Section 1

Participation Purposes

While the idea of participation can be traced to preliterate societies, community participation is of a more recent origin. It is commonly associated with the idea of involving local people in social development. The most important influences come from the Third World community development movement of the 1950s and 1960s, western social work, and community radicalism (Midgley, 1986). The plans of many developing countries emphasized cooperative and communitarian forms of social and economic organization, stressing the values of self help and self sufficiency (Worsley, 1967), advocating that the poor and the oppressed should be mobilized to promote social and economic progress. Current community participation theory suggests that politicians and bureaucrats have exploited ordinary people and that they have been excluded from the community development process. Its leading proponents are found in international agencies such as the United Nations, the World Health Organization and UNICEF. The emergence of community participation theory as an approach to social development is an outgrowth of the United Nations' popular participation program that required the creation of opportunities for all people to be political involved and share in the development process.

Although social work is primarily concerned with the problems of needy individuals and their families, it has also, since its inception in the late nineteenth century, focused on communities seeking to organize people to improve social services. Community organization then became an accepted method of social work incorporating such notions as social planning. Conventional methods of community work were transformed into a more radical approach of urging people to take direct political action to demand changes and improvements.

The beginnings of a grassroots democracy in America were linked to the community-based struggles of the 1960s that took place in the context of the civil rights movement, the rise of women's liberation, the anti-war movement and the challenges of alternative cultures, all of which represented an upheaval of civil society (Castells, 1983). The revolts that occurred in American inner cities throughout that time rarely identified themselves as 'urban movements.' They tended to see themselves as expressions of black power, of welfare rights, of tenants' interests, or of the needs of the poor, triggered by the disruptive efforts of urban renewal.

Legitimacy of this social movement was achieved by programs of social reform known as the "War on Poverty." The Community Action Program, funded by the Federal Office of Economic Opportunity (OEO) provided the institutional support and political legitimacy for the formation of urban grassroots organizations in support of the demands of poor neighborhoods. Thousands of organizations arose in urban, inner city areas laying the groundwork for a major neighborhood movement in America. The failure, however, of these social struggles to achieve substantial change was due to the diversity of issues related to the community organization movement and the lack of shared common goals. On the other hand, the Alinsky model of community organization tried to organize urban protest, to improve the living condition of the poor, empower the grassroots, and obtain more democracy and greater social justice (Castells, 1983).

An advocate of Jeffersonian democracy, Alinsky (1972) believed in pluralism, government accountability, local autonomy, and widespread citizen participation. He believed that the main problem with the system was its insensitivity of political institutions to the people, who were excluded because of bureaucratization, centralization, and manipulation of information.

As a community organizer, Alinsky believed that people could not be mobilized around models but could around the defense of their immediate interests. Thus his tactics were to organize people around a sensible issue and identify a clear opponent. He believed that when people achieve a victory they feel the effort has been worthwhile. In a sense, the main outcome of the organization has been the organization itself, its influence, its representativeness, and its internal democracy. Once this grassroots empowerment has been achieved, the democratic institutions start working in their favor and economic interests come under control.

As an organizer, Alinsky has to be called in by the community, and has to leave the community as soon as the organization is established and led by its own elected leaders. The organizer must be paid by the community, through funds raised by the community, and not ever become part of the movement. He believed that the organizer was a facilitator and educator in what was essentially a self-help effort. Most of Alinsky's experiences, however, were initiated by a single institution: churches that traditionally have been the natural form of popular organization in American history, since they represent the grassroots expression of voluntary organizations.

Alinsky believed in participatory democracy and utilized methods that endeavored to make it a reality rather than a trite phrase. In emphasizing the importance of citizen action, particularly at the neighborhood level, he stimulated the movement toward decentralization, local control, and consumer power. Criticisms of Alinsky focus on his antagonism and confrontational attitude toward the establishment.

Traditional community organizers operated from the premise that people and institutions with power will never surrender it voluntarily. Consequently, conflict organizers employed events such as rallies or pickets, involving large numbers of people, because they believed that

numbers are the primary source of the community's strength. The role of people participating in such events has been simply to be counted.

The consensus organizing model, on the other hand, seeks to establish partnerships between private and public sector leaders and community groups by providing effective ways for individuals to use and develop their own skills and creativity on behalf of their community. The model emphasizes strategy, pragmatism, and relationship building. Consensus organizing in a community starts with the identification and involvement of a local institution that provides the financial resources to support the organizing process.

The community organizing process begins with an assessment of community and downtown interests. An assessment of the culture of community involvement includes an analysis of the strengths and weaknesses of community groups, as well as the linkages that already exist between social service and government agencies and local banks and foundations. The aim of the process is to build community organizations that allow for resident involvement and leadership development, where every segment of the community has representation.

According to an extensive survey of community organizations initiated by Alinsky, Joan Lancourt (1979) concludes that, concerning issues addressing housing, schools, business, employment, welfare and city services, the community organizations were not able to reverse the trend toward deterioration. Community control was not achieved in some instances because they could not be multi-ethnic. When they were, ethnic components fought each other. Often, organizations did not achieve community control but were instead co-opted and absorbed into the management of the programs they were supposed to control. Yet, organizations were successfully formed on a territorial basis and were able to represent the diversity of the neighborhood's interests. The most successful experiences to emerge from the Alinsky ideology occurred in the 1970s when the new middle class, struck by the economic crisis was affected by the rapid decay of the quality of urban life. The organizations that developed were truly multi-ethnic and sometimes citywide, and based on a broad range of issues of economic policy, from taxes to nuclear power, and from health services to electricity rates.

Citizen movements, such as those occurring in the inner cities in the 1960s, are reactions against centralized authority and intractable bureaucracies. This form of grassroots democracy represents an important link to a representative democracy becoming a true participatory democracy. In the mid-1960's, Paul Davidoff, a planner and lawyer, challenged planners to promote participatory democracy and positive social change; to overcome poverty and racism; and to reduce disparities between rich and poor. Davidoff challenged planners to become advocates for what they deemed proper. He viewed advocacy as a way of enabling all groups in society, particularly organizations representing low-income families. His article "Advocacy and Pluralism in Planning" (1965) was a new model to the field of planning. Davidoff was instrumental in amending the American Institute of Planner's code of ethics to state that, "A planner shall seek to expand choice and opportunity for all persons, recognizing a

social responsibility to plan for the needs of disadvantaged groups and persons, and shall urge the alteration of policies, institutions, and decisions which militate against such objectives" (Checkoway, 1994).

COMMUNITY DESIGN CENTERS

Influenced by Davidoff's advocacy model of planning, many design and planning professionals rejected traditional practice. Instead they fought against urban redevelopment, advocated for the rights of poor citizens, and developed methods of citizen participation. Community Design Centers became the staging ground for professionals to represent the interests of disenfranchised community groups (Comerio, 1984). The social momentum of the Civil Rights Act (1957), the innovations of the Ford Foundation's Gray Areas Program initiated in 1960 was rapidly building a framework for change throughout the nation. The experiences provided by the Economic Opportunity Act in Community Action Agencies followed the Act's passage in 1964, and the stimulus of the Office of Neighborhood Development (HUD) strategically enhanced the economic development role of grassroots organizations and the usefulness of professional advocacy networks (Association for Community Design). Organized in 1963, the Architectural Renewal Committee in Harlem (ARCH) fought a proposed freeway in Upper Manhattan. In Cleveland, Architecture-Research-Construction (ARC) remodeled hospital wards, community-based treatment centers, and group homes working with patients, staff, and administrators in a participatory design process. In Tucson, the design center removed over 100 pit privies from barrio homes and replaced them with prefabricated bathroom units. Founded in 1973, Asian Neighborhood Design's name represents the history of work on issues in San Francisco's Chinatown. Today it is a full service professional planning and architectural service, dedicated to housing and community development throughout the region, with an annual operating budget of about $4 million. In Salt Lake City, ASSIST continues to provide accessibility design services completing over one hundred projects through construction each year. Architects, landscape architects and planners, working as volunteers in community design centers, complete hundreds of similar projects annually.

Community Design Centers (Sachner, 1983) are dedicated to the provision of planning, architecture, and development services unavailable to emerging civic organizations, or established community based development corporations (CBDOs). Design Center practices range from architect led nonprofit corporations through to university service-learning programs to private practices, and AIA/community sponsored volunteer programs. Support for design centers comes from Community Development Block Grants and other sources of funding to facilitate volunteerism. Services represented by most CDCs are:

- Comprehensive, participatory and strategic planning,

- Technical assistance in the selection and financing of development projects, and

- Advocacy and support for the acquisition and management of housing and community facilities.

Over the last thirty years Community Design centers have been effective in providing a broad range of services in economically distressed communities (Curry, 1998). For the design and planning professions, Community Design Centers were the equivalent of what health clinics are to medicine and what legal aid is to law. People are served through probono professional assistance, but often after the injury has occurred. Long-term community-based planning and visioning processes require linkages between design centers and community organizations with a full time commitment to distresses urban and rural environments.

Many of the major nonprofit community development corporations in the United States began as civic groups resisting development. This community economic development movement has now moved from grassroots activities to serving as a significant community building and development practice.

In response to the economic and political pressures of the 1980's some community design centers remained project based. These centers are generally organized as a non-profit corporation by an administrator through a local AIA chapter, and supported by Community Development Block Grants, and other sources of funding to facilitate volunteerism. Other, more comprehensive community design practice is carried out by centers that promote community-based control of local projects with related community improvement activities. Because these centers concentrate on providing a variety of services, they help to bring about projects for which architectural services will eventually be required. Community Design Centers look to organizers, neighborhood planning groups, individual low-income clients, community service committees, and non-profit boards of directors for its leadership in building communities.

Grass Roots Participation

While Community Design Centers were the initial advocates of grass roots participation, local citizens groups are organizing and demonstrating their capability to acquire power to effect neighborhood change. Today, in the South Bronx citizens practice a form of radical decentralized planning as they engage in a 300-acre revitalization project designated by the Bronx Borough President. While city planning officials proposed the clearing of a 30-square- block, neighborhood forums to discuss revitalization resulted in protest staged by the residents. Long-term residents were outraged at the idea of being pushed out by an urban renewal plan, after having remained in the neighborhood to keep it livable.

A neighborhood group was form and called itself--We Stay/Nos Quedamos that starting with block-by-block canvassing to explain the stakes and invite people to what would be 168 planning meetings in a single year. Meetings held twice a week allowed 6000 residents of the neighborhood to take part.

The open meetings attracted citizens, urbanists and environmentalists, and debate about neighborhood layout, community facilities and finding environmentally friendly construction materials. Staff from local housing and transportation agencies were sensitized to neighborhood issues as a result of participating in the discussions with the residents and walking the streets of Melrose Commons.

A radically revised plan emerged which retained 60% of the existing buildings instead of wholesale clearance. The residents asked for higher densities at several locations, a pedestrian mews with off-street buildings and small courtyards. They rejected a four-acre park proposed by city planners and reduced it to one acre for better security and visibility. The residents also wanted a meeting center with open space for concerts for the community.

In the end, the city approved the plan as the residents designed it. The most difficult part of the whole process reported Nos Quedamos, was to convince this heavily Central American and black community that they could fight city hall. The achievement of this grass roots effort was not only in gaining acceptance for a neighborhood plan, but also by a civic process that enhanced the dignity of people who felt powerless.

COMMUNITY BUILDING

Federal programs of the 1960's, such as the Community Action Program and Model Cities, emphasized resident participation in improvement programs, where outside professionals were making key decisions, controlling the budgets, and taking the risks. Today, community building, in contrast, sees resident groups playing a more central role in both planning and implementation. A term used to reflect this trend is *community driven* (Kingsley, McNeely & Gibson, 1997), rather than the nondefining term "community participation," or the more inward-looking term" community controlled."

Community building is a holistic approach that focuses its efforts on people. It is dedicated to the idea that residents must take control of their destiny, and that of their communities. Community building grows from a vision of how communities function normally where community members create community institutions, that help to achieve their aspirations as well as strengthen community fabric.

Building social capital is the primary objective that is achieved by residents playing a central role in decision making and believes that they "own" the process as they move away from being dependent. Many case experiences suggest that resident-driven initiatives have a greater chance of success because residents are more aware of the reali-

ties of their own environments than outside professionals. They have a sense of what will work and what will not work. Principles of community building activities are (Naparstek, Dooley, & Smith, 1997):

- Identify a community's assets as well as its problems.
- Work in communities of manageable size.
- Develop unique strategies for each neighborhood.
- Reinforce community values while building human & social capital.
- Develop creative partnerships with institutions in the city.

Community building integrates traditional top-down approaches with bottom-up, resident driven initiatives to create a network of partnerships among residents, management and community organizations. Through resident participation in setting goals and developing implementation strategies, residents assume ownership in the process. Residents involved in community building spend their time jointly working on productive activities that address the problems they identified. This collaborative involvement builds social capital-developing friendships and mutual trust, sharing and strengthening common values. Building social capital is a means of building human capital-strengthening the capacities of individuals and families to overcome adversities and take advantage of opportunities. Utilizing local youth to conduct surveys, or mobilizing residents to get involved in construction and clean-up projects, helps to develop human capital.

Community building has to take place at the neighborhood level because it allows for frequent face-to-face interaction-the ability for people to get to know each other in order to establish mutual trust. In American cities, neighborhoods of about 6000 people are different from each other, which suggests the need for considerable variation in strategy. Since individual neighborhoods may be too small to address some environmental problems, larger resident-driven organizations can facilitate collaboration between neighborhoods yet allowing each to maintain its identity.

Residents need to develop a vision of what they want the neighborhood to become and how to get there. To start the process an inventory of community assets can set a positive tone and then finding ways to take advantage of them in creating action programs. John Kretzman and John McKnight (1993) have said that community initiatives from the perspective of solving problems casts a negative tone on what should be a positive capacity building process. They argue that community building should start by identifying neighborhood assets and finding ways to build upon them, while still recognizing that serious problems may still exist in certain neighborhoods. The community building orientation should be positive and constructive.

Kretzman and McKnight suggest that identifying assets in a neighborhood or community can dramatically alter the planning process since assets occur at different levels, which can relate to their priority in developing programs. Assets within the neighborhood such

as residents experience, neighborhood businesses and citizens and business associations should be acted on first, while assets controlled by outsiders such as public institutions, can become assets but requires the community to devise appropriate enabling strategies.

CURRENT VIEWS OFCOMMUNITY PARTICIPATION

A new pragmatic approach to participation has emerged, one that no longer view participation as Arnstein's (1969) categorical term for "citizen power." The purposes of participation have been more modestly defined to include information exchange, resolving conflicts, and to supplement design and planning. *(Participation) reduces the feeling of anonymity and communicates to the user a greater degree of concern on the part of the management of administration. (With) it, residents are actively involved in the development process, there will be a better maintained physical environment, greater public spirit, more user satisfaction and significant financial changes* (Becker, 1977). Community participation, however, has a different meaning to different people and even a different meaning to the same people according to the situation; different users prefer to participate in different ways according to the situation too. Numerous definitions of participation can be found in the literature. Participation is contextual, so participation varies in type, level of intensity, extent, and frequency. In a review of participation literature, Deshler and Sock (1985) identified the following two levels of participation:

Pseudo-participation was categorized as:

- Domestication- this involves informing, therapy, and manipulation.
- Assistencialism- This includes placation, and consultation.

Genuine Participation was categorized as:

- Cooperation- this refers to partnership and delegation of power.
- Citizen control- which means empowerment.

People's participation, where control of the project rests with administrators is *pseudo-participation*. Here the level of participation of people is that of being present to listen to what is being planned *for* them. This is definitely *non*participatory. Genuine participation occurs when people are empowered to control the action taken. The distinction between forms of participation is important because it requires careful consideration of communication behaviors throughout the process to bring about knowledge sharing and learning on the part of all participants (White, 1994).

Participation is a general concept covering different forms of decision-making by a number of involved groups (Wulz, 1986). Participation can be addressed effectively if the task of participation is thought of in terms of what is to be accomplished when the need is acknowledged to

involve citizens. Conceptualizing the issue means asking simple questions of who, what, where, how, and when?

- Who are the parties to be involved in participation? Individuals or groups who will or should be involved in the participation activity being planned need to be identified. Generally, people who will be affected by design and planning decisions should be involved in the process of making those decisions.

- What do we wish to have performed by the participation program? For example, is the participation intended to generate ideas, to identify attitudes, to disseminate information, to resolve some identified conflict, to review a proposal, or, is it merely to serve as a safety valve for pent-up emotions?

- Where do we wish the participation road to lead? What are the goals?

- How should people be involved? Appropriate participation methods need to be identified to achieve desired objectives. Methods need to be matched to purposes. Methods such as community workshops and charrettes allow for diverse interests and promote human resource development. They may afford the opportunity for participants to have control over decisions. Public hearings, on the other hand, may provide information but may not promote community support.

- When in the planning process is participation needed or desired? It is necessary to decide where the participants should be involved; that is in development, implementation, evaluation or some combination thereof. These are simple questions, yet rarely asked prior to the development of a community participation program.

The purposes of participation have been more modestly defined to include information exchange, resolving conflicts, and to supplement planning and design. Participation reduces the feeling of anonymity and communicates to the user a greater degree of concern on the part of the management or administration. With it, residents are actively involved in the development process; there will be a better-maintained physical environment, greater public spirit, more user satisfaction and significant financial savings. The main purposes of participation are:

- To involve people in design decision-making processes and, as a result increase their trust and confidence in organizations, making it more likely that they will accept decisions and plans and work within the systems when seeking solutions to problems.

- To provide people with a voice in design and decision-making in order to improve plans, decisions and service delivery.

- To promote a sense of community by bringing people together whom share common goals.

An important point in the participatory process is individual learning through increased awareness of a problem. In order to maximize learning the process should be clear, communicable and open. It should encourage dialogue, debate and collaboration. Thus, participation may be seen as direct public involvement in decision making processes where people share in social decisions that determine the quality and direction of their lives. This requires the provision of effective communication media in order to provide suitable grounds for user participation in designing. There are many benefits accruing from such an approach for the community, the users, and design and planning professionals.

Firstly, from the social point of view, participation results in a greater meeting of social needs and increasingly effective utilization of resources at the disposal of a particular community.

Secondly, to the user group, it represents an increased sense of having influenced the design decision making process and an increased awareness of the consequences of decisions made (Hester, 1990).

Thirdly, to the professional, it represents more relevant and up-to-date information than was possible before. Creating a methodological framework can enable the use of rational decision making methods without affecting the creative process.

Since participation has a diversity of expression, a design and planning solution from this approach will need to be made *transparent* so that the decisions are understood by the people who made them. By convening public forums that encourage community participation, people can openly express their opinions; make necessary compromises, and arrive at decisions that are acceptable. By involving as many interests as possible, not only is the product strengthened by the wealth of input, but the user group is strengthened as well by learning more about itself.

The types and degrees of participation depend on several factors and vary in accord with the circumstances. Burns (1979) classifies participation in four categories or 'experiences' that can lead to agreement about what the future should bring:

Awareness: This experience involves discovering or rediscovering the realities of a given environment or situation, so that everyone that takes part in the process is speaking the same language based on their experiences in the field where change is proposed.

Perception: This entails going from awareness of the situation to understanding it, and its physical, social, cultural, and economical ramifications. It means sharing with each other so that the understanding, objectives, and expectations of all participants become resources for planning and not hidden agendas that could disrupt the project at a later date.

Decision-Making: This phase concentrates on working from awareness and perception to a program for the situation under consideration. In it,

participants make actual physical designs based on their priorities for professionals to use as a resource to synthesize alternative and final plans.

Implementation: Many community-based planning processes stop with awareness, perception, and decision-making, often with fatal results to a project because it ends people's responsibilities just when they could be of most value: when the how-to, where-to, when-to, and who-will-do-it must be added to what people want and how it will look. People must stay involved, throughout the process, and take responsibility with their professionals to see that there are results (Hurwitz, 1975).

Participation means different things to different people and different things to the same people, depending on the issue, its timing, and the political setting in which it takes place. To address participation effectively, the task should be conceptualized in terms of what is to be accomplished when the need is acknowledged to involve citizens. The planning that accompanies the development of any participation program should first include a determination of objectives. For example:

- Is the participation intended to generate ideas?
- Is it to identify attitudes?
- Is it to disseminate information?
- Is it to resolve some identified conflict?
- Is it to measure opinion?
- Is it to review a proposal?
- Or is it merely to serve as a safety valve for pent-up emotions?

The list of possible participation objectives will differ from time to time, and from issue to issue. Once the objectives of community participation are stated, it becomes clear that participation is perceived differently depending on the type of issue and people involved. If differences in perception and expectations are not identified at the outset, and realistic objectives are not made clear, the expectations of those involved in the participation program will not have been met, and they will become disenchanted. Planning for participation requires the following steps: (Rosner, 1978):

- Identify the individuals or groups who should be involved in the participation activity being planned.

- Decide where in the design process the participants should be involved; that is in the development, implementation, or evaluation.

- Articulate the participation objectives in relation to all participants who will be involved.

- Identify and match alternative participation methods to objectives in terms of the resources available.

- Select an appropriate method to be used to achieve specific objectives.

- Implement chosen participation activities.

- Evaluate the implemented methods to see to what extent they achieved the desired goals and objectives.

Taking the proposed steps will not automatically assure success, but it can be claimed that the process will minimize failure. As a summary, four essential purposes of participation can be identified:

1 Participation is inherently good.

2 It is a source of wisdom and information about local conditions, needs, and attitudes, and thus improves the effectiveness of decision-making.

3 It is an inclusive and pluralistic approach by which fundamental human needs are fulfilled and user values reflected.

4 It is a means of defending the interests of groups of people and of individuals, and a tool for satisfying their needs that are often ignored and dominated by large organizations, institutions, and their inflated bureaucracies.

Experiences in the participation process show that the main source of user satisfaction is not the degree to which his/her needs have been met but the feeling of having influenced the decisions. The potential benefits offered by an organized approach to participation constitute logical, emotional, technological, and economical benefits. A review of the theories and practices of participation are summarized as follows:

- The professional's job is no longer to produce finished and unchangeable solutions, but to develop solutions from a continuous dialogue with those who will use his/her work. Energy and imagination of the professional are directed to raising the citizen's level of awareness in the discussion. The solution will come out of the exchanges between two; the professional states' opinions, provides technical information, and discusses consequences of various alternatives, just as citizen's state their opinions and contribute their expertise.

- Participation has a diversity of expression. A design or planning task resulting from this approach should be made 'transparent' in order for the final decisions to be understood by the people who will be affected by them.

- Public forums should be convened, and participation by all members of the community should be encouraged. In this way people can openly express their opinions, make necessary compromises, and arrive at acceptable decisions. This method not only strengthens the product but the user group is strengthened as well by learning more about itself.

- Participation in the design and planning process may involve technological issues, and as a result, specialists in various fields may be required to cooperate. Public education about technical matters, however, can make participation effective and efficient.

- Public comments and representation should be accepted into the process continuously. The final decision is not the end of the process. It must be managed, evaluated and adapted to changing needs. Effective community change requires increasing participation of citizens in defining the type of changes desired.

Professionals will need to make their solutions less representative of themselves and more representation of citizens even though difficulties in applying participation may arise.

