience for students and other community members. Community leaders could be drawn from the design professions, such as architects, landscape designers, and planners, as well as from economic, social, and political arenas.

In spite of the risks that have been noted in outlining curricular ap-

proaches that might contradict the texture of particular communities, in the section that follows several selected propositions, along with some educational activities, are suggested. These are designed to be more suggestive than prescriptive, for in the final analysis each teacher must particularize her or his approaches in sympathy with local community textures. Thus, they may be further elaborated, simplified, and changed to develop the major thrust of each. The view of student/teacher-constructed knowledge supported under the texture of community means that both should contribute to the development of educational activities.

SELECTED ENVIRONMENTAL PROPOSITIONS

Propositions about environments are offered as means of orienting perception of and behavior toward facilitating human-environment interactions. Rapoport (1977, 1982) has situated investigations of environmental meanings within a cognitive framework in which the perceptual process is central. Norman (1988) refers to schema theory, frame theory, semantic networks, or propositional encoding. Using a similar approach, Neperud (1988) developed a propositional view of aesthetic experiencing, in which "individuals are motivated to make sense of their environments. This interaction of individual and environment revolves around the generation and testing of 'propositions'" (p. 288). Visual/verbal propositions in memory are tested against one's environmental focus and may be altered in the process, thus accommodating new information. Emotion is ever present in the process, coloring the interactions, or even precluding further perceptual processing if affective reactions to the environment are extremely strong. This propositional/schema approach provides access to information from environments through perception, in which children and youth use visual/verbal propositions to acquire meanings through continuing explorations and interactions with their environments.

Environments Are Experiential

This means that students need to develop a detailed sensory awareness of environments. Individuals interact existentially (Nobberg-Schulz, 1971) and phenomenologically (Bachelard, 1964) with their surroundings. Children experience their surroundings directly through play and creative, manipulative behavior in the course of which they touch, smell, and listen. Noted developmentalists, such as Piaget and Vygotsky, have recognized the manipulation of concrete phenomena as essential to children's development of meaning. Children aged 3, or even younger, may profit from their interactions with surroundings in a way that leads to their understanding that environments

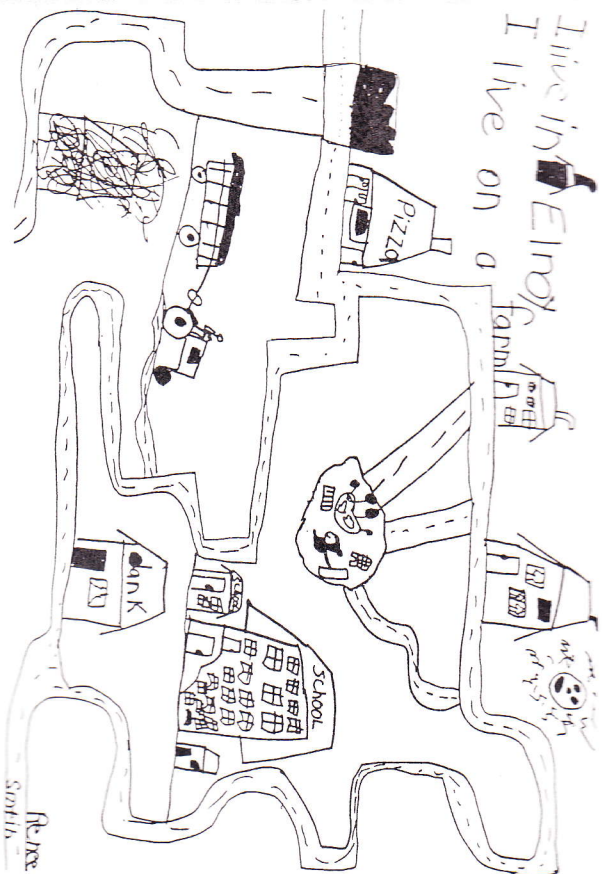
respond to their actions. Propositions serve as the interactive mediators between individual and experience; words and visuals serve to direct experiencing. However, overly strong insistence on verbal/cognitive propositions can limit rather than expand experiencing. Thus, for example, insistence on the observation of formal qualities, such as texture and color, can restrict exploratory tendencies leading to new experiential discoveries.