STAGES OF PARTICIPATION

The types and degrees of participation depend on several factors and vary in accord with the circumstances. The most modest kind of participation is where the user helps to shape a building by acting as a client of an architect. The fullest kind of participation is the kind where users construct their housing for themselves. Participation can be viewed in four categories or experiences that can lead to agreement about what the future should bring:

Goal setting: This stage involves discovering or re-discovering the realities of a given environment of a situation so that everyone in the process is speaking the same language based on their experiences in the field where change is proposed.

Programming: This entails going from awareness of the situation to understanding it, and its physical, social, cultural and economic ramifications. It means sharing with each other so that the understanding, objectives, and expectations of all participants become resources for planning and not hidden agendas that could disrupt the project later on.

Design: This phase concentrates on working from awareness and perception to a program for the situation under consideration. In it, participants make actual physical designs based on their priorities for professionals to use as resource to synthesize alternative and final plans.

Implementation: Many community-based planning processes stop with awareness, perception and decision-making, often with fatal results to a

project because it ends people's responsibilities just when they could be of most value: when the how-to, where-to, when-to, and who-will-do-it must be added to what people want and how it will look. People must stay involved, throughout the processes, in other words, and take responsibility with their professionals to see that there are results.

The planning that accompanies the design of any participation program should first include a determination of goals and objectives. Participation objectives will differ from time to time and from issue to issue. Once they are stated, it becomes clear that participation is perceived differently depending on the type of issue and people involved. If differences in perception and expectations are not identified at the outset, and realistic objectives are not made clear, the expectations of those involved in the participation program will likely not be met, and people will become disenchanted.

Planning for participation needs considerable time. When sufficient time is allowed to analyze issues, participants, resources, and objectives prior to the choosing of participation methods, the chance of success is greatly enhanced.

Participation might be seen as direct public involvement in decision making processes. In this type of participation, citizens share in decisions that determine the quality and direction of their lives. People will come together if change can and will clearly occur. Participation can function if it is active, directed, and those who get involved experience a sense of achievement. At the same time, it requires a re-examination of traditional planning procedures to insure that participation becomes more than affirmation of the designer or planner's intentions. The guidance of participation directed at environmental change requires a new skill of the professional that of ensuring community participation in the design process. This requires the provision of effective tools. Experiences in design participation show that the main source of user satisfaction is not only the degree to which design needs have been met but also the feeling of having influenced the decisions.

The theories and practices of participation can be synthesized into the following five statements:

1 *There is no 'best solution' to design problems.* Each problem has a number of solutions. Solutions to design and planning problems are traditionally based on two sets of criteria:

a. *Facts*--the empirical data concerning material strengths, economics, building codes, and so forth; and

b. *Attitudes*--interpretation of the facts, the state of the art in any particular area, traditional and customary approach, and value judgments. Thus design and planning decisions are by nature biased and depend on the values of the decision maker(s).

2 *'Expert' decisions are not necessarily better than 'lay' decisions.* Given the facts with which to make decisions, the users can exam-

ine the available alternatives and choose among them. The designer or planner involved in such an approach should be considered a participant who is expected to identify possible alternatives and discuss consequences of various alternatives, to state an opinion, not to decide among them, just as the users state opinions and contribute their expertise.

3 *A design or planning task can be made transparent.* Alternatives considered by professionals are frameworks in their own minds and can be brought to the surface for the users to discuss. After understanding the components of design decisions and exploring alternatives, the users in effect can generate their own plan rather than react to one provided for them. The product is more likely to succeed because it is more responsive to the needs of the people who will use it.

4 *All individuals and interest groups should come together in an open forum.* In this way people can openly express their opinions, make necessary compromises, and arrive at decisions that are acceptable to all concerned. By involving as many interests as possible, not only is the product strengthened by the wealth of input, but the user group is strengthened as well by learning more about itself.

5 *The process is continuous and ever changing.* The product is not the end of the process. It must be managed, re-evaluated, and adapted to changing needs. Those most directly involved with the product, the users, are best able to assume those tasks.

CONSENSUS BUILDING

Noted educational philosopher, John Dewey, believed that the transfer of knowledge between two people is self-corrective, allowing them to gain valid knowledge through experience, to learn from success and failure in a non-authoritarian, non-hierarchical manner (Friedmann, 1987). Paulo Friere (1990), the Latin American philosopher, too, suggests an equal playing ground to exchange ideas and knowledge. All citizens are assumed to hold equally valid knowledge that they can contribute to an active discourse. Dewey and Friere have both written extensively on the value of social learning and an iterative discourse leading to consensus.

The idea of consensus is evident since ancient history, in the notion of *consensus gentium*, the Latin phrase for agreement of people (Webster, 1996). Contemporary views of consensus have evolved from educational and political philosophy. On the grounds of equal participation and the development of consensus, Connolly (1969) coined "the arena theory" that involves an ultimate appeal to the notion of consensus. Arena theory advocates the exchange of expert and experiential knowledge. The

assumption of the arena theory is that there is at least one agreeable outcome to which all parties come to a consensus. However, there needs to be a willingness of groups to accommodate one another. Such consensus cannot be achieved in isolation. Through the iterative process of social learning and through the equality framework of the arena theory, there can develop consensus.

Nicholas Rescher (1993) categorically discounts the value of consensus, opting instead for the *understanding* of individual needs and customs rather than the *compromise* of such needs and customs. Rescher argues that what matters to people are not shared goals but the recognition of a common interest. An understanding of one's motives and interests is more valid than conforming those interests to the ideals of the larger population. According to Rescher, what needs to be developed is a convergence of interests. While it is imperative to understand other's interests, it is not necessary to fully agree with such interests. This era has revealed that individual interests can coexist without any agreement between them. In an era of pluralism, consensus may not be accepted with welcoming arms. While we may strive for understanding as a community, there remains to be seen the ideal of individual agreement. Consensus, however, is an appropriate means of assessment and reflection, though not as a means to justify a majority. There is the view that consensus is not necessarily a decision-making tool, but the foundation from which co-operation is possible. Out of this co-operation will develop ideas, decisions, and strategies, all of which rely upon the development of consensus. "The more group members are involved in a decision-making process, the more likely it is that that they will develop feelings of teamwork and co-operation, thereby increasing their motivation, commitment, and contribution to the group. This is why, generally, authoritarian leadership is not successful" (Brody, 1982).

The criticism that consensus either accepts or rejects individual proposals is largely unfounded. The process of consensus allows for the iterative dialogue of idea generation and debate toward decision-making. The fear lies in limiting any access to the debate or considering any input more or less valid than others. "Consensus occurs after all members have had an opportunity to voice their opinions and can arrive at a decision that almost everyone can support. The process of arriving at a consensus is a free and open exchange of ideas, which continues until agreement has been reached. The process insures that each individual's concerns are heard and understood and that a sincere attempt is made to take them into consideration in searching for a resolution. This resolution may not reflect the exact wishes of each member, but since it does not violate the deep concerns of anyone, it can be agreed upon by all" (Brody, 1982,p.67).

The "ideal speech situation" (Habermas, 1990) serves as an appropriate model for this communicative framework that identifies four components necessary to facilitate an iterative dialogue. First, there must be no constraints in the discussion process. The individual must be free to express his/her personal interests without the intimidation from more powerful participants. Second, each participant must be given an equal platform from which to express his/her concerns. No one participant

should have more or less opportunity to discuss personal desires and needs. Third, all participants assume equal power. All political hierarchies are abandoned and no participant is allowed to exercise more influence than the others do. Lastly, the "ideal speech situation" calls for the rational process of discussion. Persuasion by good reason is justified more than threats.

There are, however, participant attitudes that work at odds to the consensus process. Avery (1981,p.15) sees competition among groups as a barrier to consensus. This sense of competition coincides with a general lack of interest among group members. Participants that see personal goals as the most critical to address may lack any commitment to resolving group conflict.

The notion of individual ownership of ideas has been shown to be a weakness. Individuals may look at their contributions as their own creative property and argue defensively for their own ideas rather than work toward a mutually acceptable reformulation (Avery, p.15). Group ownership, however, is considered a significant strength in furthering ideals of consensus. As Avery (p.20) states," group ownership acknowledges that new concepts are developed through the process of members responding to previous contributions of other members. With group ownership of ideas, it is the idea itself, not the presenter, that is criticized. Through this process, all participants are involved in developing ideas and decisions.

When faced with complex problems and diverse interests, collaborative decision making encourages creativity, open communication, broad participation and agreement. Designing a clear, well managed collaborative process can lead to agreement where all participants are likely to receive wide community support during implementation. Consensus building in a collaborative decision making process occurs in several different stages.

To begin, it is necessary for all participants to have a shared sense of purpose. Working together to share information and reach agreements requires a clear process and explicit operating procedures. Agreement should be reached on the following questions (Godschalk, et. al., 1994):

- Why is this process needed?
- What form of resolution is required?
- How will the group work towards a solution?
- How will decisions be made?
- What is the schedule?
- Who will receive and act on the final product?

Next, participants need to share information and identify additional information needs. A common base of information is needed for effective problem solving. Site visits, personal narratives, interviews with experts, and a review of technical reports are ways by which participants can become well informed about a problem.

Once the needed information is collected and discussed the problem must be clearly and specifically stated. The problem should reflect the concerns of all participants and it must be manageable within the time

and resource constraints. There are several methods that can be used to define the problem. In addition to verbal descriptions, the use of diagrams, flowcharts and models may help participants better understand a physical problem. Large complex problems may be subdivided into smaller manageable parts and assigned to different task groups and report their findings to the larger group. The is/is not method helps to develop a problem statement by identifying the parts of the problem with "is" and those, which are not by "is not. " A variation of this method is to identify the forces that are either blocking or supporting change by listing them under "blocks' and "supports." For certain problems the advice of experts may equally help to formulate a mutually acceptable problem statement.

Consensus on a problem statement can be reached by having each participant restate the problem in their own words insuring that all participants understand all elements of the problem.

Clarification of a problem statement can be used in the development of a collective vision where participants fantasize about an ideal state or long range potential of a site. A visioning process may begin with individual statements by participants. A wish poem, beginning with the phrase "I wish my..." can allow each participant to write about their vision, which can be shared with the group as they work toward a common vision. For more complex problems, a design charrette can function to help participants visualize the three-dimensional implications of various proposals (See Section 2). Visual preferences, inventories and assessments are useful for use in well-defined settings to convey positive or negative features of an existing or proposed situation (See Section 2).

The next step in the process calls for the generation of ideas where criticism and discussion is withheld until the range of options is exhausted. Similar to "brainstorming," this step in the process encourages the exploration of alternative solutions (See Section 2). To arrive at an appropriate solution it is necessary for the participants to establish criteria for evaluation of the alternatives. Several methods are available to evaluate options. Participants can rank order options from the most desired to the least desired, or, advantages and disadvantages can be identified for each option. More systematically, options can be compared to evaluation criteria through the use of a matrix. Once the options are evaluated participants need to reach consensus by either by selecting the highest-ranking option or by combining options.

Implementation of the recommendations is the final step in the process. An action plan identifying whom, what, and when is an effective method for establishing responsibility.

WHO SHOULD PARTICIPATE

People participate in issues in response to some perceived interest and remain involved as long as that interest persists. Clearly, different segments of the public will choose to participate on different issues. People choose to participate if they see themselves affected by an

issue because of a possible threat or benefit of a proposed facility; if they have an economic interest in the outcome of a particular decision; if they need to protect or increase access to the use of a facility or service; if they perceive an environmental or health risk associated with a proposed action; or if they affect strongly held religious or political beliefs. Therefore the size and composition of the participants will be different for each decision making process (Creighton, 1994).

People need to participate at their level of interest and expertise. There will always be different levels of involvement depending on differences in technical expertise, differences in roles, and willingness to commit time and energy. Different groups may choose to be involved at different stages of the process, especially in larger projects. People may also participate more in some stages of the process than others. In technical areas that may involve data collection and analysis, people with such expertise may be instrumental, while stages where choices are made may attract a larger public. Therefore, the number and type of participants could change during the course of the planning process.

Public participation programs rarely involve the "general public." However, the general public should be informed about an issue so that people can decide whether or not to participate. However, people who are most affected by a decision should have the greatest voice in a decision. People should be informed about the consequences of not participating. People should also know how to participate if they wish to do so, and all viewpoints and interest groups within the community should be sought out.

Youth's Participation

Participatory processes are also a means of enhancing the role of youths in society. Youth's involvement in community activities creates a necessary sense of belonging and the opportunity to become socially productive. Young people want to contribute to their community, and believe themselves capable of doing so, but are often constrained by adult expectations. Isolation in school, for example, deprives youth of community participation, of socially productive work, and limits their chances to develop personal responsibility, tolerance, cooperation, and creativity.

Children who exist in isolated environments, such as schools, focusing on individual achievement, develop simplistic relationship skills, dependence on external validation, and anti-social behaviors (Kurth-Schai, 1988). In contrast, in non-industrialized societies, children traditionally hold a variety of household and societal responsibilities. The role of children as nurturer in developing countries is widespread and significantly influences quality of life. In all cultures, children have the capacity to renew creative activity in adults.

Community development and youth development are inextricably related because both hinge on the basic health of the functions of family and citizenship, and are long term strategies for reducing youth

and community problems. In 1994, the National Network for Youth (NNY) embraced the idea of "community youth development" as a vision of working in partnership with young people to strengthen their ties to community, and working with communities to value and support youth (Pittman, 1996). Investment in the human and social capital of young people through their participation in community problem solving is the best way to build skills and connections.

Through participatory processes, youths are taking on roles that make them active members of their communities. The Dudley's Young Architects and Planners Project resulted from the energy and vision of youth (Medoff, 1994). A youth focus group on a planned community center attracted more than twice the number of participants invited. The focus group was successful as a visioning tool and the youth requested continuation of the process. The resulting participatory process engaged youth in community ownership, taught them new skills, and produced a model for a neighborhood community center. In presenting their model to the community, the youth group conveyed clearly that they had designed the center with everyone in the neighborhood in mind.

The Du Sable/Farren Outdoor Learning Center in the South Side of Chicago, an oasis located between an elementary and high school, was conceived and designed by at-risk youth under the guidance of landscape architects (Dickey, 1996). Students took, and were allowed, a central role in the process and in the design of the project. Professionals in the process saw themselves as tools to assist the students who were the "heart and sole" of the project. A landscape architect on the project noted that, "We learned that the process we took the kids through was as important as the product" (Dickey, p.54). Learning resulted in a change of behavior for one professional firm involved in the project, where they changed their traditional approach to a public participation approach. Community work is seen as a way to fill the need for a sense of community and a sense of practical accomplishment (Boyte, 1991). Youths focus their attention on activities where they can make a difference, close to home. Today's youths are more tolerant, accepting and open to diversity of race, ethnicity, and gender than previous generations.

The environmental and perceptual needs of youth permit them to make a unique contribution. Roger Hart's (1979) work investigates children's exploration, use, knowledge of, and feelings for places. Hart found that our greatest period of geographic exploration is in our childhood. Attempts to design environments for children should be preceded by an understanding of children's activities in and experience of the physical environment.

One step to shifting the role of children and youths in society to a more contributory and positive one is to provide opportunities for them to act on their conceptions in real-life situations. By making a place for youths in community participatory processes, they will be empowered to make their unique creative contributions. Young people need to participate as equal partners in making decisions about their

own environmental futures. In Norway for example, many municipalities developed action plans for children and youth based on goals set by the national government that include statements such as, "Young people must be integrated into society, given responsibilities, and have opportunities to influence their own living conditions "(Moore, 1986).

The environmental yard, a project initiated by Robin Moore (1998) developed an asphalt urban schoolyard into an educational resource and community open space (Figure 1.1). With the goal of involving as many of the present and future users as possible, a survey solicited ideas from children, teachers, parents, and residents living near the school. Students completed a written survey that asked three questions:

- What do you like about the yard at Washington School?
- What do you dislike about the yard?
- What would you like to see added or changed to the yard?

Figure 1.1: Construction of Washington Yard was a community process (Photo: R. Moore)

The results of the survey indicated that while children valued the old play equipment, most respondents expressed a desire for natural spaces. Student and teacher groups went on field trips to observe play areas in other neighborhoods as well as to sample the local flora and fauna. Based on the results of surveys, field trips and children's design proposals, architecture and landscape architecture students proposed alternative layouts for the site.

Community groups discussed their needs, proposals were evaluated and a master plan was presented to local officials that aimed to upgrade the physical environment and to re-establish the natural habitats that existed prior to the asphalt. The results of a post-occupancy evaluation from the 350-student body, that compared the actual use of the yard with the children's perception of it, revealed that the natural settings were among the most attractive and memorable to the children. The evolution of the yard was integrated into the development of the education program. Numerous studies conducted over a

10-year period confirmed the extent of teacher and student growth resulting from the curricular involvement facilitated by the yard.

Rewards for Youth's Participation

Youths who take part in participatory processes reap a variety of rewards including reduced alienation, skill development and empowerment. Community organizations empower young people by providing a strong sense of membership, a range of developmentally appropriate activities, and a structure within which everyone is accountable (Heath, 1991). Youths learn an applicable problem solving model (Figure 1.2), learn to analyze and evaluate information, learn the skills for teamwork, learn compromise, strengthen communication skills, and develop attitudes and behaviors of the world of work (Schine, 1990).

Figure 1.2: Youth's taking part in community building (Photo: H. Sanoff)

Society also derives benefits from youth's participation in community activities. The United States depends on volunteers for numerous services, for creative solutions to community problems, for fund raising, and for political action. Cooperative effort is essential to survival of a democratic society. Professionals will be called upon to cooperate in the development of programs, collaborate in their execution, and coordinate participation of adult and youth volunteers. Young people need not to be included as a courtesy, or because they are needy, or to keep them out of trouble, but to be included because they belong in the community process.

CONSEQUENCES OF PARTICIPATION

Citizen participation in design and planning has increased rapidly in the past few years to the point where it is a frequently praised practice. Federal legislation and the demands of citizens themselves have combined to make citizen participation an essential requirement in any urban project. Yet, nothing in community design and planning has caused more contention. In most communities, citizen participation is the principal source of confusion and conflict.

Barriers to participation in design and planning are generated by the process itself, while others are associated with false assumptions about participation. Several barriers are identified as follows:

Some professionals argue that participation is not necessary, and often undesirable for eventual users to participate in designing and planning, since they do not have the necessary expertise and often get in the way.

The technical complexity of planning issues and problems can discourage or inhibit citizen participation, particularly without a skilled facilitator. If planning organizations preempt community involvement by defining problems as too technical or as too complex for nonprofessionals to understand, they may engender political passivity, dependency, and ignorance (Forester, 1989).

Since everyone has a different opinion, you will get as many answers as the number of people you ask. Another, contradictory argument is that people are so similar, that their needs are undifferentiated.

While people are different and their preferences may vary, research has shown that ignoring these differences has resulted in dissatisfaction with the results. A consequence of excluding users in the design and planning process is the assumption that all people are the same. This usually results in solutions that are totally uniform in which everyone is assumed to have identical requirements. Both assumptions have resulted in considerable user dissatisfaction.

Participation can be threatening to professionals and managers who feel it threatens their role as experts since it implies shifting decision control to users.

Professionals have an expertise that is different from that of the user. Users have an expertise in identifying problems not necessarily solving problems. Collaboration is effective when all participants in the process share their areas of expertise with each other.

Involving users are more time consuming and therefore more expensive than relying on professionals who have broad experience and specialized knowledge.

The time and effort devoted to involving users is a basic form of community or organizational development. Helping participants to resolve conflicts, and having them identify goals that can be widely

discussed, are invaluable contributions to any community planning process.

The lack of adequate experience by professionals, government officials, and managers in working in collaboration with users can limit the effectiveness of participation.

An outside consultant can facilitate the participatory process and train local professionals and officials.

Often, the people involved do not represent the majority, but rather citizens that represent special interests.

Citizen participation has been found lacking because many affected citizens are left out of the process, the influence of those citizens included in the process is minimized, and the process is inefficient in bringing citizen input to the decision makers. Participation is unequally distributed throughout society because the qualities that lead some to participate—motivation, skills, resources—are not equally distributed (Verba & Nie, 1972). Factors that inhibit participation include overwhelming personal need, low sense of efficacy, and a suspicion of bureaucracy. These are characteristics often associated with poverty.

Every effort should be made to include people who will be affected by design and planning decisions. This often requires contacting individuals directly; contacting schools to reach children; and contacting religious and community organizations and clubs.

There is a danger that the entire process turns out to be like the aphorism that a camel is a horse designed by committee. Everything is likely to end up as a compromise.

People can be reasonable. Most people will change their views in light of new information when presented in a way that helps them see how the overall scheme fits into their own vision.

Research Findings

In a case study analysis of ten community-developed and maintained gardens and parks in New York City, Francis, Cashden and Paxson (1984) identified the following criteria used in evaluating the projects as well as to point out issues common to many community developed open-space projects:

- Phase and degree of community control
- Project initiation
- Size of organizing group
- Number of key participants
- Ethnicity of organizing group
- Neighborhood ethnicity
- Relationship of group to other neighborhood efforts
- Opportunities for new group participation

- Group goals
- Funding source
- When funding was secured
- Dependability of funding
- Materials source
- Staff and workers
- Size of site
- Permanency of site
- Site ownership
- Site condition prior to development
- Site use
- Site activity
- Adjacent neighborhood/street activity
- Site accessibility of neighborhood residents
- Location of site in neighborhood
- Site users
- Perception of success or failure
- Income in neighborhood
- Neighborhood stability

An analysis of the ten case studies sites in New York City revealed several observations about the consequences of open-space projects:

- Participants report a personal feeling of accomplishment in improving their neighborhood.
- Participants report gaining confidence and skills from their involvement.
- Participants develop friendships and a sense of belonging.
- Projects help to improve the appearance of adjacent areas.
- Projects inspire other open-space projects in the community.
- Projects can exclude teenagers from using or managing the site.
- Projects require considerable time and energy from participants.

The authors recommend the following ingredients necessary for starting and maintaining a successful open-space project:

- Clear, and agreed upon goals
- Good group dynamics
- Clear definition of responsibility
- Continuity and commitment from participants
- Diversity of skills and experience of participants
- Sympathetic community climate
- Group control of decision-making, funding and the development process
- Realistic fundraising strategies
- Good knowledge of the community
- Large number of volunteers to do physical work

A review of the public involvement literature, conducted by Lach and Hixson (1998), revealed descriptive case studies of the effectiveness of various processes and effective implementation strategies. They discovered, however, a lack of documentation related to the value or cost effectiveness of participation. Their literature review did indicate that participants valued such issues as public acceptability, accessibility, good decision making, education and learning, time commitments, and trust. To identify value and cost indicators of public involvement they conducted interviews with people that have been involved in participatory projects. Combining the literature review, interviews and expert judgement, they identified public involvement value attributed to the process, to the outcomes, and to the cost. The key indicators of the value of participation are:

- Opening the process to stakeholders
- Diversity of viewpoints
- Meaningful participation
- Integrating stakeholder concerns
- Information exchange
- Saving time
- Saving and avoiding costs
- Enhanced project acceptability
- Mutual learning
- Mutual respect

Lach and Hixson also developed direct and indirect cost indicators of the public involvement effort. Certain costs can be linked to traditional accounting practice such as preparation and participation time, facilities, materials, and services. Other indirect costs such as participants time commitment, lack of opportunity to participate in other projects and heavy emotional demands on participation cannot be easily measured. The intent of their research was to develop prototype indicators to be tested in ongoing and completed public involvement programs.

Results from project participants indicated that the positive aspects of their involvement were that a diversity of viewpoints in the participation process was valuable, and that project savings occurred in the form saving and of avoiding costs. The authors detected a discrepancy between the perceived time commitment of participants which seemed quite large, and the actual time spent on preparation, participation and follow-up which appeared to be modest. This suggests that the actual time commitment in the participation process needs to be carefully tracked. Such indicators as those identified by this research effort provide an initial point for discussion with potential sponsors of participation projects about the fears as well as the benefits of public participation.

PARTICIPATORY REFORM

More people participate in local planning today than ever before. This participation is supported by local authorities and provides unique opportunities for increasing public awareness to a variety of community issues. However, the capacity of participatory design to address issues of environmental risks and poverty has diminished, argues Hester (1996), because powerful local interests tend to dominate.

Citizens, today, tend to be motivated by self interests that are short sighted in their efforts that are increasingly segregated along class and racial lines. As wealthy citizens embraced participation and environmental risks have become clearer, an increasing number of dangerous land uses, such as land fills, toxic sites, and polluting industries have been located in poor communities (Bullard, 1990). Today, participation has been used to preserve the quality of life for affluent and powerful citizens. Those who already have economic clout are involved in politics in ways that disproportionately increase their influence, making the practice of democracy increasingly biased against the economically disadvantaged (Easterbrook, 1995).

Quality of life participation, efforts at neighborhood protection and NIMBY, frequently rely on the methods of advocacy that were developed initially to empower the poor. Special interest groups empowered through participatory processes block each other's actions creating a local gridlock. People tend to be more sophisticated in their knowledge of participation processes, yet they are often fearful. This citizen motivation is evidenced in actions like "not on our street (NOOS)," "not in my back yard (NIMBY)," and "locally unwanted land uses (LULU)."

Only by refocusing on the initial reasons for community participation can local problems be effectively solved. This suggests that grassroots must be empowered with the authority and responsibility for local action, not just blocking actions.

Local groups with similar goals that lack communication or cooperation may undermine the potential for mutual benefits. This dominance of narrow special interests needs to be replaced by a broader civic vision that penetrates social and physical barriers. Hester advocates a reformation of participatory process that stresses the conscious pursuit of a sense of community, a new form of governance that empowers local communities, and the creation of sustainable communities. This new approach to participation, argues Hester, should examine the cumulative impact of actions and their ecological implications.

Mark Francis (1998) recognizes that participation has become a tool for defending exclusionary, conservative principles rather than for promoting social justice and ecological vision. He proposes a new proactive role for professionals that distinguish them from their more traditional counterparts. The new professional employs a visionary approach that allows a community to expand its vision through participatory processes. Effective visionary action requires persistence and risk taking. In the United Kingdom, Wates and Knevit (1987) dis-

tinguish the differences between conventional and community architecture as shown in Figure 1.3.

Figure 1.3: Differences between conventional & community architecture (Source: Wates & Knevit)

Proactive practice, argues Francis, begins well before there is a paying client and continues long after the contract ends. In 1987, Francis proposed an integrated regional open system for Davis, California, called the Davis Greenway. The greenway concept was presented in environmental forums and refined in participatory planning workshops. The idea ultimately became the Open Space Element of the city's General Plan. His proactive effort established a future vision that generated substantial community involvement and an open space constituency.

Diffusing 'NIMBY'ism

The Alberta Special Waste Treatment Center near Swan Hills has proven a model of private and local government collaboration not only for its transcendence of NIMBYism but also for its alteration of the traditional methods of the siting process and the nature of interactions among key participants (Rabe, 1994). The conditions necessary to foster cooperative outcomes rely on the creation of new governmental institutions that can mediate factional conflict, the establishment of public participation processes well before final decisions must be made, and the development of competent professionals to oversee policy and build public trust.

The Alberta approach involved numerous general information meetings sharing technical reports with community organizations. More than 120 meetings in every county and affected community were held to respond to citizen questions, as well as to provide information about the hazardous waste situation in the area. Local political leadership was effective in building public trust in advocating the voluntary nature of the siting process, the economic development potential of a waste management facility, and how this effort was part of a comprehensive waste management strategy.

Meaningful methods of public participation are necessary to achieve any future breakthroughs. Political dialogue is necessary to diffuse the adversarialism that is common in NIMBY-type situations and move towards processes of conflict resolution (Williams & Matheny, 1994). If participation is to have a significant impact, multiple participatory methods need to be employed (Mazmanian & Nienabler, 1994).

To diffuse NIMBYism, methods of compensation were proposed at a very early stage in the process. This strategy is consistent with the lessons offered by game theorists who suggest that altering the payoffs and how they are distributed may result in stable, cooperative outcomes (Axelrod, 1984). Swan Hills officials contend that the economic impact of the facility has been substantial in the prosperity enjoyed in the years following facility approval.

Public opposition to unwanted facilities is often described as selfish parochialism that generates locational conflict that prevents attainment of societal goals. Robert Lake (1993) suggests a reconsideration of the assumption that siting of unwanted facilities is in conflict with societal needs. Whether it is siting hazardous waste incinerators or locating homeless shelters, such strategies concentrate costs on host communities. An alternative view is to restructure production to produce less waste, which initially shifts the costs on capital. Similarly, an alternative strategy to locating homeless shelters is to alleviate joblessness and reduce the incidence of poverty through capital restructuring.

Lake further contends that the reason NIMBYism is such a powerful political force is that is an integral factor in the land development process guided by the rate of return of property. Proliferation of problems associated with suburban sprawl, low-density development, socioeconomic racial and ethnic segregation, traffic congestion and environmental pollution threaten profitability of land investment. Plans to

address these problems are encounter opposition from consumers who invested in the land. Therefore, he suggests a proactive approach, such as mounting support for recognizing the pervasiveness of poverty to help establish political support to ease the homeless crisis and the pressure for siting group homes and social services. In a similar manner, lake suggests support for hazardous waste source reduction my reduce pressure to impose waste incinerators on resistant communities.

CONFLICT RESOLUTION

All communities and organizations experience conflict at some time during their daily interruptions. One view is that conflict and disputes occur when people are involved in meeting goals that are incompatible that people are working against each other and that their goals are competitive (Moore, 1986). Another definition is that conflict involves incompatible behaviors between parties whose interests differ; where people are disrupting each other's actions (Brown, 1983). The assumption that conflict is based on opposing interests leads to viewing conflict as a power struggle. Assuming that people have cooperative goals leads to viewing conflict as a common problem that can be resolved for mutual benefit.

People find themselves in conflict because they assess situations differently, vary in their objectives, and prefer different courses of action. Such differences may occur because people have different values, or they may have different information, or they may process information differently (Lozare, 1994).

While there may be negative consequences associated with conflict, disputes can be positively resolved if the participants can develop cooperative problem solving procedures. Avoidance of conflict, however, undermines people's well being and effectiveness. Managing conflict reduces the time wasted by redoing tasks and results in more efficient use of resources. Addressing conflicts encourages people to understand the viewpoint of others and become less egocentric. People can become more confident and feel empowered to cope with difficulties by directly confronting them (Tjosvold, 1993). Having others listen and respond to their feelings build people's self-esteem. Learning to manage conflict facilitates the well being of people as well as the effectiveness of organizations.

The absence of conflict usually means that different viewpoints have been excluded from the decision-making process. Conflict can broaden views of what is possible and allow more choices. Disagreement can be used to uncover prejudices, needs, values, and improve skills in interaction. Groups that use conflict for learning, instead of winning or losing, become stronger.

Research has established that the probability of achieving favorable outcomes is enhanced when all parties know and practice sound negotiating techniques. Such situations help mediate differences without the use of manipulative methods. Negotiation is a procedure for resolving disputes. It is a form of joint problem solving. People in conflict, however,

often need some form of help to settle their differences. Mediation is a voluntary process of helping people resolve their differences with the assistance of a neutral person. Mediation is applied to a variety of organizational, environmental and public policy disputes. For mediation to occur, parties must have begun the process of negotiation. So, mediation is an extension of the negotiation process requiring the involvement of a mediator who brings a new dynamic to the dispute. Negotiation is a psychological process involving group dynamics where there is often an expression of strong emotions. Problems associated with negative dynamics in the negotiation process are often associated with a lack of trust and poor communications. Creating an atmosphere of trust and cooperation is referred to as conciliation, an integral part of mediation.

Moore (1986) outlines twelve stages of the mediation process:

1 Initial contacts with the disputing parties to build rapport and credibility, educating the participants about the negotiation process, and a commitment to the mediation process.

2 Selecting a conflict resolution strategy to guide mediation, which include competition, avoidance, accommodation, negotiated compromise, and interest-based negotiation.

3 Collecting and analyzing background information about the people through direct observation, interviewing, and secondary sources such as reports, minutes, or newspaper articles.

4 Developing a detailed plan for mediation, identifying strategies that will enable agreement, answering such questions as who should be involved, what procedures will be used, how will participants be educated about the process and agree to proceed.

5 Building trust, cooperation and clarifying communication by responding to intense emotions, suppressing emotions, and resolving misperceptions.

6 Opening negotiation by establishing ground rules and behavioral guidelines by facilitating communication and information exchange. Communication techniques might include:

a. Restating what has been said in the same words,
b. Paraphrasing what has been said in different words,
c. Dividing an idea into smaller parts,
d. Summarizing the message,
e. Organizing ideas into a sequence,
f. Generalizing the points in a message,
g. Probing questions of elaboration, and
h. Questions of clarification.

7 Defining issues and setting an agenda by ranking the issues in terms of importance and selecting the most important items for discussion; by identifying issues that are most likely to reach agreement; by identifying which issues require agreement first; by negotiating more than one issue simultaneously to allow for trade-offs; and by defining issues in terms of principles, then work out the details.

8 Uncovering hidden interests of disputing parties can be identified through the use of communication techniques such as restating, listening, or generalizing as well as questioning and brainstorming in small groups.

9 Generating options for settlement is best achieved in small discussion groups using brainstorming, Nominal Group Process (Delbecq, Van deVen, & Gustafson, 1975), or through the use of hypothetical scenarios where participants in small groups identify how the problem can be solved.

10 Assessing options for settlement often requires an initial review of the interests of all parties, then combining, dropping or modifying alternatives to reach a final settlement.

11 Reaching substantive agreement requires disputing parties to reduce the number of differences in order to terminate their conflict. This final bargaining stage requires parties to make offers, concessions or agreements as they incrementally converge on a settlement within a prescribed deadline.

12 Formalizing the settlement can be a public or private oral exchange of agreement, or a written agreement of promises between disputants.

Mediation is a participatory process where the mediator educates the parties involved in the mediation process. The primary responsibility for the resolution of a dispute rests on the parties themselves, where agreements reached in negotiations are voluntary, and the mediator's responsibility is to assist the disputants in reaching a settlement.

Combining Conflict Resolution and Public Participation

Combining conflict resolution and public participation processes is a model proposed by Conner and Orenstein (1995) to diffuse a controversy when several citizens groups are in opposition to a proposed action. Conflict resolution focuses on developing understanding, trust and acceptance among appropriate parties, with the assistance of mediators or facilitators. In some instances, however, significant publics do not have organizations to represent them in discussing key community is-

sues. Integrating conflict resolution and public participation allows the general public to be informed and involved as well as to develop consensus building with group leaders.

The twelve step integrated process is described as follows where each strategy is identified as public participation (PP) or conflict resolution (CR):

1 (PP) Develop a profile of the community's social characteristics, key leaders and groups.

2 (CR) Meeting of interest group leaders to identify key issues and options.

3 (PP) Inform the general public through various media about the process and proposals.

4 (PP) Organize workshops to discuss issues and produce a synthesis for interest group leaders.

5 (CR) Interest group leaders review proposals and public responses to it.

6 (PP) Inform the general public through various media about alternatives indicating selection criteria and their assessment.

7 (PP) Organize workshops to respond to public concerns for group leaders to consider.

8 (CR) Convene a third meeting of interest group leaders to review alternatives and establish evaluation criteria.

9 (PP) Publish alternatives acceptable to interest group leaders and seek responses from the public.

10 (PP) Organize workshops to identify preferred alternatives and convey results to group leaders.

11 (PP) Conduct surveys to broaden participation from the general public. Convey results to group leaders.

12 (CR) Convene meetings to integrate the views of interest group leaders, the interested public and the general public. Convey results to all public groups involved in the process.

This process relies on effective public information to allow people to make informed decisions. Too many information campaigns failed because people were not prepared to receive information that did not support their worldview. Consequently, opening people's mind to change is a crucial initial step. DeBono (1985) suggests that people need

to think in a design mode. Rather than determining blame for present situations, where argument, negotiation and analysis tend to look back, people need to look forward at what may be created. Equally significant is the need for mediation expertise to create effective working relationships between special interest groups, technical consultants and elected officials.

Section 2

Participation Methods

Participation in community issues places serious demands and responsibilities upon participants. Although citizens' groups voluntarily organize to participate in community projects, the technical complexity of the projects usually requires professional assistance. In addition to concern with technical complexity, sound design and planning principles must also be incorporated in the development process. Without guidance, community groups may respond only to crisis situations and may not achieve the goals that originally united the group. Often community volunteers cannot draw upon personal experiences for solving environmental problems and may arrive at solutions that create unforeseen, serious consequences. Therefore, the management of participatory efforts is important.

People will join if change can and will occur. Participation can function if it is active, directed, and if those who become involved experience a sense of achievement. At the same time, it requires a reexamination of traditional design and planning procedures to assure that participation becomes more than confirming the professional's original intentions.

Organizing citizen's efforts can take many forms corresponding to different environmental issues. The goal of participation is to encourage people to learn as a result of becoming aware of a problem. Learning occurs best when the process is clear, communicable, open, and encourages dialogue, debate, and collaboration. As more people learn about environmental issues their decisions will have positive effects on the quality of the environment (White, 1994). One of the fundamental hindrances to the decision to adopt the participation strategy is that it threatens existing hierarchies. Nevertheless, participation does not imply that there is no longer a role for institutional leaders. It only means that a dialogue is necessary between grassroots citizenry and government leadership regarding needs and resources to meet needs (White & Patel, 1994).

The professional's role is to facilitate the citizen group's ability to reach decisions about the environment through an easily understood process. Most often this will take the form of making people aware of environmental alternatives. This role also includes helping people develop their resources in ways that will benefit themselves and others. Facilitation is a way to bring people together to determine what they wish to do and helps them find ways to work together in deciding how to do it. A facilitator should make everyone feel included in what is going on and that

what they have to say is being listened to by the group. Facilitation can also include the use of a variety of techniques where people not professionally trained can organize themselves to create a change in the environment. If people are to discover the principle of quality for themselves, they are more likely to do so in small groups. Significant changes in people's behavior will occur if the persons expected to change participate in deciding what the change shall be and how it shall be made.

Good planning for community participation requires careful analysis. While it is critical to examine goals and objectives in planning for participation, there are various techniques that are available, each of which performs different functions. In the last several decades, there have been numerous efforts to accumulate knowledge about various participation techniques, as well as the function that these techniques perform. Citizen surveys, review boards, advisory boards, task forces, neighborhood and community meetings, public hearings, public information programs, interactive cable TV, have all been used with varying degrees of success, depending on the effectiveness of the participation plan. Since community participation is a complex concept, it requires considerable thought to prepare an effective participation program.

STRATEGIC PLANNING

Strategic planning is a management technique borrowed from the private sector. Poister and Streib (1989) report that 60 percent of cities with populations over 25,000 use some form of strategic planning. Basically, strategic planning is an organized effort to produce decisions and actions that shape and guide what a community is, what it does, and why it does it. Strategy is the act of mobilizing resources towards goals. It includes setting goals and priorities, identifying issues and constituencies, developing an organization, taking actions and evaluating results (Checkoway, 1986). Strategic planning requires information gathering, an exploration of alternatives, and an emphasis on the future implications of present decisions. It can facilitate communication and participation, accommodate divergent interests and values, and foster orderly decision making and successful implementation.

A strategic plan is a method of developing strategies and action plans necessary to identify and resolve issues. The challenge in creating a plan is to be specific enough to be able to monitor progress over time. To be usable, a strategic plan should have built in flexibility to allow for revisions to occur, as new opportunities become apparent. Strategic planning is action oriented and considers a range of possible futures and focuses on the implications of present decisions and actions in relation to that range (Bryson, 1988).

The development of a strategic plan requires the creation of a vision statement to provide suitable guidance and motivation for the ensuing process. The vision should emphasize purposes and arrived at through group sessions in order to establish a common reference point for

the broad objectives of the community. It outlines the key areas of concern within the community and will help people make decisions that support that vision.

The foundation for a strategic plan, often referred to as environmental assessment, considers needs, priorities, issues and opportunities. Environmental assessment, or post-occupancy evaluation (POE) is the practice of using methods such as surveys, questionnaires, observation's of people's behavior, and focus groups to discover exactly what makes the environment work well for its users. POEs are a procedure that involves the user in their own assessment of their every day physical environment. POEs can be effective in correcting environmental errors by examining urban environments in use, or in preventing potential errors through the use of information results in a projects' programming stage.

Environmental assessments have also helped to persuade clients to choose design alternatives that they might not otherwise have considered. Some professional firms carry out their own evaluations in order to measure building performance against the original program, to acquaint the designer with the opinions and attitudes of the client or user, and to provide the designer with useful feedback for the design of similar facilities.

Goal Setting

The results of an environmental assessment can serve as a starting point for the identification of goals. A goal is an end toward which an effort or direction is specified. A goal specifies a direction of intended movement not a location. In this sense a goal reflects an underlying value that is sought after and is not an object to be achieved (Smith & Hester, 1982). Goal setting can be seen as the guiding process necessary for successful community design.

Goals identify what should be accomplished through the plan. Therefore, it is the participants in the planning process who are responsible for shaping goals over the course of the project. Goals begin as open-ended ideas derived from knowledge of community needs. While a goal is the desired general result, an objective is the desired specific result. Objectives should respond to each goal by defining a direction. They are definable and measurable tasks that support the accomplishment of goals.

Smith and Hester (1982) propose twelve reasons for setting goals:

1 Setting goals provides a sound basis for planning, implementation and evaluation.
2 Setting goals clarifies problems.
3 Planning based on goals elicits community support.
4 Goal setting leads to positive action.
5 Goal setting leads to creative problem solving.
6 Goals are based on the potential of a community.
7 Plans based on goals can be evaluated and consciously changed.
8 Goal setting promotes human resource development.

9 Goal setting identifies the community-wide needs and values of minorities and special populations.
10 Goal setting has long-term educational value for the participants.
11 Goal setting is a good investment.
12 Participatory goal setting demonstrates good faith on the part of community leaders.

The primary inputs to goal setting are the collective knowledge, skills, abilities, and experiences of participants in the process. Although most processes are iterative, there are three stages of development integral to goal setting that require examination. Goal identification, the first stage requires an awareness of the problem and a willingness to confront controversial issues. Goal clarification is the attempt to understand and describe feelings and emotions that may be explicit or unexpressed and implicit. Identifying goal priorities is a process of rank ordering according to some criterion. The sum of goal identification, goal clarification, and establishing goal priorities comprises what is commonly known as goal setting.

Goal setting entails documentation and analysis. It also entails people; local informants, a community of clients, all of whom have their own social, political and economic agendas. Goal setting is about collecting stories and identifying themes that are common and that bind people together. Local people can provide knowledge about function, values, history and structure of community institutions. Story gathering or qualitative research is an approach where people are treated as informants, not as subjects. They are encouraged to tell what has happened to them as a way of explaining how things work and not just what things are (Peattie, 1983). Goal setting results in a mutual understanding of interests and subsequently of interpretation of issues.

Goals may be stated in a variety of ways. Jones (1990) suggests the PARK categories could be used to organize goal statements:

- **P**reserve (what we have now that is positive)
- **A**dd (what we do not have that is positive)
- **R**emove (what we have that is negative)
- **K**eep out (what we do not have that is negative)

Goal statements should contain one major thought and not specify how they will be met (that comes later when strategies are identified for accomplishing goals). Statements should begin with an action word such as *develop, provide, maintain, reduce, continue, increase* or *upgrade*. Equally important as writing clear goals is making sure they represent stakeholder's views.

Strategies further clarify the methods required to reach a goal. There may be a variety of strategies required to reach a goal. Action steps advance those strategies further by specifying activities that contribute to their achievement. An action plan defines what action will be taken, who

is responsible for getting it accomplished, and when the action plan should be complete (Figure 2.1). An action plan is expressed as:

> *What*-A document that defines the actions to be taken, the person(s) responsible, and the time frame for completion.
> *Why*- to define roles and responsibilities and provide a tool for tracking implementation.
> *How*- Define actions; gain commitments; agree on deadlines.
> While participants in the strategic planning process are amenable to supporting the actions required, a sense of ownership and accountability for all enabling actions will effect successful implementation.

Figure 2.1: Sample Action Plan

Strategy Selection

A group process for identifying strategic issues is referred to as the "snow card" (Greenblat & Duke, 1981), or "snowball" (Nutt & Backoff, 1987) technique that combines brainstorming-which produces a long list of possible answers to a specific question-with a synthesizing step, in which answers are grouped into categories according to common themes. Each of the individual answers is written onto a five-by-seven inch index card called a "snow card;" the individual cards then are fastened to a wall according to common themes, producing several "snowballs" of cards. Guidelines for using the snow card technique are:

- Select a facilitator to guide the process.

- Form the group(s) that will use the technique. The group size can vary between five to twelve members. Several groups can be formed if large numbers of people wish to participate.

- Participants should be seated around a table where the index cards can be read clearly by all members.

- Participants should focus on a single problem or issue.

- Participants should silently brainstorm as many ideas as possible and select five best items to be transcribed onto separate index cards.

- Cards are collected by the facilitator, fastened to the wall, clustered by all participants, then discussed until agreement is reached about categories and their contents.

Strategic planning cycles typically begin with an appreciation and articulation of necessity and threat. Opportunity also can capture people's attention, though it seems to do so less frequently than necessity and threat. People and organizations are attached to ideas. In fact, organizations, agencies, and institutions are all organized around ideas, many of which are outmoded. Strategic planning, if it is to be effective, is often about replacing the way things are being done now with other ways. Schon (1971) argues it is more important to manage ideas rather than people or structures, because ideas are the rallying points of collective action.

Strategic Planning Process

Several conditions need to be satisfied for a strategic planning process to be effective. They are:

- There must be a compelling reason to undertake a strategic planning process. Key decision-makers must see some important benefits from strategic planning or they will not be active supporters and participants.

- The process must be supported by important and powerful leaders and decision-makers.

- There must be a process advocate; a person who believes in strategic planning and assumes the role of facilitating the thinking, deciding, and acting of key decision-makers.

- The process must be tailored to the community situation.

- Key decision-makers talk with one another about what is important for the community as a whole.

- Resources needed are the attention and commitment from key decision-makers.