The cultural variability of environmental propositions also must be recognized so that there will not be a tendency to generalize propositions across ethnic and social groups. Having recognized these cautions, direct sensory/phenomenological experiencing of one's surroundings can enhance attention to nonverbal propositions that figure so importantly in affective responses to environment. This means that students need to be provided numerous experiences that will enhance sensory awareness. Hiss (1990) urges an experiential role in guiding the development that is certain to occur in the next quarter century; he suggests that individuals need to determine and make known the kind of experiences they want in their surroundings. This is certainly a role that students can discuss and evaluate in their own environments.

Environments Have Meaning Through Direct Experiencing

Children's environmental awareness is developed through a variety of experiences, concepts, and propositions acquired through several methods. An individual interacts environmentally with various levels ranging from objects, living space, home, and the several communities of which he or she may be a member to geographic considerations. Concepts of place, community, and ecology have been added to our talk about environments. Children experience environments through perceptual and creative processes, and through interpretation and reflection in their search for meaning. Just as spatial types are not linear, these processes are differentially emphasized as circumstances prevail; for example, evaluation may precede other processes, may be intertwined with them, or may be a final judgment of environmental preference or worth.

Several techniques can be used to increase environmental awareness, including drawing, surveying, and mapping (Neperud, 1977). Unless attention is somehow focused on qualities of surroundings, a child simply may name a space and its functions without attending to dimensions actually experienced. Experiencing the phenomena of environments involves all of the senses—sight, hearing, smell, taste, feeling, and movement as one performs daily tasks. The object is to become conscious of qualities rather than merely attending to verbal functional categories. A technique focused on visual qualities of a familiar space is to have someone stand in the middle of the classroom with eyes closed and ask, "Tell us what you can remember about the room without



A pictorial map by a first grader depicting home in relationship to major places in a small community

looking. Then, describe the floor. Of what material is it made?" Next, have someone walk around the room; then ask, "When you walk on it how does it feel and sound? What does this tell you about the floor and wall surfaces?" Similar activities may be repeated with rooms less familiar to students.

Another approach is to change familiar surroundings incrementally, such as by addition of color or texture panels, and ask someone, "Close your eyes, describe the surface of the room as you remember it." The amount of change needed to produce awareness should be observed. Repetition of this process will begin to sharpen students' awareness of and attention to immediate surroundings. These approaches are only suggestive of the many possibilities that innovative teachers can create to heighten environmental awareness.

A series of auditory activities will help develop more acute awareness of the many sounds that surround us. The teacher can record sounds from everyday environments—airplanes landing and taking off, street noises at different times of the day, playgrounds, city center, rural areas, farm noises, wave sounds, running water, and animals and birds in different settings. Then the teacher can ask, "What made these sounds, and where were the sounds made?"

These activities, as well as those involving taste, smell, and combined sensations, can direct attention to varied qualities as at least a partial basis for

evaluation of environments. One can grow so accustomed to traffic and other city sounds, or so inattentive to the subtleties of a rural landscape, that one has a diminished capacity to evaluate and make judgments.

Environmental Meanings Are Context Specific

Environments have meaning for humans within particular contextual circumstances such as rooms, houses, places, communities, regions, and ecosystems. How can awareness of this extended view of environment be developed? This probably can be accomplished best in terms of an individual's everyday activities, such as home life, going back and forth to school, shopping, and recreation, among other individual/environmental interactions.

The aim is to help children develop a consciousness of interactions with several levels of surroundings, including objects, rooms and other intimate surroundings, their home, the neighborhood, community (schools and other activity centers), parts of a city they may have frequented, and regions visited. What kinds of experiences do they have with these? How can identity of these objects and places be established? The many objects that surround individuals serve a variety of purposes ranging from functional to associational ones, such as mementoes that remind one of past experiences. In considering the relationship of things to people, Csikszentmihalyi & Rochberg-Halton (1981) consider objects, furnishings, and the things that people collect to be expressions of themselves since these are the objects over which they have some control.

Consequently, the methods of study may vary depending on uses of the object. The teacher might have a student select a favorite object that he or she has saved for a long time. "Why is it important to you? How do you feel about it? Tell us about the circumstances surrounding how you obtained it, or why it is important to you? Or, in a sequence of drawings depict your answers to these questions."

One way of developing awareness of commonly used spaces is to draw a room, such as a bedroom, from memory. The teacher might ask someone, "Make a drawing of your bedroom. Put into it everything that you can remember, including the things that you use." Or, "If you could change your room, house, or living space, draw what you would like." These studies could be expanded to larger communities and regions. This indicates what students value about their surroundings and why. Findings from such activities, when contrasted among student groups, will indicate the importance of context. In addition, information would be provided about the cultural variability to which Rapoport (1982) has referred.

Environments Are Culturally Variable

Environmental design based on objective approaches has assumed that "good design" is universally applicable across cultures and societies. Architectural styles such as modernism were assumed to be most functional, whether applied to apartments or offices; sometimes they were applicable, but usually they were not. Environments that people create or toward which they gravitate differ among groups by race, class, ethnic difference, and so on. Some choices apparently are made on geographic features; some years ago while tracing ancestral roots in Norway I was amazed by the similarity of Norwegian landscapes to those areas in the United States chosen by immigrants from Norway. Schellen (1976) and other behavioral scientists have indicated differing spatial use of apartments and other facilities by ethnic grouping.

When discussing or teaching about environments, one cannot assume universal characteristics, but must attempt to determine how individuals differ in using and creating spaces, so as not to do injustice to the very nature of the texture of community and multiculturalism. Activities can range from comparative studies of differing cultures and ethnic groups to simple observational reporting in different areas of a city or countryside.

People Need to Have an Effect on Their Environments

People plant gardens, landscape their surroundings, rearrange and decorate their living spaces, and engage in other activities in order to have an effect on their surroundings. In fact, destructive and constructive behaviors represent different points of a continuum from social to social behavior rather than mutually exclusive categories. Graffiti and murals created to celebrate ethnic identity and history represent differing points on a continuum of the need to have an effect. Recently, Dissanayake (1988), art historian and ethnologist, has pointed to this need to have an effect and to make things special.

From an educational perspective, teachers not only can study cultural differences, especially in local communities, but also need to engage students in creating spaces, including their classrooms; planning for anticipated community changes; and actually renovating and changing neglected neighborhood spaces.

People Need to Develop Evaluative Criteria

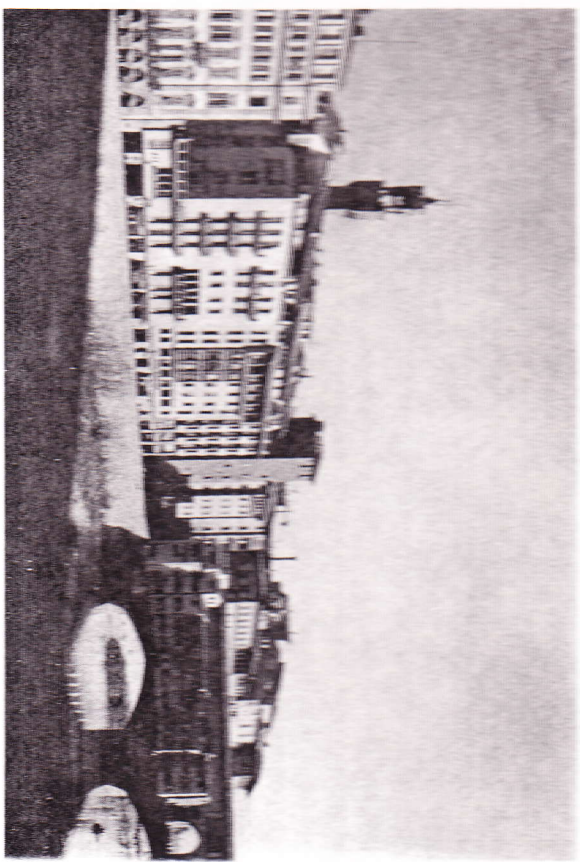
It has been demonstrated that affect is present throughout the perceptual and experiential process to the extent that emotion may even preclude further



Having an effect on one's environment through gardening

analysis (Nepertud, 1988). Rapoport (1982) also concludes, "It can therefore be shown that people react to environments globally and affectively before they analyze them and evaluate them in more specific terms. Thus the whole concept of environmental quality is clearly an aspect of this—people like certain urban areas, or housing forms, because of what they mean." Citing examples of classrooms, student dormitories, wilderness areas, housing, and other examples, Rapoport continues, "In all these cases the initial affective and global response governs the direction that subsequent interactions with environment will take" (p. 14).

Thus, individuals do evaluate their surroundings, much as they do the visual arts, probably based on criteria subtly acquired through the ongoing educational processes associated with family life, life on the street, and ethnic, class, and gender associations. Or, as suggested in the *biophilia hypothesis*, through the evolutionary process humans have acquired a genetically based emotional need for interaction with nature and landscapes (Keller & Wilson, 1993; Wilson, 1984). This information means that additional evaluative processes and criteria are not automatically acquired, but need to be developed. However, evaluative criteria applicable to various environments must recognize sociocultural differences, precluding the applicability of universal design-



Florence: Most cities reflect development over a long period

based evaluative criteria. Students can be encouraged to evaluate their own communities in ways leading to the discussion and analysis of criteria, thus avoiding top-down, critics' evaluative approaches.