VISIONING

Visioning is a process that seeks to "create living, useful guides for public actions intended to position the community for the future (Thomas, Means & Greive, 1988)." Participants are asked to think about how the community should be and find ways to identify, strengthen and work toward a community vision (Figure 2.2). Participants are asked how they would like their community to be in 20 years and to try to put that vision into words or images. It is effective to start the process with a large group informally brainstorming what should be included in the community vision. The, breaking into small working groups of about 7 people, the ideas should be discussed and then presented to the larger group. Once participants present their views, common themes are identified and strategies are developed to move the community in the direction of the vision. While specialists may carry out specific policies and recommendations, citizens remain responsible for the framework where decisions are made. The shared vision belongs to the group rather than to any one individual.

Community visioning projects are conducted by citizens, often referred to as stakeholders, who care about the future of their communities. The stakeholders in successful visioning processes represent the community's diversity. As the planning group for the visioning process, they set goals, develop the action plan and implementation strategies.

Successful visioning projects usually follow a similar process. The National Civic League (1997) has identified a 10-step process:

1 *The Initiating Committee*- this group of about 10-15 people representing the broader community lays the foundation for the visioning process. They focus on the process and logistics necessary to move the process forward. Their diverse interests lend credibility to the process.

2 *The Project Kickoff*- This initial event allows participants to get to know each other and to understand the purpose of the visioning process.

3 *The Environmental Scan*- At this stage it is useful to examine those forces from the state and national level that can impact the community.

Figure 2.3: Newspaper report about a community vision

4 *The Community Profile*- Here the participants examine the current circumstances in the community and examine their future if no intervention occurs.

5 *The Civic Index*- This is a tool developed by the National Civic League to measure the communities problem-solving capability.

6 *The Community Vision Statemen*t- A vision is the way to develop a framework for projects and priorities for 10, 20, or 30 years into the future.

7 *Action Plans*- Participants identify projects, implementation strategies, timelines, and responsible parties.

8 *A Community Celebration*- A visioning process should conclude with a celebration acknowledging the work of all participants and announcing the plan to the community.

9 *Shifting from Planning to Implementation*- This is the transition stage where responsible parties build on the momentum of the celebration and begin their work.

10 *The Implementation Committee*- Successful visioning projects require a group to oversee and support the implementation process.

Brea Visioning Process

A visioning process was employed in the town of Brea, California, where the opening of one of the largest regional malls impacted the city's downtown district located just one mile away. In an effort to reactivate the downtown, the Brea Redevelopment Agency acquired almost 50 acres of land for a major rebuilding program. However, in order to insure that the development is part of an overall vision for the downtown that reflected broad community involvement, the city council decided to undertake a three-day workshop. The workshop or charrette called "Brea by Design" consisted of professional advisors who worked with Brea residents to develop a vision statement for the downtown development rather than a detailed design solution.

The opening session of the charrette, which occurred on the evening prior to the 2-day workshop, oriented participants to the objectives of the visioning process. On the following morning, the resource team conducted an "awareness walk" where participants recorded their impressions of particular views and specific locations. Impressions were recorded and shared with all participants. Some of the comments included such ideas as "we need people on the street," and "let's have a pub like Cheers." Residents of Brea realized that walking through the town provided them with a different perspective than driving through the downtown.

The remainder of the day was devoted to small group discussions, led by resource team members, about the people the town should serve and the needed elements the town should contain. A final session organized the recommendations and noted where agreement occurred and where it did not. Recommendations from the workshop included such policies as:

- Establish a new identity: downtown should be a visual and symbolic focal point for the community.

- Make Brea for Breans: the downtown should appeal to residents of all ages and all backgrounds.

- The views of the hills, which provide a dramatic backdrop to Brea, should be preserved and emphasized.

The resource team then translated the ideas and recommendations of the workshop participants into a plan and policy statements such as, *the downtown core should feature an effective and vital mixture of land uses, with a high degree of foot traffic and shared parking*, and *a shopping center should be developed with landscape and design treatment to enhance its view from the highway*. The final vision statement was presented to the city council and potential developers. When the final developer was selected, he credited the charrette process with sensitizing him to the community's interests.

The charrette was successful in obtaining residents views as well as informing residents about their present community. The vision statement resulting from this process provided a basis for evaluating developers proposals.

Empowering the Vision (ETV) in Rock Hill

Rock Hill, South Carolina, a city with a 1990 population of 47,000 is a community that has gone to extremes to save its commercial core. In the early 1970's Rock Hill's downtown area was in rapid decline. Suburban shopping centers and residential development were eroding downtown's strength as the city's business center. In 1972, downtown leaders initiated discussions with the city regarding the future of the area. In addressing the problems of downtown a planning study was conducted to make the downtown more efficient, more attractive and more active. Over the next two years a redevelopment plan outlined specific projects which included the construction of a covered, climate controlled mall over a three block section of Main Street and the creation of a Special Improvement District to repay the city for the total cost of construction of the mall.

TownCenter Mall proved successful for a decade in maintaining downtown's retail base. By the late 1980's, the mall was suffering from downtown's decline as the city's retail center. At that time, the city and the Rock Hill Economic Development Corporation in conjunction with the South Carolina Downtown Development Association used a community-

wide strategic planning process (Wheeland, 1991) called Empowering the Vision (ETV) to develop a 10 year plan to transform the city's image. ETV employed a strategic planning process that included nine basic components: the initial agreement, the steering committee, the theme groups, the ETV staff, special events, charrettes, models, the general public, and the timetable.

Initially, the city formed a coalition of private, public, and nonprofit organizations that would help develop a strategic plan for the city. The coalition formed a steering committee to monitor the process and coordinate implementation of the strategic plan whose goal was to capitalize on the strengths of Rock Hill and result in growth that would allow opportunities for citizens to improve their quality of life (City of Rock Hill, 1987). Based on research conducted by the city staff on major trends, issues, problems and opportunities facing Rock Hill, six theme groups were created: Business City, Educational City, Garden City, Historic City, and Functional City. The theme groups were organized as the mechanism for developing a plan. Well over 100 citizens participated in the groups where they studied their area, identified issues and developed a plan based on their vision of assuring quality development. Staff positions were created to assist the theme groups in the technical and graphic areas as well as to document and communicate their results.

Numerous special events were scheduled during the two-year process such as workshops, lectures by consultants, tours, receptions and a conference. Different theme groups conducted site visits throughout Rock Hill and neighboring cities to assess various cultural, historic and land use patterns. The most significant special event was the "charrette" consisting of intensive work sessions and meetings with theme groups in a central location. A vacant department store, located on the declining town mall, one of the problems in the downtown area, was donated to the city for the theme groups to meet, set up their work and allow the citizens to participate and recognize the need to create a vision for a new Rock Hill that would guide the development of the central core of the city.

The architectural firm of The Morgan–Adams Group (later named The Adams Group) prepared physical models and computer-generated images to help theme group members, community leaders and citizens obtain a clear view of the vision for a new Rock Hill. Color photographs of various parts of the downtown area were scanned and digitally altered to show the changes that would occur if the plans were implemented. Citizens participated in the theme groups, in suggesting ideas for the improvement of the cultural, historic and economic development, and in an open house to review the details of the final plan.

All themes pointed to returning Rock Hill to a village atmosphere. A downtown Raise the Roof Party initiated the task in 1993, when a bulldozer punched the first hole in the mall wall. Removal of the main street mall cover revealed many historic buildings that might otherwise have been removed when earlier urban renewal demolished much of the downtown (Figure 2.3). The Rock Hill Economic Development Corporation purchased twenty six downtown buildings, fifteen relocated during the renovation and returned to their Main Street locales (Figure 2.4a & b).

Figure 2.3: Demolition of covered mall (Photo: Beth Bailey)

Figure 2.4: Downtown improvement (Photo: Beth Bailey)

Rock Hill won two major awards for the ETV process: the 1989 Planning Award from the South Carolina Association for American Planners and the 1990 South Carolina Municipal Association Achievement Award for cities with a population over 25,000. The strategic planning process has made Rock Hill more livable, strengthened the economic development aspects, and instilled a sense of unity among the various groups in the community.

Acknowledgement: Beth Bailey, urban designer, Rock Hill Economic Development, who was instrumental Rock Hill's downtown development also provided useful background material.

CHARRETTE PROCESS

The word *charrette* derives from the French translation of chariot or cart, like the one used to collect architectural designs produced at the Ecole des Beaux Arts in Paris at the end of the 19th century. Often, the students would be drawing while the carts were moving, giving the word the meaning of a last-minute burst of activity to meet the deadline. The charrette process, as used today, refers to the rapid pace at which these designs were finalized and the energy that ensued from that production. But, a newer component, consensus, has emerged as a guiding principle throughout the charrette.

The contemporary charrette operates simultaneously as a product and a process. Depending on the nature of the product, the necessary tools will vary. The typical charrette process maximizes participation over a three to five day framework. In addition to a structured schedule and an open process for participation, the charrette follows through three defined mechanisms. The first, idea generation, requires a knowledge transfer among all affected parties. The second charrette mechanism, decision making, requires a dialogic discourse about the ideas presented. Lastly, problem solving provides recommendations and proposals as process outcomes.

The Charrette Process has proven to be a successful goal setting technique, a collaborative exchange and an interdisciplinary problem solving approach. It is a successful participatory design strategy when applied to specific goal oriented objectives of a clearly defined problem. The charrette becomes less of a technique and more of a collaborative planning process when used in conjunction with other participatory techniques within a defined program. In general, the two main objectives of the charrette are:

1 To gain the unified support of a representative cross section of citizens who are committed to implementing the proposed solutions.

2 To get the commitment of the power structure to secure the necessary resources in order to affect the changes.

The basic strategies of a *charrette* are:

- Perception of a common goal or sense of urgency.
- Involvement of all factions of the community.
- Full citizen participation (includes those not experiencing the problem).
- Maintain a sense of individual contribution to the total process.
- Resolve conflict and redirect its energy toward community tasks.

First of all, the community must have a sense of urgency about certain issues in order for a *charrette* to become an effective mechanism for change. It is important to get the various factions to work together toward the common goals of the charrette. This is more likely to occur if the individuals within these factions feel a sense of personal contribution to the total process. "If they (citizens) do not perceive that they can satisfy their own goals, they will not participate" (Altman & Wandersman, 1987). It is particularly important for the Steering Committee to know which faction of the community have the greatest interest in solving the problems, because these are the people most likely to formulate the solutions. Creating a dialogue within working groups will allow people who are not experiencing the problem to learn from those who are. The charrette manager must maintain control of the group dynamics: get the groups to work and if necessary, be able to diffuse any disruptive behavior. The essential ingredients of a charrette are:

- An identifiable problem.
- User participation.
- Involvement of professionals from within and from outside the community.
- The adoption of short and long term goals.
- A commitment to put the recommendations of the charrette into action.

Categories of Charrettes

Charrettes can be altered to fit most local situations; they generally fall into four categories (Zucker, 1995):

Educational Charrettes: Educational charrettes can last from one day to several weeks. They generally address a well-defined architectural or urban design problem and result in schematic, illustrated ideas. The process usually involves university architecture students and instructors. Such programs often include community participation and serve community issues.

Leadership Forums, *Retreats*, *Focus Groups:* A one or two day forum for citizen activists, elected officials, and nonprofit developers, among others, can be a useful tool to define local problems, list issues, and test alterna-

tive strategies in an informal setting. Such programs have been implemented as a series of events lasting several months.

Traditional Problem-Solving Charrettes: A traditional design charrette is usually a one or two day program, under some circumstances it may run from four days to two weeks. Practicing professionals focus on producing solutions to a well-defined problem. Results usually include a design plan for a specific building such as a homeless shelter, a streetscape, urban park, or multiple-building project on a defined site. Traditional problem solving charrettes often include citizens who participate in the overall process.

Interdisciplinary Team Charrette: An intense three to four day interdisciplinary team process that takes a holistic approach to community issues with an emphasis on community participation. Teams of eight to twelve practicing professionals are drawn from various disciplines: economic development, transportation planning, public policy and management, private and public finance, sustainable development, and architecture and landscape architecture among others. Issues addressed include economic development, affordable housing, neighborhood crime, and transportation.

Interdisciplinary problem-solving techniques allow communities to assimilate solutions at the neighborhood scale--an important social building block. Many urban problems can best be resolved at this level. Interdisciplinary problem solving helps communities make connections between diverse issues that might not otherwise be made using traditional planning methods. Interdisciplinary problem solving helps to reestablish lost connections between people, connections within communities, connections across neighborhoods, cities, and regions, and connections among formerly unrelated government programs. These connections must be grounded in neighborhoods that nurture cultural diversity while maintaining local character and human scale. At the heart of these concepts is Neighborhood and Community; it is the place and the scale at which the other three organizing principles--human scale and human development; diversity and balance; and sustainability, conservation and restoration--take on meaning and social power.

In the charrette, the process requires an accelerated rate of participation and an unveiling of all agendas. With all parties at the table, the transactive dialogue evolves into decision making. An individual's interests are not ignored whole-heartedly. Rather, they are considered with respect to others and are modified accordingly.

The role of modification during the charrette process is important to identify at the outset of the charrette. The eventual goal is local consensus. The extent to which consensus demands modification is something that cannot be ignored. In his discussion of consensus decision-making, Avery (1981) comments, "what occurs in consensus is not compromise, i.e. giving up of something you want, a something that is assumed to be fixed and unchangeable, but a profoundly if subtly different event: reformulation, in which what you started out wanting itself changes. You do not lose something of this fixed position, you change, see something

better, improve your benefits in the contexts of the group exchange, the new information, the longer better vision generated."

A charrette consensus is seen as an agent of self-awareness and knowledge through action or learning by doing. On the other hand, compromise is seen as a loss. The perception of this "loss" needs to be adjusted so that the consensus process is seen more as an evolving modification or reformulation of ideas.

Regional and Urban Design Assistance Teams (R/UDAT)

R/UDAT is an acronym for Regional and Urban Design Assistance Teams. The title derives from two AIA national committees-the Regional Planning Committee and the Urban Planning and Design Committee that shared responsibility for the program when it first got started. The key feature is an invited interdisciplinary team of professionals who address problems at various scales, ranging from city and regional issues down to neighborhoods. The team, together with local supporters, then prepares recommendations and development schemes.

During the months preceding the R/UDAT process, site visits to the community are conducted to understand the issues, to collect relevant information, and to determine the appropriate team composition. The team's four-day visit usually begins with a walking and/or driving tour through the study area. Meetings are also conducted with elected officials, community leaders, planning and zoning boards, banking and special interest groups. A community meeting open to all interested citizens is conducted on the second day. The purpose of this meeting is to gather information from non-establishment groups such as neighborhood organizations, block groups and ethnic and minority representatives. This open meeting helps to sharpen the team's understanding of major issues. On the third day team members begin their planning in a 24-hour nonstop problem-solving work session that consists of conceptualizing, writing and drawing. The problem-solving approach is based on a team discussion of concepts followed by joint or individual work groups focusing on different segments of the problem. A final report is prepared and made available on the evening of the fourth day that is the second open community meeting. Here team members present their recommendations to the community. Following the R/UDAT charrette, additional visits are made by select team members to help the community move forward with the recommendations and to develop strategies to remove roadblocks to progress.

In 1995, the town of Salisbury, North Carolina played host to a group of 11 visiting architects and landscape architects, who volunteered a week to study the Innes Street corridor in response to community concerns about unsightly development along portions of the street, Salisbury's most historically significant traffic artery. The city leaders commissioned an intensive study of this corridor by N.C. A.I.A.'s Urban Design Assistance Team (UDAT) led by Peter Batchelor. Based upon a week of on-site research, many interviews with local citizens, officials and

developers, and many debates, recommended actions included immediate strategies for enhancing and protecting the corridor from further degradation. Others included strategies that would require the cooperation of several agencies, businesses, developers, utilities companies and local citizens. While the design team offered many ideas such as bringing back the trees that lined the street when it was more residential (Figure 2.5), it was agreed that at the heart of the plan lies one element that will determine the success or failure of the whole: success.

Figure 2.5: Drawing of a Salisbury, NC UDAT recommendation

Based on the 100 R/UDAT projects conducted in the USA alone, three ingredients have been identified for success (Batchelor and Lewis, 1985):

- First, the process is as important as the product. All members of the community must be openly involved in the initial stages of goal setting through the development of implementation strategies. To be successful, the process needs to be sensitive to the people in the community, the culture and history, the physical fabric, and the political climate.

- The second requirement for achieving success is the formation of an interdisciplinary team. Today's complex urban issues require professionals with different backgrounds and areas of expertise.

- Third, citizen participation is regarded as the key ingredient for success. The citizen's movement is no longer the scattered local voice it was only a few decades ago. Cities belong to the people who live in them.

FISHBOWL PLANNING

The basic objective of fishbowl planning is "to ensure that planning for public works projects is highly visible to all interested individuals and organizations" (Sargent, 1972). Concerned citizens are to be involved in the planning process from the beginning. Throughout the planning process, citizens serve as a check on agency planners and contribute ideas, insights, and alternatives of their own. The process was developed by Howard Sargent of the Corps of Engineers as a result of a controversy that began in the late 1960's between recreationists, conservationists, and the Governor of Washington against local developers, many property owners within the Snoqualmie River Basin, and the Corps of Engineers (Mazmanian & Nienaber, 1984).

The debate arose over the need for a dam and reservoir for the Middle Fork of the Snoqualmie River in northwestern Washington, as a means of flood control from major storms, particularly since there was equal concern for preservation of the greenbelt of agricultural land below the river. Flood management studies conducted by the Corps of Engineers, however, did not compare cost and benefits of alternative proposals, consequently opponents of the dam and reservoir organized a delaying action. A public hearing attended by over 1000 people emphasized broad public concern about the project and how this issue had polarized the community.

It was the recommendation of the Governor's environmental review team that the project should not be authorized. Instead, the Corps of Engineers should conduct an in-depth study of all alternatives in conjunction with the appropriate agencies of the State of Washington. The study was undertaken by the newly appointed district engineer, Colonel Howard L. Sargent, who viewed this as an opportunity to implement a comprehensive public participation and open planning process he described as fishbowl planning. The four procedural components of fishbowl planning are workshops, public meetings, citizen committees, and a brochure of the study. The study brochure is an essential component of fishbowl planning. It provides a written record of all alternative solutions suggested by citizens or agencies. The brochures serve as a forum for debate about alternatives.

The results of a number of workshops and public meetings did not reveal any new information or consensus, but resulted in the participants' greater appreciation for one another's views. As a result, approval was withheld for the Corps to proceed with any of the alternatives. Continuing community interest in the problem of flooding brought a crisis intervention group to mediate between the opponents and proponents. This effort resulted in a plan agreed upon by the Sierra Club, the Washington Environmental Council, the valley farmers, the League of Women Voters, and the basin communities.

The fishbowl experience did not bring about consensus on a single alternative in the Middle Fork study; rather it was designed to improve communication among all concerned groups, with the hope that propo-

nents of each alternative could accommodate the concerns of others. The important point is that it is not judged as a failure if consensus does not emerge. The opening of the decision-making process had never been attempted before.

COMMUNITY ACTION PLANNING (CAP)

Community Action Planning is an approach that empowers communities to design, implement, and manage their own settlement programs. Its key characteristics are participatory, community-based, problem driven, and fast. CAP has been developed over many years in the field by Nabeel Hamdi and Reinhard Goethert, and their experience is collected in their book, *Action Planning for Cities* (1997). Traditional planning methods, such as master plans or development plans, they argue, take too long to develop, demand substantial resources to implement and are unrelated and of no benefit to the poor majority of urban populations.

While the issues may be broad in scope, the process begins with small-scale projects that are additive in nature promoting appropriate technologies and local enterprises. While stakeholder participation is at the core of action planning, building coalitions between government and non-government groups, between competing government departments as well as between competing community groups. Participation occurs when people and organizations are convinced that their interests will be better served in partnerships than without them (Hamdi & Goethert, 1997, p.31). At the heart of the action planning process is a series of phases and techniques that include:

- Direct observation allows the planning team to see the conditions of the environment under consideration.
- Interviews and focus group discussions help to generate insights into those community characteristics that are not visible through direct observation.
- Measuring is a quantitative view of environmental conditions.
- Surveying resources, a community function, identifies local people and places that are important to any proposed program, similar to the "yellow pages."
- Prioritizing is an ongoing process where stakeholders consider their needs and the feasibility of implementing projects.
- Brainstorming is used to allow groups to explore alternative ways of solving problems.

- Diagramming allows time-line and population information to be presented in an easily understood graphic format.

- Mapping and modeling allows people to record their feelings, perceptions, social networks and to examine existing conditions as well as evaluate proposals for improvement.

- Gaming and role-playing can be used to build awareness of planning procedures, to anticipate potential difficulties as well as to allow participants to become sensitive to each others needs.

- Group work during all stages of the planning process helps to build cooperation.

- The process begins with identifying problems and with identifying opportunities in a workshop setting.

A workshop conducted in a South African agricultural town, an area where housing is largely built through self-help, and deficient in its basic services, was held to assist the Government of South Africa to implement a Reconstruction and Development Program. Participants included 20 representatives of community organizations and interests. The workshop was organized into four phases:

1 Deciding what was needed (identifying key problems and priorities)

2 Sorting out how to achieve what was needed (preparing proposals)

3 Assessing what will get in the way of implementation (project viability)

4 Building a plan of action (tasks, partners, schedules, organizations, etc.) and getting projects going.

The workshop produced a viable community action plan that set a development process in motion. At its conclusion, a planning unit was established and four project coordinators were selected from the community to pursue the tasks identified, grouped in four areas: health, income generation, water and sanitation, and housing. Following the workshop the project was presented to representatives of local government who believed the community should be empowered to sustain what had been started and minority and low-income members of the community should be included as experts.

Planning Assistance Kit (PAK)

The Planning Assistance Kit (PAK) developed at the Massachusetts Institute of Technology (Hamdi & Goethert, 1997), is a series of worksheets prepared to assist community organizations in physical planning, implementation and management of their housing (Figure 2.6). This planning guide is aimed at aiding local community development corporations (CDC's) manage new housing projects. The guide provides communities with a tool for clarifying objectives and defining problems. It enables communities to familiarize themselves with procedures as well as obstacles, while allowing for expanding the range of options. For public authorities, PAK provides a structure and a process for participatory decision making.

Figure 2.6: Planning Assistance Kit (PAK-Courtesy: Reinhard Goethert)

Planning occurs in a workshop setting where conflicting interest groups are brought together to define problems, to explore alternatives, and to establish priorities. A gameboard called "Gamepak" is the opening activity of the workshop where participants learn housing terminology while they move through several stages of the housing process. Structured as a parlor game similar to Monopoly, this exercise allows participants to familiarize themselves with each other.

The key components in the planning kit are "setting objectives" and "building programs," both aimed at the development of a proposal. PAK-I outlines procedures for setting priorities and resolving conflicts, while PAK-II introduces methods for making the community development process accessible to lay people. The use of worksheets (Figure 2.7) helps to document the process and the decisions for viewing by a wider audience.

Figure 2.7: Typical planning worksheets (Courtesy: Reinhard Goethert)

Setting objectives includes a 4-step sequence beginning with (Figure 2.8):

1 Identify and clarify concerns (what are the concerns, who is affected, and why)

2 Prioritize concerns and identify conflicts (identify interest groups and their concerns)

3 Set objectives (relate concerns to objectives)

4 Prioritize objectives (identify options for satisfying objectives).

Building a program initially explores strategies, options and trade-offs by considering options, prioritizing options, identifying conflicts and opportunities and selecting viable options. The second part of this phase considers planning for implementation. This phase begins with assessing resources, identifying what is needed, and where and when to acquire what is needed. Compliance with permits, etc. and other specific task responsibilities are delegated, and finally potential sites are evaluated to determine the best location for the project.

To support the workshop activities, a directory of information about agencies and other housing resources are included in an "Infopak."

In the United Kingdom, The Prince of Wales Institute of Architecture published *Action Planning*, by Nick Wates (1996) as a tool for community design. The underlying philosophy of Action Planning is interdisciplinary, collaborative and community based. Action planning is usefully applied to urban improvement, capacity building, new development planning, and for planning under crisis such as rebuilding communities that have suffered political or natural disaster. Action planning is based on the following characteristics: achievable actions, participatory, small in scale and community based, and reliant on local knowledge and skills. The process relies on building on existing organizational structures, available skills and knowledge and focuses on what is achievable with visible, tangible outputs (Figure 2.8).

Figure 2.8: Action planning process (Courtesy: Reinhard Goethert)

Action Planning is an urban management technique similar in structure to a charrette and modeled after the RUDAT process. Action Planning is an event usually lasting 4 or 5 days guided by a multidisciplinary team of independent specialists. Community planning weekends, as they are referred to in the United Kingdom achieve success in galvanizing community participation and allowing collective decisions to be made in an effective way. The benefits of Action Planning include:

- Creation of shared visions
- Catalyst for action
- Resolution of complex problems
- Fostering of consensus building
- Heightened public awareness
- Morale boost
- Promotion of urban design capability

The Action Planning process does not finish at the end of an event. A follow-up program allows the ideas to fully implemented. Evaluating the impact of Action Planning events is important to help focus attention on long-term objectives and help improve the process. Wates' proposes an evaluation form that can be modified and expanded based on particular community needs (Figure 2.9).

Figure 2.9: Action planning evaluation form

Take Part

"Take Part" is a process for helping people to become aware of the problems and potentials of their shared environment. It also helps people to work together to make planning and design decisions together with professionals, and to implement their projects.

Take Part was developed by Anna and Lawrence Halprin, Jim Burns and Paul Baum, and in some respects resembles a musical score (Halprin, 1974). While music is a closed score, in which the performer must do what the composer intends, Take Part scores are more open. They welcome the feelings and creativity of the participants, so that the "performances" of the participants become important elements in determining what will result.

There are three categories of people in a Take Part team to help the participants. The "workshop conductor" is like a conductor of an orchestra who helps people to work together and achieve the best results. The "facilitator" is the same sort of person who helps people in small groups in the way the conductor helps the entire workshop. Since a workshop frequently involves one hundred or more people, several facilitators are needed. The third category is the "recorder" who documents exactly what people discuss and recommend during the workshop. The recorder can work with small groups, like the facilitator, or large groups, recording, then sharing the discussion back to the participants to make sure that it is accurate. In this way a body of complex and interrelated insights and data is developed for the designer and planner to work with.

Usually, a workshop begins with an "awareness walk" or trip to the project area. Through these trips, people with little previous awareness of each other learn a common language and bond through a shared experience in physical reality and in each other's perceptions. Many projects, of different sizes and degrees of complexity have been undertaken with Take Part processes (Halprin, 1974). Sometimes a project may be a single building, such as a school or something more complex, such as the downtown of a large city.

PARTICIPATORY ACTION RESEARCH

Participatory action research (PAR) is proposed as a new paradigm for effectively utilizing the knowledge that is generated by the environment-behavior community through the integration of design, planning, research and participation. This is an outgrowth of traditional research approaches that are not capable of dealing with goals, values, and problem solving. Similarly, the behavioral research model, which consists of an institutionalized separation of research and application does not facilitate collaboration among researchers, designers, and planners (Seidel, 1982). The specialization of knowledge makes it impossible for one group to plan and to determine optimal solutions on behalf of the world community.

Similarly, the problems of poverty and social development are complex and require multidisciplinary collaboration.

It is no longer possible to plan effectively for people given the changing nature of the economy, the political landscape, and the speed at which these changes occur in cities and urban areas of the world (Friedmann, 1992). This notion stems from Lewin's (1946) concept of action research, a model that not only integrates theory and practice, but requires that one must act on a system in order to understand it, and that the designer/planner will consequently have some effect on the outcome. Action research is a pro-active strategy where research utilization has political and social relevance. By placing people and their concerns as the starting point, research takes on a more activist role, and can be described as participatory research. Participatory action research involves practitioners in the research process from the initial design of the project through data gathering and analysis to final conclusions and actions arising out of the research (Whyte, 1991).

Participatory research, however, has been defined differently by its proponents. Participatory research is seen as the development of a communities' potential; as collaborative problem solving; and as a synonym for 'user participation' in planning and in the decision-making process (Lineberry, 1986). Gaventa (1993) suggests that "participatory research attempts to break down the distinction between the researcher and the researched, the subjects and objects of knowledge produced by the participation of the people-for-themselves in the process of gaining and creating knowledge. In the process, research is seen not only as a process of creating knowledge, but simultaneously, as education and development of consciousness, and of mobilization for action." Ramasubramanian (1995) describes participatory research as an approach that:

- Develops the capacity of the participants to organize, analyze, and discuss concepts to the level required by the particular issue in which they are involved;

- Develops a process to incorporate the participants in the research and decision making process that includes the basic assumptions, the research design, and the methods of evaluation; and

- Returns the research findings to the participants.

The long-term goal of participatory research is to empower people to effect social change. This new outlook is not unique to design and planning, but has been taken up by many kinds of professionals about the distinction between 'research for the people' vs. 'research by the people.' Conventional design and planning practice usually undervalues the expertise of the user and denies their involvement in decision making. Lack of design or planning training, however, does not interfere with citizen's ability to make meaningful judgments of environmental alternatives early in the decision-making process. Expensive models are not needed to en-

gage them in the process and to elicit feedback from them to incorporate in final decisions (Kaplan, 1987).

A participatory action research model (Wisner, Stea & Kruks, 1996) is based on the belief that people who use the environment, who are the traditional subjects of research, become active participants in the research and equally active participants in changing the environment. This idea is based on the belief that user groups have an expertise equal to, but different from the expertise of the professional. Participation then becomes a central component of the research approach. Users would then be involved in evaluating research results and subsequently develop recommendations about how to address problems that have been identified.

In practice the participatory research process of intervention is initiated by a community development agency, an extension service of a university, or a church group. The researcher/practitioner needs to be well informed about the community both historically and sociologically through records, interviews, observations and some form of participation in the life of the community. The organizational aspect of the PAR begins by informing the larger community of the purpose of the project and identifying the key individuals who would play an active role in its development. The researcher/professional acts as a facilitator and technical resource person as the community decides how to formulate the problem to be investigated, what information is needed, what methods should be used, what procedures should be taken, how the data should be analyzed, what to do with the findings, and what action should be taken (Park, 1993).

The degree and nature of participation in all phases of participatory action research is a critical factor. Empowering participation implies that participants are in charge of the inquiry by actively helping to create and codetermine in every phase of the research process (Elden & Levin, 1991). Empowering participation in action research does not imply that everyone in the community or organization is involved in every phase of the research process. PAR is a representative form of participation in which all stakeholders interests and viewpoints are included. Criteria for creating an effective dialogue include (Gustavsen, 1985):

- All concerned must have the opportunity to participate.
- Initially, all participants are equal.
- Participants should be active in the discourse.
- All participants must understand the issues at stake.
- Initially, all arguments should be considered legitimate.
- Agreement should continuously occur from the dialogue as a basis for investigation and action.

This action approach offers designers and planners concerned with user needs a new set of social science tools. These new tools not only provide the professional with a deeper understanding of the human condition, but an opportunity for engaging in an effective dialogue with people who use the environment. This approach is in contrast to the use of

more casual methods of inquiry that typically reveal what is already obvious, or traditional social science approaches which tend to generalize people's requirements (Argyris & Schon, 1991).

Clearly, this suggests an expanded role for the professional to include the function of instructor and facilitator of the decision making process, in addition to being an advocate for the principles of good design and planning. Professionals can easily change their behavior to accommodate this new role. It requires a shift in the allocation of time from project development to the front end or pre-design/ planning stage where more reliable information can minimize the time normally wasted in second-guessing client/user needs requirements, and preferences. This new role will subsequently increase the professional's social standing, esteem, and respect in the community. A process that is rooted in open and meaningful communication is essential to learning. Through mutual learning changes can be brought about. These changes will evolve since it may not be necessary to produce finished and unalterable solutions, but to extract solutions from a continuous dialogue with those who will use the professionals work.

Case Study of a Town Relocation

The U.S. Army Corps of Engineers identified the town of North Bonneville in the state of Washington, as the best location for a powerhouse and consequently its residents faced eviction and relocation (Comstock & Fox, 1993). The residents of North Bonneville are independent and self sufficient in their personal and family lives yet were unified by the common threat to that relationship. Unwilling to relocate to Portland, Vancouver, or Seattle, the residents rallied around a common goal of relocating as a community, where they could maintain their social relationships. The Corps of Engineers on the other hand did not feel it was authorized to replace towns, only compensate individuals for the cost of relocation.

In a search for assistance in maintaining its identity, the town contacted the Evergreen State College in Olympia, Washington, an institution that enabled faculty and students to pursue problems in an in-depth interdisciplinary context. The residents of North Bonneville discovered Russell Fox, a faculty member interested in empowering citizens through participatory research, and his students who were looking for projects that would involve citizens in the planning process. Together, they embarked on a four-year participatory research project that began in 1973.

The students quickly discovered that although the town's residents had extensive knowledge about their community, and strong feelings about their pending relocation, they were uninformed about the complex political and social forces that could influence their future. After discussing the town's problems and their commitment to active involvement in the planning process it was agreed to develop a plan for the relocation of North Bonneville, and to develop the capability of the residents to use this information in pursuing their goals.

The first phase of the project included the information needed to plan for the relocation of North Bonneville. A report produced during this phase included such information as the town's historical and regional context, demographic and economic data, sociological and cultural patterns, physical infrastructure and community facilities, geographical and natural features, and other external factors affecting relocation.

Students lived in the community while gathering data and discussed the use of this information with the residents. Through informal discussions with the residents and through community workshops, the students shared their findings with the residents. As a result of this participatory process the residents became aware of the discrepancy between their sense of community and how differently the Corps of Engineers viewed relocation. The residents realized that their goal of maintaining the social relationships of their community were different from the government's goal of building a powerhouse. They discovered that the government perceived their community as physical structures and people as abstract individuals.

A relocation planning study documented the knowledge of the residents and a clear sense of their identity as a community. Through research about their community and their newly acquired planning skills, the residents were able to create a better community in a new location. At the appropriate time, the townspeople demanded of the private planning firm the right to participate in planning the new town so they could incorporate their knowledge into the design. The residents also refused the Corps's offer to plan the new town realizing they would have no control over such a process. Finally, the people of North Bonneville gained federal legislation to require the Corps to pay for the design of the new town to be carried out under the community's control.

This project demonstrates how participatory research provided a basis for a successful political struggle by a community. During the participatory research process the people of the town, with the help of the students, learned about themselves and their environment, and were able to put this knowledge to use in creating a new community. The students guided the research process, taught technical skills to the community, and organized information provided by the residents. The data gathered and skills learned gave the community the self-confidence to challenge the Corps of Engineers. This town of fewer than 500 people challenged the U.S. Army and won.

Runyon Canyon Master Plan

When the city of Los Angeles acquired Runyon Canyon, the Department of Parks and Recreation received a burned-out, 133-acre wasteland resulting from the 1984 fire causing mudslides, floods, erosion and serious injuries. With the city's history of environmental degradation, attitudes toward the canyon of disregard, fear and abuse would need to change if its native ecology was to be restored. The firm of Community Development Planning and Design, headed by Randy Hester (Landscape

Architecture, 1987), convinced the department that the master planning process had to be educational as well as participatory.

To help the public overcome its fears, the planning team took citizens on site tours to provide them with knowledge of the landscape, which helped to gain community support for restoring the canyon's native ecology. A score sheet was developed to allow citizens to evaluate the damage and potential creating an inexpensive database (Figure 2.9). The model consisted of a three step transformation that accrues over a 12-step participatory planning process (Hester, 1987). "Place knowing," means a user can name, locate, describe and attribute some use to the place. "Place Understanding" is knowing why a place is the way it is and how it might change. "Place Caring" is an active state based on an emotional bonding and involves a sense of ownership and responsibility. This approach can achieve a sense of caring and increased understanding-reversing the cycle of placelessness and abuse.

Figure 2.10: Runyon County master planning process

Listening, the first step, enabled the planning team to learn from the local school officials that a generation of children was growing up with undeveloped gross motor skills because the neighborhood playgrounds and open spaces are inadequate. As a result, the master plan includes natural areas where a child can explore, climb, and learn about animal habitats. The team employed focused techniques to engage different citizens groups throughout the process. More than 400 citizens participated, representing such diverse interests as native plants restoration, the homeless, historic preservation, children, crime prevention, and property values.

PARTICIPATION TECHNIQUES

The techniques described in this section all require sufficient planning time and clearly stated participation goals. They evolved as a result of the criticism of citizen involvement as being time-consuming, inefficient, and not very productive (Rosner, 1978). It is because of tight time and financial constraints that structured participatory techniques have proven to be successful.

There is a wide range of techniques available to designers and planners. Some of these techniques have become a standard method used

in participatory processes. For example, participation rarely occurs without the use of interactive group decision-making techniques that take place in workshops. At the same time, field techniques such as questionnaires, interviewing, focus groups and group mapping have effectively been used by designers and planners to acquire information. In general, many of the techniques facilitate citizen's awareness to environmental situations, and help activate their creative thinking.

In conjunction with the need for achieving effective dialogues between people is the need for technical assistance. Qualified and sensitive professionals often need to provide technical assistance to allow people to participate more effectively in developing plans or objections to plans. The forms of technical assistance vary and include local community design centers, on-site project office, as well as private and public sector community design professionals.

The key to making community design work effectively is a range of techniques for enabling professional and lay people to creatively collaborate. Many of these techniques have become standard methods used in participatory processes. Participation rarely occurs without the use of interactive group decision-making that usually occurs in workshops, while interviewing and mapping allow large numbers of people to participate. The techniques are classified into five major categories; awareness methods, group interaction methods, gaming methods, indirect methods, and open-ended methods.

Awareness Methods

Exhibits: People need to know what an issue is about to be able to decide whether they want to participate. One way to inform and stimulate people to participate is to set up exhibits in public places, such as a shopping mall or at street fairs.

News media: Sending a news release to a newspaper, radio or TV station is one way to get media interested in doing a story. Often a news release is used to convince an editor to do a story, especially in larger communities where there is competition to get the attention of the media. Press kits are a more detailed and authoritative source of information useful for reporters. They should contain summary information about the decision process, as well as key technical studies. Newspaper inserts are also effective as a means to inform the public about the process and to keep people adequately informed. Newsletters are an effective means of sustaining interest throughout an extended decision making process. They can provide more information than can be communicated through the news media (Figure 2.11).

Walking tours: Another approach to facilitate user's awareness to environmental situations, particularly where people have adapted to intolerable conditions is a planned walk or walkthrough the area of study. This walk allows participants to rediscover a familiar situation or to acquaint the participant with a new situation. This approach might include a map or plan designating specific stops to record impressions, and a list of

specific tasks. This technique is most effective as an introduction to the participatory process. A map of an eight-block study area, locating specific stops, appeared in the Smithfield, North Carolina newspaper prior to an open community workshop. Townspeople filled the streets on this self-guided walking tour to rediscover the positive as well as negative features of the town (Figure 2.12).

Figure 2.12: Walking tour insert in newspaper

Indirect Methods

Surveys and questionnaires help to gather information, attitudes, and opinions from a sample of the user population. In Ohya, Japan a mapping survey allowed citizens to identify and locate areas of environmental degradation, while in Raleigh, North Carolina a mapping study identified boundaries of citizen's perceived neighborhood. This approach yields easily quantified, rapid results. The limitation of this approach is that it reflects the position of those who prepare the surveys rather than those who respond to the questions. One-on-one interviews, however, can provide much more information. While interviewing does not provide a scientific sample, it does provide qualitative and detailed information. They often provide information that cannot be obtained any other way.

Group Interaction Methods

Face-to-face interaction characterizes all group methods often referred to as a workshop. Focus groups usually consist of six to ten

carefully selected people with a facilitator who guides the discussion to relevant issues. A charrette, on the other hand, is an intensive participatory process lasting several days, or longer depending on the complexity of the problem. This is a process that convenes interest groups in a series of interactive meetings aimed at solving a particular problem. Phases of the charrette process may include workshops, or working sessions that engage participants in the development of ideas, recommendations, and decisions. A 'Design-In,' may also be part of this process or used as an independent method. It is a "hands-on" approach where professionals and citizens work together with plans, photographs, or models to explore alternatives.

Open-Ended Methods

Informing a large audience about proposals, generating interest, or securing approval can take the form of a community meeting also referred to as a public hearing or a public forum. Public meetings allow community leaders to present project information at any time during the process. The tight structure of such meetings, however, does not permit ample time for discussion. Although referred to as community participation, only the most aggressive personalities tend to participate and often dominate the discussion. Public reactions in open meetings are often taken by a vote through a show of hands.

Participatory cable television: While many communities broadcast city council meetings over local channels, television can be used in a more participatory way. The city of Roanoke, Virginia developed an electronic town meeting they called a "design telethon." Where four television events were held in the Roanoke Design 79 series. The city consulted the architectural firm of Centerbrook who developed a series of district maps that were presented on the air with proposals being phoned in and discussed. At the close of each one-hour broadcast, there was a recap of the ideas collected and the architects returned to their office to consider each one. Subsequent shows included development alternatives published in a local newspaper. Votes for preferences were sent in and the plan was refined. The third show presented the final plan in model form. A total of 59 individual projects were proposed. Within three years the citizens of Roanoke approved bond issues for all but seven of the projects (Sanoff, 1994).

Planning ballot: A planning ballot was conceived as a way to broaden active citizen participation by providing a way for people who cannot attend or speak out at public meetings, with a medium to express their feelings. The Yerba Buena Planning Ballot conceived of by the San Francisco Design Center (Sanoff, 1978) is made up of three parts: three propositions outlining plan alternatives; thirteen policy statements dealing with how the project should be planned, financed and administered; and a section containing a map of the project area and a selection of land uses from

which people can devise their own plan (Figure 2.13). A detachable part of the ballot can be mailed or placed in one of several ballot boxes located in the project area. Together, the three parts of the ballot provided people with a way to organize and express their preferences for the most important facets of a large complex urban renewal project.

Figure 2.13: Planning ballot (Courtesy: Charles Turner)

Digital technology: Digital media may have a significant and strategic role to play in facilitating communication and collaboration in a variety of settings. Creating an effective human interface to complex information is the aim of telecommunications services. Video conferencing is a one-to-one communication, which means that all participants have equal status and no one person is in control of the conference. People can see each other, talk to each other, show each other relevant documents, and change those documents together. CU-SeeMe is a real time, desktop videoconferencing program developed at Cornell University that provides the ability to transmit and receive digital audio and video on personal computers. It allows individual or multiple users to participate with another site at different locations from a desktop computer (Figure 2.14).

Simulation modeling, combining video, CD-ROM and computers use technology immediately useful for participation practice. Computer simulations of buildings allow viewers to walk-through, fly over and alter interior and exterior features. CD-ROM is used to store and access the information. Similarly, videos of physical models allow participants to view a building or streetscape from many different points.

SimCity (Bremer, 1996) is a CD-ROM city simulator game that allows the player to design and build small rural towns or large

Figure 2.14: CU-SeeMe desktop image (Courtesy: White Pine Software)

megalopolises. Designed by Fred Haslam and Will Wright, SimCity is a building game aimed at maintaining large cities without scarificing quality of life. In SimCity, the player is the planner and mayor of an unlimited number of cities. Initially, the player needs to identify long-term goals in order to plan a workable strategy. The game consists of a number of scenarios with different challenges. Disasters such as fires, riots, tornadoes and monsters from outer space are included in all the scenarios. Cities can be expanded or new cities can be started by generating a new landscape. The City window is the main work area for shaping a city and the land under it. A City toolbar allows the player to modify the landscape, center on different areas of the city, build the city infrastructure as well as many other features. Maps of cities from all over the world are available to allow the participant to improve on a favorite city.

The VisionDome, a collaborative virtual environment, is an interactive digital display that enables group interaction around a shared application. The public, planners, and public officials could walk through a proposed urban development, experiencing the environmental impact. The VisionDome delivers full-color, raster based, interactive display, with 360-degree projection and a 180-degree field of view. The tilted hemispherical screen is positioned so as to fill the field-of-view of the participants, creating a sense of immersion in the same way that large-screen cinemas draw the audience into the scene. The observer loses the normal depth cues, such as edges, and will perceive 3D objects beyond the surface of the screen. The dome itself allows freedom of head motion, so the observer can change their direction of view, and yet still have their vision fully encompassed by the image (Figure 2.15). The VisionDome

allows groups of between eight and fourteen people to view three-dimensional models in an immersive environment, facilitating focus groups, or for collaborative interaction.

Figure 2.15: VisionDome

The Center for Housing Innovation initiated the Net Energy Communities (NEC) project to create computer-based decision support for public participation in neighborhood planning and design (Kellett, 1998). NEC develops four tools: *Site Modeller, Elements of Neighborhood, Scenario Modeller*, and *Scenario Calculator*. Together, these tools help charrette participants define site-specific issues and circumstances influencing their development choices, increase the generation of acceptable alternatives, and measure alternative scenarios against common indicators of energy, environment, community, and cost.

NEC's *Site Modeller* builds digital models of project sites using quantitative, qualitative, and visual information, including location base maps, air photos, explanatory diagrams, movies, pictures, GIS wireframes, and land use suitability models. *Elements of a Neighborhood* is a compilation of neighborhood design elements derived from case studies. Organized by land use, such as open space, housing, commercial, and streets, case studies are illustrated with air photos, movies, scaled site plans, and design drawings. They are measured by attributes of planning, design, energy, environment, and cost. NEC's *Scenario Modeller* (Figure 2.16) allows participants to understand and visualize proposed scenarios by assigning selections from *Elements of a Neighborhood* to areas of a site. Scenario Calcu-

lator will compile quantitative data and evaluate measures about these scenarios through a series of comparative proforma reports.

Figure 2.16: Scenario Modeller showing hand drawn plan converted into a digital map and GIS wireframe (Courtesy: Ronald Kellett)

Brainstorming Methods

Teamwork is beneficial in creative problem solving, but nowhere more so than for idea generation (Lumsdaine & Lumsdaine, 1993). The best-known method for doing this is brainstorming. Classic brainstorming is a verbal method of problem solving used with small groups of from three to nine people with three rules to follow:

1 Generate as many solutions as possible
2 Wild ideas are encouraged
3 No criticism is allowed-judgment is deferred

There are, however, other brainstorming methods sometimes referred to as brainwriting, for groups larger twelve members. These methods can also be used by a group of people who cannot meet in the same place at the same time. They are:

Gallery: Each member is given an easel and a large pad with time to write down all his/her ideas about the problem. Time-out is called. Participants circulate among the easels, then return to their own to make additions and modifications. Idea hitchhiking occurs. Notes are collected and given to another team for evaluation. This method is particularly effective for people who are uncomfortable when speaking in front of a group.