In one such effort, I organized a panel of architects and landscape architects and invited townspeople of a small western city to a planning session. Everyone was given 15 minutes to design a particular building and a park space, using paper and pencil. The resulting sketch plans, in effect, reflected each person's evaluative criteria for particular environments. This approach engaged individuals in reflecting about and sketching the qualities desired of each space and provided useful environmental materials for further discussion and analysis.

People Need to Understand How Environments Are Formed

It is relatively simple to understand how carpenters and other construction workers build a house. It is much more complex to understand the social, economic, political, and psychological forces, as well as the design and planning arts, that form the basis for building that single house. Why do styles of houses change? Why do some residences have more space around them than others (why row houses in inner cities as contrasted to suburban houses with large lawns)? By contrasting types of housing, students can begin to discern

the interrelationships of economic, social, and political contextual factors in affecting environments. The local communities should be a basis for studying, using descriptive and analytic methods, how environments are formed.

At another level, the evolution of a city over several centuries may reflect many styles of architecture and patterns of development. By surveying and contrasting different sections of a city, one can begin to trace the history of a place and then begin to ask questions about the differences: "Why does an old section of a city develop over several centuries, whereas contemporary residential developments and shopping malls may spring up, virtually overnight, on what was formerly a farm?" These contrasts provide a basis for analyzing social, economic, and political forces that shape environments. The resulting environmental forms can be evaluated critically for their relationships to the quality of human existence. By developing propositions about the shaping of local environments, whether of recent or ancient origins, students begin to realize that their surroundings are created through complex interactions of forces. Likewise, they realize that there are no simple roads to improvement. An environment carries traces from earlier periods relating to how people lived and valued their communities; such information provides a perspective for valuing one's surroundings.

CONCLUSIONS

Environmental design education is not firmly established as a part of the public school curriculum, but it should be as a means of planning for an increasingly diverse and interrelated world. In elementary education, a physical and biological science approach to environmental education exists as a form of shallow ecology. At the secondary level, art teachers sometimes extend art curricula to include some architectural studies, but it is usually from an historical or traditional design perspective. This is not to say that some art teachers aren't concerned with a more comprehensive ecological approach to design and environment, but most traditionally educated art educators with a heavy preparation of studio art and art history are simply not prepared to develop an environmental design program without resorting to universal design and aesthetic values. This has implications for teacher education, for unless future teachers truly experience and understand what contemporary environment (often is all about, the addition of another course won't do the job.

The meaning of environment has changed dramatically in recent decades. The integrity of ecology, place, community, and biodiversity have been added to "good design" as measures of environmental design. Social responsibility, justice, equity, ethnicity, class, empowerment, and gender are now legitimate

environmental issues. These changes in environmentalism, now joined to multiculturalism, become increasingly potent forces in American society.

The earlier forms of environmental design education developed by college and university art educators during the 1970s paralleled the prevailing conceptions of environmental design, heavily weighted toward universal absolutist design and aesthetic manifestoes, or behavioral psychology. Neither approach dealt with the interface between human behavior, environments, and designers' practices. A new environmental design education is developing that promises to address the problems of livability of the spaces we create and have inherited.

The greatest source of energy in realizing improvements is the *motivated human energy* of our children and youth. They have real interests and concerns about the environment, for it is they who are inheriting what we leave them. Their enthusiasm and idealism represent an untapped force for change, when situated within the new environmentalism and multiculturalism. These potentials can be realized through the texture of community in which environmentalism becomes an active force within students' lived experiences set in local communities. In this way, community issues of housing, preservation, development, open places, and where waste dumps are located become the focus through which environmental propositions and values are developed and tested.

Not only art educators, but all teachers with vision, need to work with students in constructing understanding and knowledge of local environments. Environmental propositions need to be developed and constructed that can be tested and redeveloped in the give-and-take of local communities. These approaches raise some central pedagogical issues: I believe that an environmental design education focused on the texture of community will prepare students to practice a citizenry alive to the reality of their own situations, not just to the abstractions disseminated by others. Teachers are not, and must not be, pessimists. Working cooperatively with other teachers and with community residents, teachers and students can be a powerful constructive force in achieving positive changes in environmental education.

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