Pin Card: People sit around a large table and write ideas on note cards. The cards are then passed around and participants can add their ideas and improvements to the original idea. Cards are then collected to be evaluated by another team.

Nominal Group Technique (NGT): The problem is presented and participants silently write down their ideas in a five-minute period. Ideas are then pooled, discussed and voted on, ranking them in order of preference. This technique combines the idea generation and idea evaluation phases into one session (Delbecq, et. al., 1975).

Cranford Slip Writing: This method is used to collect ideas when large groups of people want to be involved in the process. After the problem definition has been presented, each participant is asked to write down 20 ideas on slips of paper, with each on a separate slip. These are collected and given to another team to organize and evaluate the ideas generated.

Ringii Process: This is a Japanese process where an idea is circulated in written form. Participants make notes and send it along. The originator gets it back, digests the suggestions, and rewrites the idea. This process can be done in several rounds. It avoids personal conflicts if expected.

Delphi Method: This is a technique that begins with written brainstorming but then continues until consensus has been reached on the best ideas. Here participants can remain anonymous; no direct interaction occurs since the idea collection is done by questionnaire or on-line computer. Ideas are collected. These are then listed and the list is circulated for evaluation and ranking by each participant. This process is continued until a consensus is reached (Delbecq, et. Al., 1975).

Interactive Brainstorming

Verbal and written brainstorming techniques can be combined to take advantage of the best features of each approach. Groups of about 20 people can participate in interactive brainstorming, and these method feature periods of idea writing with verbal sharing of ideas.

Idea Trigger: After an initial period of silent activity, in which each participant writes down ideas on a notepad with two columns, each member takes turns reading their list. As members read from their list, other participants cross off any new or hitchhiking ideas they have in the second column. After going around the group once clockwise, the process is repeated moving counterclockwise around the group. Once the second cycle is completed, the ideas are collected for later evaluation (Lumsdaine & Lumsdaine, 1993).

Panel Format: When a larger group is present, say from 20-30 people, a panel of 5-10 participants can be formed, who then verbally brainstorm in front of the rest of the group. The group at large will write down their own new or hitchhiking ideas as they listen to the panel. After the process is completed, the ideas of both the panel and the "audience" are collected for later evaluation.

Group Process

A collaborative, affirmative group process is a way for people to share ideas and to improve the quality of each other's work. The recommended size of an affirmative group is eight persons, each of whom presents a proposal to which each of the others responds. The rules of the process are as follows:

1 No leader, only a referee/timekeeper (who also presents).

2 Each person has 5-10 minutes to present her or his idea or project. Each person has 1-2 minutes to respond.

3 Each responds only affirmatively in the form: "If I were you ... (presenter's name) I would..." (Responses that resemble previous ones should not be inhibited - repetition is useful to the presenter.)

4 The presenter does not reply, but records each affirmative response in writing, and as fully as possible. This list of responses is the valuable result.

5 After everyone has responded the presenter replies to all the affirmations together and subsequently attempts to incorporate all or most of them in the next version of her or his design.

The referee/timekeeper's role is to:

- Ensure that each response begins with the words. "If I were you.." (A difficult habit to learn, but very helpful - it often involves changing from destructive to constructive language)

- Keep everyone to the times and to the sequence of speaking

- Prevent the presenter from replying to responses until the end of a round (another difficult habit to learn - to overcome the defensiveness)

- Ensure that the next person does not begin responding until the presenter has written the previous response.

- Limit the times of presenting and responding so that the total time is not excessive.

John Chris Jones developed this seemingly mechanical procedure and found that it improves the quality of comments and of subsequent idea development provided that the rules are imposed firmly enough to enable people to overcome non-affirmative and aggressive or defensive habits that often prevail in committee-like groups.

PARTICIPATION GAMES

Participation can take place through other types of involvement such as design and planning games for organizing group decision making. Jerome Bruner (1967) suggests that one of the key factors in the learning process is participation-particularly by the use of games that incorporate the formal properties of the phenomena for which the game is an analogue. A game is a simulation of a real situation allowing participants to act out situations and experience the interactions of a community activity. Games are educational since their purpose is to create an environment for learning and prepare people to act (Duke, 1974). Gaming is a participatory approach to problem solving that engages a real life situation compressed in time so that the essential characteristics of the problem are open to examination. This technique permits learning about the process of change in a dynamic environment requiring periodic decisions. Essentially, a complex problem is identified, its essence is abstracted, and the end result is a process referred to as a simulation. Games consist of players, placed in a prescribed setting, with constraints within this setting represented by rule systems and methods of procedure.

Games used for teaching in the community produce outcomes such as learning of principles, processes, structures, and inter-relationships; empathy and understanding for predicaments, pressures, and real-world problems presented by role players; and a strong sense of efficacy (Abt, 1970). Games used for skill development by businesspersons, police officers, and diplomats help to develop skills in persuasion, bargaining, and strategic planning. Game use in social planning is helpful when players try out different forms of social structure, resource-allocation, and communication within a simulated environment, to test the effectiveness of ideas, costs, and rewards of options (Duke, 1974). Games used by groups to explore values, ideas, and behaviors as a communication function, result in a better understanding of themselves and others. Games used in conflict resolution facilitate communication between dissimilar or opposing groups (Greenblat & Duke, 1981).

Design games get people involved in their play and in their design and planning results. There are several reasons for this, but three are central:

1 Participants take a role and argue the problem from that posture.

2 Games organize complex details into an overview model. This allows the player to grasp details that might otherwise be lost.

3 Games require trial decisions, and this commitment sharpens the thought processes of the participants who are required to act.

A familiar feature of games is that of winning and losing. The behavior and the interaction of participants in a game can possibly involve competition, co-operation, conflict or even collusion, but usually limited or partially described. The basic format of this chapter, however, is group discussions that are collaborative in nature and that require consensus decisions. Bargaining and voting methods create situations that have only two sides. These methods are increasingly more unrealistic and usually force people to take extreme positions in order to influence votes. Also, losers in any situation become disgruntled. Therefore, all the gaming exercises in this book are based on the premise that there should not be winners or losers in the decision making process. Every participant should be a winner. The consensus process, then, replaces the traditional process of voting.

All of the techniques included here have gone through the test of experience. Each method aims to accomplish specific tasks ranging from increasing people's awareness to particular environmental issues, to teaching concepts and relationships, to clarifying value differences between decision makers. Values are those beliefs we hold to have some intrinsic worth. Value differences between individuals often account for an inability to achieve agreement in group problem solving situations. Quite often so-called "differences of opinions" result from basic value dif-

ferences not made explicit. Values clarification methods encourage people to examine their own beliefs.

In each design game the individuals make choices, hold positions and debate them. In making choices individuals have to examine their feelings, self-concepts, and values. The final goal of the exercise is a plan of action for an entire group of people; a goal that requires some compromising. Participants in these design groups learn about each other's value differences, and use the game props to clarify and reconcile those differences.

Each design game provides a variety of materials including lists of objectives, activities, activity symbols, and environmental settings. The range of possibilities has not been exhausted. It would be appropriate to add or eliminate from any list of objectives, as well the opportunity for participants to include their own choices of objectives or settings.

The games included in this book help to facilitate an understanding of strategies for solving a variety of environment problems, and imparting information in a meaningful way. Each game has a structure that helps to focus the group process and control extraneous variables, and increase the probability that certain learning will occur for the participants. While games help to understand the complex interweaving of environmental and social forces, they can provide insights into situations so familiar that their characteristics are not perceived. Games help sharpen perceptions.

Another form of design game requires the direct involvement of community residents in an organized decision process. Specific community issues, however, should guide the development of this process. The quality of leadership through the decision procedure will effect the success of this approach. Leadership is necessary to assure that all the participants contribute to the fullest of their abilities.

The process should reflect the willingness of people to work together, yet not force their involvement beyond their competence. Attempts at involving community residents in all stages of the design process may lead to early withdrawal, particularly if progress toward implementation is slow. An effective process for involving people must be carefully designed. The random involvement of people without a clear sequence of events and without clearly understood roles can result in chaos.

There are several factors that contribute to the success of any type of participation. Initially, there needs to be a shared view of the goals of the project and what the participants want to achieve. As the process moves ahead the goals may change, yet the structure should be adhered to since open-ended processes that permit people to join and drop out usually end in frustration. Creating a steering committee or citizen's council at the outset can ensure continuity of the process. Their role includes the need to maintain open communication between all participants at all times. Open dialogues often protect against hidden agendas that may emerge. The process requires a clear beginning and end where participants understand their responsibilities and their interconnection with each other and with the designer or planner.

The role of the professional in this process is not only as the facilitator, but also as the technical specialist who makes recommendations and

develops the necessary documents. Since the design process is open to lay people, clear and readable communication systems must be employed.

Steps to designing a game include the following considerations:

- Define the problem area to be simulated.
- Define the objective and scope of the simulation.
- Define the people and organizations involved.
- Define the motives and purposes of the participants.
- Define the resources available to the participants.
- Determine the transactions to be simulated and the decision rules to be followed.
- Formulate the evaluation method.
- Develop the prototype.
- Test and modify the prototype.

WORKSHOPS

Workshops are the setting for many types of participatory techniques. The term *workshop* means that citizens engage in experiences that provide the opportunity for learning about human relations. Learning is most functional when it grows out of personally involving experiences that require reflecting, developing and testing of new insights and approaches to problem solving. These processes become clear when participants are required to resolve their differences as they pursue a common goal.

Workshops achieve a high level of interaction between people sharing a common purpose. A workshop is a planned event where participants learn from each other as they explore issues. An important component in the development of a workshop is that of building group cohesion. Opportunities should be provided for groups to get so involved with each other that they begin to see each other as persons and become interested in each other. It is the intent of this experience to facilitate learning that might otherwise be haphazard and diffuse. In order to accomplish this, it is necessary to organize the experience so there is a focus to the group process. It should also increase the probability that certain learning will occur for the participants. This experience, however, does not dictate what a participant should learn.

Development of characteristics such as listening and problem solving are skill-building aspects of the goals. They include methods of interpersonal communication, group problem solving, sensory awareness, giving and receiving feedback, and team building. Techniques employed to direct learning include activities such as making or building something, discussions, summarization's, board games, interviews, inventories or checklists, role-playing, and tasks.

An appropriate combination of goals and techniques will produce an atmosphere appropriate for learning. Workshops can vary widely in topics, time lengths and goals, so it is necessary that all three be carefully

chosen. Since the workshop participants will be using various activities to heighten their sensitivity to the environment, the meeting space and graphic quality of the materials are important factors that can contribute to a successful session.

The quality of meeting space should reflect an awareness of the environment by insuring adequate ventilation and light, movable furniture and a general setting that would make the participants feel comfortable. Arrangements setting the audience apart from the speaker are not desirable since it is important to establish a feeling of informality and encourage interaction.

Generally it is useful to promote an upcoming workshop, especially those open to the public, with mail flyers, press releases to the newspaper, and television and radio coverage. Participants attending workshops should receive an information packet including the program and workshop schedule. It is also useful to document the workshop by taking photographs, slides, videotapes, or audiocassettes, as well as recording all decisions.

Certain activities are basic to any environmental workshop. First, it is necessary to clearly state the workshop's goals, schedule and events. Participants will become involved if they know what to expect. As an opening activity it is desirable to provide the participants with a personal experience that will relate to what they will encounter. This overview might take the form of a simple lecture, the presentation of environmental issues, or a slide show, which introduces basic concepts of awareness, understanding and action. The focus should be on active participation in activities that involve all the senses, allowing discovery and encouraging exploration. Each participant should carry new information and fresh insights from the workshop.

Group performance is more effective when it is clear to the member why the group was formed. It is important that there be a leader who will clarify the members' roles and group objectives of the workshop. Appropriate role definitions will help reduce barriers among members, encourage free communication, and decrease the tendency for high-status individuals to be unduly verbal. Workshop participants need to understand the context of their discussions and see the potential of their collective creativity before the process starts.

Workshop participants should be divided into groups of five to nine people, since groups of fewer than five people may lack the knowledge or critical judgments available to analyze the problem and arrive at a decision. As groups become larger than nine people, an opportunity to participate decline and dissatisfaction occurs. Workshops can be conducted with many parallel groups in one or several locations simultaneously, however, opportunities for groups to periodically present their conclusions are necessary.

Antagonism and conflicts arise when groups create together just as they do in 'real-life' situations. In both situations negative forces can emerge which can destroy personal relationships and group cohesiveness, or become positive forces for dynamic change and interchange. The core of the issue is to recognize conflict and to make it acceptable and visible,

not attempt to squelch it or deny its validity. Conflict, when looked upon as an important resource, can become useful rather than destructive. A group leader or facilitator can help members share activities and learn to work together.

One major source of conflict in community workshops occurs when participants feel that their viewpoints are not being heard and, for this reason, they become belligerent and antagonistic. It is the responsibility of the group facilitator to see that conflicts, when they arise, are settled constructively. One of the important ways of resolving conflict is for the leader to listen to what is said and then to repeat it -- making sure of what the person or the group has said. This is called the language of acceptance, which means that one person accepts the other person for what he/she is and how he/she feels, even though you may not agree.

A recorder working with each group is also an important contributor to the successful operation of the process. The recorder's function is to keep notes about what everyone in the group says so that in feedback sessions, each person has the assurance that he or she is being listened to and their input is being valued. Summaries are one method of group feedback that helps to resolve conflicts. After each session, the group leader can summarize important points, insuring that everyone's point of view has been accurately stated. This insures that the process evolves on a basis of common agreements and people can identify and accept accomplishments before proceeding to the next activity.

In participatory sessions, opinions, biases and judgments have their place, but their purpose is to allow choice and encourage input rather than to prevent ideas from flowing. Summaries during the session allow the group to perceive what has been happening and to determine how to continue. Agreements can be reached or disagreements can be made visible so they can be constructively resolved. This information should be diagrammed in a series of easily understood drawings and models. On the basis of on the objectives agreed upon in the workshops, a series of program alternatives can be developed. Alternatives should be discussed in meetings with appropriate groups and may be presented to the larger community for approval. The intention is to reach agreement to which of the solutions best responds to the concerns of all participants. This final workshop is a necessary step prior to implementation of the project. Workshops are an effective method for achieving face-to-face interaction between citizens as they share in decisions that determine the quality and direction of their lives.

A planning workshop with parents and teaching staff of the SUNY Stony Brook children's center focused on the site development of a new campus children's center. Several groups consisting of four participants each, with the aid of pre-assembled site planning kits, explored alternative locations for their new facility. Scaled wood blocks were constructed to provide a three dimensional quality that would be easily grasped by the participants (Figure 2.17). The wood blocks corresponded to all the required functional areas and classrooms. Workgroups manipulated the pieces into various combinations of age group classroom arrangements until they reached consensus about the appropriate solution. During the

two hours devoted to this exercise participants considered many issues that would influence the design of the facility, including solar orientation, circulation, age group clustering, and parking. Not surprisingly, each group arrived at similar solutions. They all divided the site into locations for four separate buildings, to reflect the characteristics of their present facility. A rift that had occurred between the university administration, parents and teachers, resulting from poor communication and unclear expectations between parties prompted the choice of a collaborative workshop. The site-planning workshop improved relations between all groups and provided a new channel of communication for parents and staff to share their child related expertise.

Figure 2.17: Workgroup using the site planning kit

STUDY CIRCLES

In contrast to typical public meetings and workshops, a community-wide dialogue on public issues is accomplished by the use of study circles grounded in the historical town meeting tradition. They consist of small groups of 5 to 15 people who agree to meet several times to collaboratively discuss a community issue. Study circles are voluntary and highly participatory. Each member has an equal opportunity to participate so the group can assimilate the experience of all its members. People are invited to share their ideas and learn from each other. In the process they can explore new ideas because agreement is not an objective of the discussions (McCoy, Emigh, Leighninger, Barrett, 1996).

In the past, most study circles have taken place within schools, colleges, community groups and religious institutions where important issues were considered. Recently, however, there is a growing interest in

community building through the use of a community-wide study circle program.

Community-wide study circle programs tend to be broad-based discussion sessions involving numerous study circles. Extensive collaboration among community organizations allows for the involvement of citizens from all parts of the community. They generally develop out of a sense of urgency resulting from a local or pending crisis and often evolve into successive rounds of discussions.

On the personal level, study circles allow participants to "take ownership" of an issue. Participants form new friendships and new community connections. Participants also learn that they are often not alone in their desire to confront an issue.

For organizations that sponsor study circles, it broadens their connections to the community, and new working relationships with other organizations develop.

For the community, the study circle can result in actions that include everything from new playgrounds to programs for addressing community problems. Study circles can also lead to new collaboration between community sectors.

Organizing a Study Circle

The basic steps for organizing a study circle are outlined by the Study Circles Resource Center (SCRC), a project by the Topsfield Center (McCoy, et al., 1996). They include:

- Organize a working group of community leaders
- Involve the working group in a study circle process
- Program planning by the working group
- Identify and recruit sponsors
- Recruit and train discussion leaders
- Develop a timetable to coordinate all study circles
- Generate media coverage to promote the study circle program
- Recruit study circle participants
- Inform all participants about proposed actions

A community-wide study circle program is usually initiated by a working group of community leaders who approach the issue from different experiences and perspectives. A study circle among the working group will allow participants to understand the process and the value of a dialogue between different community organizations. It will also help to solidify the working relationships within the group.

The working group is responsible for planning the program that entails recruiting study circle participants, leaders, and identifying sites in the community. It also requires the identification and recruitment of sponsors who can lend their resources and credibility to the program.

Once sponsors have been recruited pilot study circles will help to solidify their commitment and their understanding of the study circle

process. Pilot study circles can also help to recruit a pool of potential discussion leaders. Once recruited, discussion leaders will require training through the support of a local college or university or human relation's organization. Media coverage of the study circle program can help to gain greater community visibility and to explain why people should take part in study circles.

Lima, Ohio was where it all began with a large scale, community-wide study circle program. When the Lima working group, which consisted of the mayor's office, Ohio State University at Lima and a task force of clergymen, began the study circles in 1992, they did so out of a belief that they would be fostering a way for the community itself to develop solutions to racial tensions. But the organizers had no idea what those solutions would be. Lima's study circles have led to more than changes of attitude. With over 1,200 Lima citizens participating, numerous projects, programs and cooperative efforts have resulted. These include youth mentoring projects, collaborative school-business efforts, a new playground, a new soup kitchen and a neighborhood "peace zone." These projects emerged from the pooled ideas of small groups of people who found a voice through study circle processes, and gained the confidence to become problem solvers and community builders.

POST-OCCUPANCY EVALUATION

The physical environment affects our health, our work, our leisure, our emotions, and our sense of place and belonging. When the environment works well our lives and our communities are enhanced. While the environment is intended to support our individual needs, it is necessary to gain knowledge about diverse human needs and how the physical environment satisfies them. Evaluation is the systematic assessment of environmental performance relative to defined objectives and requirements. The assessment process is a means of providing satisfactory environments for the people who own, manage, and occupy them.

A post-occupancy evaluation (POE) is an assessment process that can be applied to any type or size of environment or facility. The type of POE utilized for a particular situation is a function of the amount of time available, the resources, and the depth of knowledge necessary. Preiser, Rabinowitz, and White (1988) describe three distinct levels in carrying out a POE-*indicative, investigative, and diagnostic*- each consisting of the phases of planning, conducting, and applying the POE.

An indicative POE is a short-term process that seeks to identify major successes and failures. The methods of collecting information consist of questionnaires, walk-throughs, and interviews usually conducted with a committee representing the client's organization. Questions ordinarily focus on issues related to performance, spatial adequacy, and image. A walk- through assessment of the entire facility or physical setting, rely on direct observation to verify issues that may have emerged from the questionnaire. Interviews and a summary of findings conclude the process.

An investigative POE, according to Preiser et al., (1988), is a more extensive investigation that relies on a literature search to establish evaluative criteria, as well as comparisons with analogous situations. The phases of the investigative POE are identical to those of the indicative POE.

The most detailed and comprehensive approach is the diagnostic POE, where the data collection methods used include questionnaires, surveys, observations, and physical measurements. These studies are long-term in nature, and tend to focus on a building or physical setting type, rather than a particular environment.

Prior to initiating a POE, there are several preliminary steps that require consideration, in preparation for on-site data collection. Client briefing about the nature of the process, the type of activities involved, and shared responsibilities are necessary before conducting the POE. Research methods and analytical techniques would be determined at this stage. In addition, background information, such as building documentation, client's organizational structure, and liaison individuals, is necessary to establish a POE plan. The plan will include the development of specific information gathering methods, sampling methods, authorization for photographs and surveys, and data recording sheets. Initially, observing the building or environment under working conditions for several hours will be sufficient to prepare a data collection plan.

The primary tasks in conducting the POE are the collection and analysis of data. Timing, too, is important in order to minimize disruption of functions in the client organization. Therefore, coordination with the user groups will facilitate the distribution and collection of data- recording forms, and other printed materials necessary for a manageable evaluation process.

Data collection and analysis precede the interpretation of the results into useful findings. Reporting and presenting the findings of the POE are integral to the client's understanding of the results. POE findings typically describe, interpret, and explain the performance of a building or environment. After extensive discussion of the findings, a recommendation for future action takes place.

Post-Ooccupancy Evaluation Methods

Success or failure of an evaluation often depends on the skill with which an evaluator selects and uses information-gathering methods. Friedman, Zimring, and Zube (1978), have classified the methods used in data collection into four categories--direct observation, interview, simulation, and pencil-and-paper tests, all of which directly or indirectly involve user participation.

Direct Observation: In this method, data are collected by direct contact with real life situations and by behaviors that occur naturally. The observer, unobtrusively, records ongoing events and records all activities in a particular setting.

Interview: This method is the most commonly used tool for assessing people's reactions to physical settings. Interviews can be structured, where the type and order of questions are decided in advance; or they can be unstructured where the interviewer asks questions of interest while visiting a site.

Simulation: In this method people's comments are evoked from representations of settings, rather than from the settings themselves.

Tasks in the Evaluation Process

When planning an evaluation, it is necessary to identify the tasks needed: *initiate, plan, execute,* and *use* the evaluation. To begin, it is necessary to identify who initiated the idea of the evaluation, and the motivation behind the request. Next, the key issue or any unresolved problem should be clarified to begin the planning process. This will aid in determining the kind of information needed, the scope of the evaluation, who will conduct the evaluation, and who will participate. The execution phase consists of selecting the appropriate tools needed for the type of data to be collected. Finally, a forum for the discussion of outcomes can raise the awareness of the benefits of the evaluation. To bring the process of evaluation to proper completion, actions must occur to honor whatever commitments were made to participants of the process.

Key questions need to be posed before finalizing an evaluation plan. They are a convenient way to inquire into the details that must be considered. Baird, et. al. (1996) identify a sequence of questions corresponding to the phases of the evaluation process:

1 Who initiated the idea for an evaluation?
2 What is the main motivation behind the request for an evaluation?
3 Who needs to authorize the evaluation?
4 What are the key issues?
5 What are the anticipated benefits?
6 What kind of information is needed?
7 Who will manage the evaluation process?
8 What is the required scope of the evaluation?
9 What method will be used?
10 What constraints are there?
11 What resources are needed?
12 Is the evaluation plan subject to approval?
13 What techniques will be used to collect data?
14 What data is needed?
15 What information can be extracted from the analysis of data?
16 Does the information gathered answer the key issues?
17 Do any parts of the evaluation need to be reworked?
18 How will the results be communicated?
19 How will the outcomes of the evaluation be discussed?
20 Who will authorize action?
21 What actions will be authorized?

A key issue is whose judgments should be sought in an evaluation. There is a tendency to regard expert opinion as always more reliable and correct. For many aspects of the environment, the experts are the people who know most about using it--the user.

An application of a post-occupancy evaluation was conducted during the remodeling phase of the Durham Arts Council (DAC) housed in a vacated City Hall building (Sanoff, 1983). After five years of occupancy the Council secured funds to make the spatial modifications that would suit the workflow of the organization. In a preliminary study of user's satisfaction with their present environment, often referred to as a Post Occupancy Evaluation, a survey was conducted with the DAC staff, members of affiliate organizations, and independent artists who rent studios, totaling 14 people. Understanding the organization and its purpose was the focus of the study. An assessment of the adequacy of their present environment revealed that DAC places the highest emphasis on the provision of service to the community through art classes and cultural events. Staff members' perception of the organizational goals was identical to its chartered goals. Council members were also asked to record their typical activities on a daily log, to rate the adequacy of the places where they were performed, to describe the flow of information between council members, and the nature of the social environment.

The results of the study showed that many of the workplaces were described as being too small while the social environment was described as friendly and cooperative. Environmental conditions related to light, temperature, and ventilation contributed to people's satisfaction with their job. Similarly, places that were too warm or poorly ventilated were reported to have a direct impact on job performance and satisfaction. Since the building occupants had identified many serious malfunctions in their work environment, a procedure was developed by the design team to permit the users to the redesign their workspaces. Work groups were organized and provided with floorplans of their existing three-story building along with a sheet of graphic symbols corresponding to all their spatial activities.

Participants examined their workspace needs, estimated area requirements, and prepared a plan layout for each of the three floors of the existing building (Figure 2.19a). Each of the three participant groups proposed opposing solutions that they compared and evaluated, along with the design team, and arrived at a solution to reconcile their differences. This approach permitted the building occupants to share their experiences and spatial concerns with each other through a process of collaborative planning. Results from all groups were summarized as shown on Figure 2.19b, and served as a point of further discussion. Finally, a layout was prepared (Figure 2.19c) that satisfied the space and adjacency requirements

Figure 2.19: Transformation of the first floor plan from participants ideas to the architects drawing

as well as other related concerns voiced by the participants. The solution was accepted as a natural evolution of the designer/client collaborative effort and not as the architect's ideas that needed to be accepted or rejected.

VISUAL PREFERENCE AND APPRAISAL

Increasing the awareness of non-verbal environmental messages is important to our psychological well being in a place. It raises questions and issues, which, while constantly affecting our relationship with the environment, sometimes remain unnoticed during our daily experience. One might question the need for awareness of these effects. It is in the physical world itself, the world that we create and change according to our needs and values, that we find reasons.

Urban environments, for instance, are constantly changing and growing, often indiscriminately. Buildings are demolished to give place to new ones, and neighborhoods are modified to create more space for cars. Those who do not have a say in the decision-making process make decisions under the guise of progress, to facilitate their acceptance.

However, such changes have many more effects than we might realize. When buildings are demolished and neighborhoods modified, familiar environments become unfamiliar, altering our feelings of comfort and safety. We lose the ability to orient ourselves and spend more time determining where we are in relation to where we want to go. More significantly, we cease to identify with places and things that surround us because their formerly unique characteristics have been homogenized for the sake of practicality and economics. At the extreme, large-scale urban projects are so interjected into existing cultural and physical situations that marked and distressing forms of antisocial behavior result. The necessary destruction of the Pruitt-Igoe complex in St. Louis is still one of the most convincing examples of environmental psychosis we have.

In short, continuous and indiscriminate changes contribute to the creation of environments at least lacking the character of their local makers and users, and often introduce inappropriate and destructive forces. As evidence of contemporary dissatisfaction with urban environments in particular increases, the need for understanding and knowledgeably modulating the interaction of people and place becomes more critical. Variety and change, nonetheless, are necessary ingredients of a pleasurable, memorable, and healthy environment. Becoming aware of perceived environmental effects is a necessary first step in striking the delicate balance between familiarity and monotony and boredom, and between variety and confusion and disorientation. With understanding of how physical surroundings affect us psychologically, we can become more aware of our effects on them, and on ourselves, when we allow them to be changed.

Nonverbal environmental messages are part of our experiences, and are conveyed in many parts of our immediate surroundings. Some of the places that stand out visually in the environment are familiar to us, either because they have been part of our everyday experiences, or because they are similar to places we have experienced in the past. Through learning, these are the places that "tell" us about people and their activities, and evoke either good or bad feelings reflecting our present sensations

and associations we make with our past. The ability to identify features in our environment is to recognize visual elements that stand out in the landscape by their size, height, color, or any other aspect that contrasts with the surroundings. It is to see characteristic elements in a background, which can range from a building in the streetscape to a park in the neighborhood. The ability to identify parts of the environment allows us to recognize the familiar as well as to appreciate the new.

A place has meaning to us as individuals when it relates to, and has in fact become the setting for, events of our personal life. Some meanings are shared by a group or even by a whole community, when they relate to events of its communal life.

Often when we think about symbols and meaning in relation to the environment, we restrict ourselves to monumental buildings, particularly religious and civic (Rapoport, 1982). Since all building form conveys messages reflecting the inner life, actions, and social conceptions of the occupants, it is necessary to re-evaluate the meaning and desirability of existing buildings as suitable for new uses.

Various approaches can be used to heighten people's awareness of building image. In the town of Kinston, North Carolina, a public workshop was held in which residents could evaluate the desirability of four alternative vacant buildings for housing the future community arts center. Through the use of a series of comparative drawings, it was possible to convey changes to the character of each building after it had undergone specific design modifications (Figure 2.20). Arts council members rated

Figure 2.20: Proposed modifications to existing buildings

each alternative using a prepared list of adjective opposites. The results of the ratings were compiled to allow for a fruitful discussion. From the participant's viewpoint, this technique was effective because they were able

to examine future building images, have an expanded vocabulary for describing the built environment, and effectively engage in a discussion of the options available to them. The major limitation to this technique is the need for acceptance of the options presented by the designer, since it is difficult to anticipate which option the participants will prefer.

Another technique that has been used to develop an understanding of people's environmental preferences is a questionnaire exploring variations in spatial character (Figure 2.21). Staff of the Durham Arts Council were asked to describe each of the photographs and to rate, in order of their preference, the photograph that best fit their idea of an arts center (Sanoff, 1991). The exercise was particularly illuminating since the council

Figure 2.21: Rating system for the image of an arts center

members initially believed that their building, the former city hall, was adequate in appearance. When comparing their facility with others that

more effectively conveyed the image of an art center, council members quickly altered their view about their facility and instructed the design team to explore modifications to their building that would be more expressive of an art center.

As a result of the success of this comparison technique, three major art center spaces such as an entrance lobby (Figure 2.22), an exhibition gallery, and an office were selected for exploring differences in spatial character and sensitizing the participants to the range of possible options. Photographs were selected from a wide range of choices based on how representative they were of different spatial features. A list of opposite pairs of adjectives allowed the participants to rate each of the photographs.

Figure 2.22: Visual quality rating method of the entrance lobby

Streetscapes

Environmental character as it pertains to streetscapes can equally engage community members in exploring various types of street im-

provements. Design proposals could be generated and compared to drawings (or photographs) of the present streetscape (Figure 2.23). This method is effective with small working groups allowing them to generate a variety of likes and dislikes by annotating the drawings. Responses from the participants would enable designers to proceed effectively to the next stage of design development with solutions that are within the range of acceptability.

Figure 2.23: Annotated streetscape drawing

Awareness Walks

Awareness walks and trails attempt to add significance to a particular place, and to encourage the observer to get the most from a given area. The walk typically provides historical background and may be associated with an illustrated guide. In the features observed, a walk may indicate planning problems or social issues, as well as offer aesthetic appreciation and enjoyment of what has been preserved. A trail often challenges the visitor to explore, demands a questioning approach, and invites the participant to appraise the quality of what is observed and experienced.

Historic architecture has been the major focus of much guided touring, and specialist groups have provided the opportunities for guided walks through significant buildings and sites. The protection of buildings of historic interest and the conservation of the special character of neighborhoods and towns have stimulated considerable interest in the development of walks and trails. More recently, walks and trails have been developed in the belief that residents as well as visitors should be aware of the aesthetic assets of a particular place. Assisting the community in discovering itself has provided considerable incentive for walk and

trail development. As a tool for understanding of and exploration in the environment, the walk or trail manages perceptions of the environment and directs the senses to specific sites.

Halprin (1974) has used awareness walks with community groups as an introduction to the planning process, inviting participants to take part in a downtown walk with specific stopping points. A walking route can also be related to longer journeys by car or by public transport. Although the range of purposes for a walk are limitless, it is necessary o stress that producing walks or trails should have a clear idea about purpose, which can be education, enjoyment, or stimulating an interest in the planning or improvement of an area. Winders and Gray (1973) advocated that the aim of trails be to:

- Arouse interest in the townscape and in the ways in which it has evolved.
- Discover the processes which are currently shaping the urban environment.
- Encourage a critical evaluation of the visual quality of the urban scene.
- Develop the skills necessary for an analysis of the urban environment.

Goodey (1974) describes a variation of the awareness walk as "the sensory walk." Experiencing townscape through a sensory walk serves as a foundation for descriptive or analytical activity. The sensory walk is an opportunity to become acquainted with the familiar and to re-examine the environment through senses and emotions. The organization of linked activities begins with being open to what the environment offers. Freeing the senses can encouraged by removing one sense so that more reliance is placed on another. For example, a blindfolded person experiencing the environment may absorb sounds, smells, and textures differently than a sighted person. The sensory walk is initially unstructured and entails looking at surfaces, edges, textures, and colors.

Goody (1974) constructed townscape walk for Abingdon (in he U.K.) requiring participants to carry out specific activities at a number of identified locations along the route. With the aid of a map, participants were instructed to take various roads and discuss immediate impressions of the place. Next, they were to search for a place to sit and absorb the smells, sounds, and other sensations of the area (Figure 2.24).

A townscape walk is a method for recording visual experiences. The purpose of the walk is to engage participants in looking at the everyday environment; "to get a feel for it;" and to evaluate the impact of the environment emotionally and aesthetically.

Figure 2.24: Townscape notation of a part of Oadby shopping center

VISUAL APPRAISAL

An approach for developing a deeper understanding of the visual environment is a self-guided tour. Unlike other assessment strategies that rely upon conventional social science techniques for describing and judging the environment, the checklist offers individuals and groups a procedure for taking a structured walk through a building. This is an impressionistic approach that increases people's awareness of the environment by focusing on visual factors. The results of such a walk-through encourage responses about views, walkways, barriers, orientation, wayfinding and appearance.

Tom Markus, in his book, Buildings and Power (1993), describes the distinct elements of our experience of buildings to be form, or what things look like; what people do in the building; and how we sense where we are, in what relation to other spaces inside and outside the building. Observers using this checklist appraise visual quality in terms of four key elements--context, massing, interface and wayfinding. Any building or group of buildings is amenable to such appraisal. By using a series of checklist questions and a numerical rating scheme, scores are assigned to the factor being appraised. The process uses notes, drawings, and photographs to supplement the factors described in the checklist.

Numerical scores from 1 to 7 (1=highly appropriate, 7=highly inappropriate) are assigned to each question in the checklist. Individual scores are then averaged and an overall project score is assigned. An appraisal report would consider:

- Description of the building(s) appraised with supporting illustrations (photographs, sketches, maps, and diagrams).

- Appraisal of the building according to the four-factor analysis using the checklists, with responses and numerical scores for each question provided.

- A paragraph describing the success or lack of success with which each factor is achieved or satisfied.

- Analysis of numerical ratings by computation of average scores for each factor of the appraisal, and computation of the overall score for the building(s).

- Concluding comments based upon the overall appraisal of the building(s).

FOUR FACTOR BUILDING ASSESSMENT

The four factor building assessment is an approach that allows you to focus on six key elements of building assessment - **context, massing, interface,** and **wayfinding**. By using a series of checklist questions and a numerical rating scale you can assign a score to each factor being assessed.

For each question in the checklist, assign a numerical score from 1 to 7 (1=*highly inappropriate, 7=highly appropriate*) and then calculate the average score for the factor by adding all the individual scores for each factor and dividing by the number of questions answered. To assign an overall score for the building based on the six-factor analysis, add up the average scores for each factor and divide by six.

Factor 1 - Context: The building's setting

(Complete the response for each question shown below and assign a score from the choices by asking yourself how well the building suits the context)

Score: *highly inappropriate - 1 2 3 4 5 6 7 - highly appropriate*

_____ **1** How does the building suit the pattern of the surrounding streets?

_____ **2** How does the scale of the building suit the site it sits upon?

_____ **3** How does the scale of the building suit the scale of the surrounding buildings?

_____ **4** How does the scale suit the character of the neighborhood?

_____ **5** Do the public and private areas relate well to one another?

_____ **6** Do the land uses adjacent to the building seem to fit harmoniously with the building?

_____ **7** Does the type of building and its intended use fit well with the type and uses of adjacent buildings?

_____ **8** Does the appearance of the building fit in well with the type of buildings surrounding it?

_____ **Average Score** (total/8)

Write any comments or concerns that you may have about the way the building suits or fails to suit the context of the surrounding area.

_____
_____
_____
_____

Factor 2 - Massing: Buildings are organized in form into some type of massing. Massing of the parts gives both form and meaning as well as variety to the building.
(Complete the response for each question and assign a score from the choices shown below by concentrating on the subdivisions of the building's form and deciding on the appropriateness of the designer's choice of massing)

Score: *highly inappropriate - 1 2 3 4 5 6 7 - highly appropriate*

_____ **1** Concentrate on the subdivision of the building's parts as viewed from the outside. Do the parts integrate well with each other and form an effective and pleasing in appearance?

_____ **2** Do the subdivided parts of the building appear to have a specific function? Is the function of each part easy to identify?

_____ **3** Is it clear what various subdivisions of the building might mean to visitors? Would a visitor know where to go on entering the building?

_____ **4** Are the various parts of the building planned carefully in relation to one another and to the characteristics of the site?

_____ **5** Is there sufficient relationship between the parts of the building for it to appear as one unified structure?

_____ **6** Does enough variation exist in the structural parts and massing to provide interest and variety?

_____ **Average Score** (total/6)

Discuss the subdivision of the building into identifiable parts and how successful has the concept of massing been employed.

_____
_____
_____
_____

Factor 3 - Interface: The interface is the crucial meeting place where the inside of the building connects with the outside.
(Complete the response for each question shown below and assign a score from the choices by deciding how well the building satisfies the problem related with interface)

Score: *highly inappropriate - 1 2 3 4 5 6 7 - highly appropriate*

_____ **1** How clearly or effectively does the exterior of the building indicate its interior function(s)?

_____ **2** How effectively does the inside of the building connect with the outside of the building? Are the connections appropriate and functional?

_____ **3** Are the exits and entrances easily accessible?

_____ **4** Are the various openings related to thoughtful planning of the interior? (Consider entry of light, view, privacy, noise, heat, glare, atmosphere, etc.)

_____ **5** Are the exits appropriate from a safety point of view?

_____ **6** When you move from the exterior of the building to the interior by means of the main entrance, is the experience pleasant, interesting, or special in any way?

_____ **7** Are the clues to what is public and what is private space clear to the visitor?

_____ **8** Have the designers, in your opinion, handled the problem of interface well in their design of this building?

_____ **Average Score** (total/8)

Write your comments about how well the design of the building has addressed the problem of interface.

_____

_____

_____

_____

Factor 4 - Wayfinding: Wayfinding is the ability for people to discern routes, traffic patterns or passageways in and around the building.
(Complete the response for each question show below and assign a score from the choices by asking yourself how appropriate is wayfinding in linking the building to its surroundings and how functional is the wayfinding)

Score: *highly inappropriate - 1 2 3 4 5 6 7 - highly appropriate*

_____ **1** Are sufficient routes, pathways, streets and passageways provided to and around the building?

_____ **2** How effectively do the routes link the building to the surrounding building or structures?

_____ **3** What are the flow patterns of traffic or people? Are there busy periods, quiet periods, one-way flows, regular movement patterns, traffic jams? Are the routes arranged to consider these factors?

_____ **4** How effective are the nodes (meeting points) for traffic around the building and what happens there?

_____ **5** Do all the routes make sense? Are they understandable and convenient?

_____ **6** Are all the circulation routes within the building easily understood by newcomers, visitors, service people?

_____ **7** How well are the interior circulation routes marked? Are the markings clear and easily understood?

_____ **Average Score** (total/7)

Write your comments about the clarity of circulation in and around the building.

_____

_____

_____

_____

_____ **Overall Score** (sum of average scores for each factor/6)

Write any concluding comments you may have based on your overall assessment of the building.

_____

_____

_____

_____

_____

_____

A framework for communicating and evaluating community design issues was developed by Greene (1992), where he describes four basic principles as function, order, identity and appeal. These principles, Greene suggests, is a synthesis of multiple sources and represents attributes that are significant enough to have universal application to all environments.

- Function is the ability for the environment to satisfy the needs of all its users.
- Order is about the clarity of the environment from the users viewpoint.

- Identity is the ability of the environment to connote special visual images.

- Appeal is the ability of the environment to offer pleasure to its users.

The community design evaluation guide (Figure 2.25) can be used to evaluate proposals or for assessments of existing developments. Participants in this assessment can include both professionals and non-professionals. Repeated assessments of existing environments, especially at night and during the day, can evoke different reactions that are useful starting points for discussions. The five-point rating scale allows for comparisons between participants in the assessment process.

Figure 2.25: Community design evaluation guide

Section 3

Participation in Educational Facilities

The more people feel themselves involved in architecture, the more likely we are to get the buildings we think we deserve. An enlarged architectural conscience brought about by the greatly increased participation of more people as partial clients is more likely to lead to good architecture than the most scrupulously applied aesthetic controls. If architecture is to flourish and progress in an age when change is constant and development rapid and relentless, it must, with renewed vigor use society as a partner in the creative process. Only then can the primary unchanging function of architecture be achieved; to provide decent surroundings for people and to help them to a wider vision of life.
(Sir) Denys Lasdun, 'Process of Continual Cooperation,' *The Times*, June 1961.

Inadequate school facility planning carries fiscal, human, and academic costs. Whether a school building is old or new, problems in design and planning can take a devastating toll. Schools that lack ventilation can make students drowsy or tempers flare. Open classrooms with noise and visual distractions can distract attention from the best-prepared lesson plans. Congested hallways can needlessly fuel student and staff hostilities. Drab interiors, poor lighting and the lack of pleasant social gathering spots make school less-than-inviting as a place to work and learn.

On the other hand, a strong facility planning process can reap benefits beyond a pleasant environment. School and community pride as well as faculty morale are raised when the planning process involves the right questions, the right stakeholders, and a clear sense of purpose. The ways in which communities design their schools will help determine the effectiveness of the investment in schools, as well as the overall livability of the neighborhoods in which they are located.

In working with more than a dozen communities over the past 25 years, my work with school districts large and small, and budgets large and small, I have found some common problems resulting from the planning process. School facility planning amounts to more than simply ensuring safety of bus drop-off points and student locker sites, though obviously these matters are important. Instead, school leaders should set their sights on what it takes to build a "responsive" school rather than a building or campus that simply warehouses children and faculty.

Building a responsive school requires that those who actually dwell in the space be part of the planning process--be they students, faculty, or community members. Not involving everyone can cripple the outcome for years to come. At the Wallace O'Neal School, faculty who had not been fully included in discussions about planning still resented it 10 years down the road--and that fact undermined morale. The same school found

that though it wanted to build community spirit, quite the opposite occurred because of a lack of an inclusive planning process.

Teen-agers at one modern high school were asked where they went to be alone. A majority responded that they go to the toilet, because they contended, there were "few places where you can be by yourself," making it difficult to "concentrate on what you are doing."

For decades, educational leaders discussed the components of a successful educational program, yet they have regarded the physical setting as an institutional backdrop receiving scant attention. Widespread misconceptions reinforce the view that the quality of school building has no impact on academic performance. Consequently, a gap exists between the educators' view of improving quality and the process of planning schools.

School buildings ought to be an expression of the fact that exploration and discovery are important parts of obtaining knowledge. Current learning styles and teaching methods suggest the need for a new form of learning environment characterized by different activity settings and small-group activities. To obtain and maintain educational quality, however, requires changes in the facility planning process.

Considering the billions of dollars needed to repair the nations' frail and aging buildings, an opportunity to make changes in the school planning process can improve student achievement. In spite of a body of research that clearly links school building conditions to student performance, school leaders and their governing boards have paid little attention to the significance of such statistics. Perhaps this neglect stems from the lack of suggested policies or procedures contained in the research or the lack of case studies related to the performance of school buildings from the user's viewpoint. Historically, this lack of systematic feedback resulted in the repetition of many standardized school buildings. Even today, new teaching methods have not influenced the physical nature of the classroom.

Outmoded educational specifications and standards are responsible for malfunctions and dissatisfaction with most school buildings. The use of standardized solutions guided by state and local regulations no longer is acceptable, in light of the variety of new learning methods that demand different spatial requirements. School leaders need an evaluation system capable of sensing evolving needs.

As users of the school building, teachers, students, parents and volunteers, would be the best evaluators of the physical environment. They should participate in the assessment. An evaluation system would be the basis for making physical improvements to school buildings since evaluation is a method of identifying needs. Assessing classroom environments can begin by questioning students and teachers about how they perceive and use the environment.

A 1988 study by Carnegie Foundation for the Advancement of Teaching found that student attitudes about education directly reflect their learning environment. Activities within schools have educational and social aspects, yet quality in both of these is important for the operation, and development of schools. Not only do teaching spaces serve to

deliver the curriculum; they are also places where students spend time, and these too should receive attention. Social areas in the school are important to create an overall atmosphere that students can identify with and feel ownership of the environment where they study and play.

To assess the social function of a classroom, for example, a rating scale can be devised using descriptive statements that students classify into categories to detail the actual and ideal classroom. The statements refer to student needs and performance where they consider such factors as privacy, personal space, personalization, social grouping and participation

In a research study in California, students in open and traditional elementary school classrooms described their actual and ideal profiles of school. Students from the traditional school described their ideal classroom as one that would provide them with "lots of comfortable places," and as a place with "lots of interesting things to do." They also preferred not to spend the entire day at their desk. Open-classroom students described their actual environment as one containing variety, with "lots of comfortable places." They also pointed to the existence of a few places "where you can be by yourself" at times they needed to concentrate. Teachers and administrators can gain useful information about classroom performance in response to their educational goals by using such an assessment method.

In education, as in other institutional systems, decisions about school facilities tend to be made by a few people who are not direct building users, often ignoring the direct involvement of teachers and students. Involving a building committee alone does not always solve the problem of gaining school-wide support for the project once the design work is completed. Only a process that allows for face-to-face contact between users and those who influence the decisions can result in a sense of ownership in the process and project. Such widespread community participation in designing schools is valuable for the diversity of perspective it brings to the process. Since communities are diverse by nature, and include people who reflect differences in age, culture, ethnicity, gender, aspirations and ability, this range of viewpoints enriches the design process.

Personal contact between school leaders, teachers, staff, and students in an organized school planning process can also result in considerable savings in time and money. Basically, it requires asking simple questions of who, what, where, how, and when. Like the manager of a professional sports club, planning a participation program requires thinking about goals and objectives, about options and plays, resources and timing, strategies and performances. And like sports, planning for a successful participation program involves a great deal of thought and analysis prior to the first public performance.

Arguments persist that a participatory process requires more of an architect's time that consequently would result in higher costs. Nothing could be further from the truth. Actually, direct participation requires less time than conventional methods normally used by architects. Involving all participants in a planning workshop is more efficient than relying on information gathered in a piecemeal fashion.

At the University of Oregon, involving users early and substantively in the planning process of a new science complex allowed for substantial acceptance in the complex process of allocating space, according to university vice president, John Moseley. Also, the users' success in developing an equitable model for spatial organization led to a high degree of ownership in the project. This made it easier for administrators to cope with problems that arose during the design and development stages. Widespread participation of faculty and staff allowed for decisions by consensus.

Carolyn Gaston, principal of the New Futures School in Albuquerque, NM, reported that the participatory process used in developing her new school helped to enhance the self-esteem of the students and a sense of ownership in the school. Gaston related a story of how one student accidentally squirted ketchup on the cafeteria wall. The girl immediately got a cleaning rag from the cafeteria staff and cleaned the wall without any prompting. "You would be hard pressed to see that occur at any school, anywhere," reported Gaston, smiling proudly.

The Adams Group architects confronted a unique challenge in designing a major renovation for the First Ward Elementary School, the oldest in the Charlotte-Mecklenburg, NC, district. For starters, they were dealing with people unaccustomed to making design decisions. And because of funding deadlines, a final plan and projected construction costs had to be prepared in less than six weeks. After several intense planning workshops, the parents and staff had completely redesigned the campus. Participants went through a goal-setting process where the outcomes were learning activities that supported each goal. Teachers working in small groups pinned photographs of different learning activities, supplied by the architect, to a campus plan and explained the reason for their choices.

The information from the sessions generated points of consensus as well as points of conflict. Areas of conflict included the location of different functions. Alternative plans and models were prepared for discussion with the teachers, who were asked to record their likes and dislikes on a visual rating scale. Difficult decisions and painful compromises had to be made, but the open process resulted in no losers, only winners-- a natural by-product of creative collaboration.

During the building construction process, a “tile workshop” conceived by the architect as a way for parents, teachers and students to personalize their building, produced 85 clay tiles that became a permanent part of the building (Figure 3.1).

An assessment of the effectiveness of community participation in the First Ward school's renovation process revealed changes in the attitudes and behavior of students and staff. Principal Pat Holleman indicated the most important change that resulted from the participatory process was the "closeness of the staff." Positive, marked changes were also noted in the spirits of the students. Attendance improved and standardized test scores went up ten points in three years.

Figure 3.1: Tile workshop

Other useful assessment techniques were applied in the expansion of the Broughton High School campus in Raleigh, NC. Diagramming user flow patterns was a revelation to the students and faculty, who were not aware that space planning could minimize many existing conflicts (Figure 3.2). Real-time studies disclose how teachers, students and staff use the campus environment. By stationing observers at various locations on campus, people's movements were recorded at specific time intervals and transcribed onto a series of maps that described daily traffic patterns, congestion peaks and lows, and points of conflict. Students map drawings of the campus to show which street and building features are recognized and considered important and ought to be considered when proposing modifications to the existing facility. For the students, the original historic building adorned with a clock tower gave the school its meaning, a factor that influenced the architects' planning.

Participation of the buildings' users can occur during several stages of the facility planning process. Each stage requires the direct involvement of teachers and students in responding to open-ended questions and in discussing the performance of spaces for learning. Initially, an evaluation of present facilities can incorporate the knowledge and experience of students, staff, and teachers. This information can be integrated into the pre-design stage where building users set goals and priorities. An evaluation can begin with interviews followed by a walk-through evaluation of the existing facility. Although some efforts have been made to assess the classroom environment, most studies have stressed features such as lighting, temperature, acoustics, and floor-space per child. School boards tend to focus on cost-per-square-foot as an objective measure. How teachers and students perceive and use the classroom is a missing factor.

Figure 3.2: Real-time student movement map to the campus

Considerable information related to technical performance of school buildings is available, since technical elements such as structure, safety, sanitation and ventilation can be measured by instruments. These evaluations have occurred for some time. But social and behavioral elements of performance that focus on the extent to which educational goals link activities to the physical environment have received little attention. The accommodation of various building-use patterns, teaching methods and learning styles reflect how satisfactorily a school building performs for its users. After students and faculty have occupied a new or renovated school building, their responses are important for making future improvements, since buildings are not perfect after completion and require continuous modifications.

Self-Assessment

In a more general way, a self-assessment process was developed for citizen groups, teachers, and policy makers to interview, observe, and discuss ways and means of making middle schools more responsive to the developmental needs of young adolescents. This self-assessment process was developed in conjunction with the Center for Early Adolescence (Dorman, 1981), a national advocate and resource center for parents and policy makers. The goal was to develop an action-oriented process for school improvement. An assessment process was developed to take a comprehensive look at middle-grade schools to see how the physical facilities, the school climate, and the teaching program accommodate the academic and developmental needs of young adolescents. The assessment program consisted of a series of interview schedules for use with the principal, teachers, counselors, students, and parents. In addition to interviews, an observation form was developed to gain a more comprehensive understanding of the school environment. Observations were required of the physical facilities where such items as places for socializa-

tion, spatial flexibility, and opportunities for students to personalize their school, were noted (Figure 3.3).

Figure 3.3: Observation schedule of physical facilities

Observations of the classroom centered on the ability for students to direct their own studies, and modify the classroom to suit their own needs (Figure 3.4). To stimulate more participation among school community members, design aids were developed to increase their awareness to the architectural implications of the school environment. Unless a teacher understands why one room arrangement may be superior to another, all the physical changes in the world will have little or no impact on the nature of the learning process within the classroom. Design aids included photographs of different school settings associated with activities generated from educational goals deemed relevant by the teachers. Mixed groups of teachers, parents, and policy makers discussed and agreed on commonly accepted objectives, and activities that were matched to the photographs. Similarly, photographs of different school settings were rated by community members for the positive or negative features they evoked.

Figure 3.4: Observation schedule of classroom instruction

A self-assessment process is usually conducted by a team of six to eighteen school staff, parents, and a variety of other professionals, usually selected by the principal. In some instances students participated in the assessment by interviewing other students. Numerous schools across the country have participated in school improvement projects. The schools all vary in size, physical facilities, location, and socioeconomic make-up of the student body, yet these factors have not been deterrents if educators want to improve their schools. Many schools have reported that while in the process of doing their assessments, spontaneous changes were occurring. For example, there was more positive interaction between teachers and students; more interest in the school among students, parents, and staff; and more specific behavioral objectives from teachers. The assessment gives teachers a sanctioned method to participate in setting priorities for the school. The result is staff members who feel empowered to make their school a better place and who are committed to reaching agreed upon goals.

In this situation, the architect is one of a number of experts involved in the process. The school assessment process is where the expertise of all people involved in the school environment contributes to the social, administrative, and physical changes.

COMMUNITY COLLEGE CHILD DEVELOPMENT CENTER

Charrette Process

Community action planning
- Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
Strategic planning
Visioning
- Workshop

Programming and design consultation were requested by the planning group of a proposed 75-child facility and training center for the Early Childhood Program at Wake Technical Community College in North Carolina. A participatory process guided the planning group through design development prior to selecting the building architect (Sanoff, 1994). Since this facility was intended as a demonstration site for the county, the department head and client representative, the teaching staff, and the educational consultants to the program, were eager to follow a planning process in which research findings, their expertise, and educational philosophy would be linked to design decisions. This was particularly important since the architect was not identified at the inception of the project, and the planning team would need to be sufficiently informed about the design process to be effective advocates for their ideas.

The Early Childhood Program previously occupied classrooms in a variety of campus and off-campus buildings. A component of the education program is a practicum where students are involved in observing and conducting exercises in children's centers throughout the County. For more effective student training, it was proposed to construct a new teaching facility with an integrated child development center.

Typically, institutional client groups planning the child care center initiate a formal needs assessment that includes the following steps (See Figure 3.5 for the entire process):

1 Campus survey of student childcare needs.
2 Survey of campus childcare centers.
3 Site visits to childcare facilities.
4 Consultation with childcare experts
5 Departmental Planning

The above steps constitute the *research* phase of the collaborative design process. The *research* phase included a needs assessment, visits to other children's centers, and the establishment of educational goals which included desired staff child ratios and other factors inherent in a high quality center. Although typically initiated by the client, a professional consultant can often provide guidelines for more systematic fact finding procedures. Surveys and visits to existing facilities, if properly organized, can reveal valuable insights into their functions, since casual visits often reveal obvious results.

Figure 3.5: Design process

The purpose of this project was to create a demonstration child development center to serve as a learning laboratory for college students enrolled in an early childhood education program. It was also intended to create a building that demonstrated the use of space appropriate for different ages and levels of development. From infants to toddlers to preschoolers, playrooms were designed to accommodate a variety of activities into learning centers. The learning centers were spatially organized to provide for active areas, constructive exploration, and fantasy play, allowing for free and uninterrupted movement.

Early in the planning process, representatives of user/client group embarked on a program of visits to other child care centers. The visiting team "walked-through" (Preiser, Rabinowitz, & White, 1988) each facility and reported on their basic features. The walk-throughs consist of a briefing session, open-ended interviews with teachers, and observations of plan layout patterns of different facilities. Visitors noted positive and negative features of the facilities. Unless the visits are organized to include an interview schedule and specific features to be observed, the results can produce only obvious and superficial results. The visits help to familiarize client groups with the issues they will encounter during the facility development process. They also provide non-professional visitors with the direct experience of observing a child care center in action.

Design Workshop

Since the playroom is the basic spatial unit of a children's center, prior familiarity with its constituent elements can enable teachers to enter into a productive dialogue with the designer. Modeling the playroom is an activity developed for a teacher's workshop, one that allows participants to manipulate fixed and movable playroom elements in order to achieve the desired developmental objectives. Working in teams of three, teachers were assigned a task to create a playroom for a specific age group, such as infants, toddlers, or pre-schoolers. Found materials, including cardboard, wood blocks, styrofoam, construction paper, and

plastic were provided along with instructions to the teachers for measuring and cutting the materials needed to construct a three-dimensional model (Figure 3.6).

Figure 3.6: Teacher's model making workshop

The model making is preceded by an exercise where developmental objectives and corresponding activity areas for specific age groups are discussed and agreed upon by each team. Participants discuss model results, then join playrooms together to resemble a building for different age groups. At this juncture, participants discuss issues of playroom adjacencies, building flow, and location of services in an exercise of four hours in duration. Walk-throughs and playroom modeling are effective methods for preparing the client group to participate actively and constructively in the planning stages of a child development center.

Planning began with focusing on the child as the basic unit of development. Next, the design participation phase involved the collection of behavioral data relating to each activity in which infants, toddlers, and preschoolers would be engaged. The conceptual framework used for the design of the facility was the activity center (Sanoff & Sanoff, 1988). The teaching staff of the child development-training program identified the developmental objectives for each activity by age group, and the "molecular" activities that would occur in the activity center.

The water play area, for example, the objectives of which would include sensory and perceptual acuity, concept formation, and eye hand coordination (Sanoff & Sanoff, 1988; Weinstein, 1987), would include such molecular activities as pouring, measuring, mixing, and floating objects,

all of which are related to the primary activity. Activity data sheets recorded the relevant activity information that served as a program and resource for future decisions. The data sheets provided a format where specific equipment needs could also be identified for future purchasing.
Since the planning of a children's center also reflects a particular ideology about child development, a space planning exercise engaged the teaching staff in decisions related to playroom layout. A planning guide of 50 square feet of usable space per child limited the number of activity centers that could be included in a playroom, and accordingly, scenarios were written by teachers about a typical child's day. The constraints encouraged the teaching staff to use "trade-offs" effectively since they were required to decide which activity centers were most important for various age groups.

Graphic symbols corresponding to each activity center (Figure 3.7) enabled the manipulation of children's movement patterns in the playroom. This element was the first step in providing environmental information to foster mental image development. Spatially organizing activity centers on a "game board" corresponding to a playroom permitted the determination of which centers were to be fixed and which were flexible. The spatial layout process required teachers to consider planning concepts, adjacency requirements, circulation, and visual and acoustic privacy between activity centers. Most of all, the process reinforced the concept of activity centers.

Figure 3.7: Diagram and model of children's playroom

The teachers worked through a playroom layout by manipulating activity symbols for each age group. They outlined the flow process from entering the facility, greeting the staff, removing their coats in the cubby area, and moving to various activity centers. When planning the infant room, the teachers identified the diaper change as the focal point with surveillance to all other activity areas. To avoid the clustering of unsightly cribs, the teachers proposed decentralizing the sleeping activity

into several crib alcoves. This process entailed small group discussions that required consensus in all decisions. When agreement was reached, the symbols were fastened to the base to constitute a record of the group's decisions. The designer constructed cardboard scale models of each playroom using movable walls and furniture, corresponding with the flow patterns in the diagrams developed by the teachers. This stage of the process permitted the teaching staff to visualize the three dimensional implications of their decisions. Simplified schematic models of the playrooms limited the amount of information presented at one time, conveying only the most significant issues in order to minimize information overload. Teachers could reconsider earlier decisions, particularly when they saw conflicts arise that were not easily predicted in the two-dimensional diagrams. Although circulation between activity centers was considered in the development of the activity symbol diagrams, the scale model conveyed the need to establish clear boundaries between centers to prevent distraction while permitting the teacher an unobstructed view of all children's play areas. The scale models included information not shown on the activity diagrams, such as furniture and equipment, but the teachers easily manipulated the movable pieces as they referred to the activity data sheets.

When the teachers reached agreement about the best playroom arrangement, the designer developed form diagrams elaborating on their spatial decisions. These diagrams combined activity centers into playrooms for different age groups. Although abstract in nature, the diagrams allowed teachers to gain an understanding of 'conceptual relationships.' Teachers were better able to clarify their intentions regarding the way in which the educational program would be enhanced in the design of the classrooms. This exercise also provided the participants with the tools to evaluate plan alternatives, and most important, a procedure for further playroom modification after the building was in use.

Design Criteria

The results of the participatory exercises helped to generate design criteria, as well as to modify the requirements of the building program. Several statements described the fundamental environmental characteristics of an effective child development center. They were as follows:

- The environment must be comfortable and inviting for children and adults. It should reflect an atmosphere conducive to children's growth.

- Materials and equipment should be easily accessible to children in order to encourage independence and self-esteem.

- An effective means of organizing the environment is to develop interest centers where the playroom is divided into areas that focus on specific activities.

- It is advisable that quieter activity areas be placed in close proximity in order to promote a quiet atmosphere. Activity areas demand visual clarity and well-defined limits if children are expected to interpret cues on appropriate areas for certain types of play.

A quality playroom would include the following activity areas:

- Creative expression/art
- Literature/language art
- Dramatic play/housekeeping
- Block building
- Self-image, personal hygiene
- Science and exploration
- Cooking
- Water play
- Carpentry
- Manipulative
- Music and movement
- Personal space

More specific guidelines that influenced the final solution included:

- Protected outdoor play area adjacent to each playroom
- South orientation for playroom and adjacent outdoor area
- Daylight to be provided by rooftop glazing and glazing orientation.

The teaching staff was involved in organizing all the building components into a facility design using graphic symbols that corresponded to the major building parts, such as playrooms, kitchen, offices, corridors, and lobby area. Age group adjacencies were considered, with opportunities for different age groups to have visual contact with each other. This effect was ultimately achieved in many ways, including low windows in each playroom for children to be able to see into the adjacent room. The parents' "drop-off" was the initial step in the flow process that also examined connections between indoor and outdoor activities. The planning concept that emerged from the discussion was that of a "central spine" from which playrooms would be connected. The spine would be more than a corridor, yet similar to a street, where parents, teachers, and visitors could view into the playrooms observing children's activities. To emphasize the street concept, it was necessary to fill the area with daylight through the use of overhead skylights (Figure 3.8). Each of the playrooms, too, would have a central spine leading to a covered outdoor play area.

Figure 3.8: Interior of children's center

Spatially well-defined activity centers were located on either side of the playroom spine. These playrooms included fixed areas for art and water play, and centers that could change their focus at the discretion of the teacher. Spatially well-defined centers imply the need to be distinctly different from adjacent centers. This differentiation was characterized by physical features such as partially surrounding dividers or storage units, implied boundaries through the use of columns, changes in floor level or ceiling height, changes in floor covering, and changes in light levels. Learning materials, furniture and equipment also contribute to the distinctiveness of the activity centers.

Teacher's Response to the Process

The diagrams and scale models provided a clear sequential procedure where all decisions could be traced and subsequently modified. The teachers, however, found difficulty in comprehending the consequences of many spatial decisions. While they were able to follow the process of playroom organization, they had difficulty visualizing the implications of alternative playroom arrangements. A continual reference to scale models and perspective drawings aided the teachers substantially in contributing their expertise to the design of the building. The teachers remarked that this process provided them with a better understanding of the principles of spatial planning, and the role of the architect. They experienced the "ripple effect," in which minor changes in adjacency relationships manifest themselves into major revisions in the spatial layout of the playroom, or of the building. This diagnostic procedure of examining flow processes and linking objectives to activity centers enables teachers to develop a conceptual understanding of playroom and building layout principles.

The interaction between teachers and the designer described in this project is clearly a departure from the traditional approach to facility development. Conventional practice usually denies the expertise of the user (non-paying client) and his or her involvement in design decision making.

Traditional designers also focus on the formal and visual issues and give less attention to the behavioral factors that may equally influence the form of the building. This tradition could be carefully guarded since the design of a child care facility is normally developed at the floor plan level, defining relationships between classrooms and other areas, and disadvantaging the teaching staff because of their inability to comprehend floor plans. The teachers' expertise lies at the level of behavioral interactions within the playroom, but this is typically ignored by architects and left to the teachers to resolve after occupancy of the facility.

In this project, a structured process enabled professionals to lend their expertise to the initial programming stages of the design process. Use of activity data sheets, activity symbols, and form diagrams permitted the designer to integrate knowledge about children's behavior and their requirements into a format that was conducive to making space planning decisions. Integrating the expertise of the staff in this guided process established clear linkages between child development goals and the types of places where these goals could be fulfilled. The teaching staff's continual involvement in the building design process encouraged the exchange of ideas and concepts with the architect, which increased the staff's ability to act as effective design team members. The active part of the process usually terminated with the schematic design of the children's center, which is the result of the team's involvement.

It is evident from these experiences that the dynamics of a participatory process and product are different than the results of a more traditional design process. Not only is there a shared sense of ownership in the product, but participants are empowered by an understanding of the decisions that led to the physical form decisions. This approach has the further promise in enabling teaching staff to make spatial modifications after occupancy.

The effectiveness of a collaborative process is contingent upon the involvement of the architect from the inception of the project. When the architect is an integral part of the process, the building design proposals are clearly understood by the user-client group of teaching staff, parents, and administrators. On those occasions when the programming document was completed prior to the architect being commissioned for the project, significant communication problems can occur between the user group and the architect. In this instance, the architect of record was appointed by the college administration after the program and preliminary design had been completed by the consulting design team. Although considerable effort was made by the design consultant and teaching staff to explain the rationale for the programming and design decisions, the architect had great difficulty in grasping many of the nuances of the proposed design solution. Similarly, the teaching staff did not understand the architect’s drawings, since the drawings were prepared for construction purposes. This situation created difficulty in the working relations with the client because the architect often urged quick approval to expedite the production process.

The language of the program should reflect the concepts developed by the teaching staff and conveyed in terms of educational goals and chil-

dren's activities. The language of the architect-- the floor plans and elevations-- are the interpretation of verbal concepts, and are often unintelligible to the user group, especially if they are not developed simultaneously with the program. The implications of these experiences is that ownership in the design process, achieved through active involvement in design decisions, permits the user-nonpaying client to exercise free and informed choice. The separation of the programming and design stages not only limits participation of a wide range of experts but also jeopardizes the ability of the product to fulfill the expectations of the program.

Acknowledgment: The success of this project is due to Joan Sanoff, Department Head, Early Childhood Education, Wake Technical Community College, who participated in the programming and design development, and urged the college administration and architect-of-record to produce a high quality building. James Utley also contributed to the design of the project.

DAVIDSON ELEMENTARY SCHOOL

- Charrette Process
  Community action planning

Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
- Public forum

Strategic planning
- Visioning
- Workshop

The amount of time young people spend in school, from preschool to twelfth grade, is so significant, that it is important to recognize that much of this time is devoted to living as well as learning. Consequently, the quality of this living is an important matter. The quality of student life and the quality of education are directly affected by the quality of the school environment. School environments might refer to physical provisions as well as the patterns of a school's operations. Students perception of their environment, whether supportive or hostile, interesting or boring, are also integral to an understanding of the school environment.

There is a gulf between what is known to be the needs of adolescents and their experiences in schools. Decisions about schooling are more often made on the basis of budgets and buses rather than on an understanding of the physical, intellectual, psychological, and social needs of adolescents. Schools that encourage the developmental needs of young people do not look the same nor do they have identical programs. Safety and academic achievement are necessary for all schools, but they are not sufficient in themselves to produce responsive schools for adolescents. Since young people vary in physical development, intellectual capability, and interests, the need for diversity would be an important characteristic of a responsive school. In such a setting, students and teachers would be engaged in different learning activities, where a variety of teaching methods would be used. Small group work, lectures, individual projects, and experiential learning, combined with flexible scheduling are features that would respond to the need for diversity.

The school district located in the Charlotte-Mecklenburg area of North Carolina is undergoing educational reform that can have a substantial effect on the design of school buildings in the county. The result of numerous workshops and teacher in-service training programs in 1991 has created a climate conducive to team teaching in the county's elementary schools. The growing population and inadequacy of older schools in the area has prompted the school administration to construct four new elementary schools in 1992, on four different sites. The Davidson site is the only one containing an existing school building, located in a well-organized community, with an appearance commission, an historic district commission, and active citizen's groups. The School Planning administration selected the firm of The Adams Group architects because of their experience producing effective results working with a variety of community groups, and a previous award winning elementary school addition (Sanoff, 1994). Davidson Elementary School already had a committee structure examining excellence in education, and a group of

teachers and parents anxious to be involved in the process of designing their new school.

The Davidson Elementary School was designed to accommodate the teachers and parents vision of an appropriate environment for 600 children, kindergarten through 5th grade. The goal of community involvement was perceived to be instrumental in achieving any changes in the traditional school delivery process, which normally bypasses the teacher's expertise and results in a building, produced by a formula. In Davidson, the new school was also perceived to be the center of the community, particularly since the community would fund the gymnasium.

To begin, an assessment process was developed that included the use of extensive interviews with teachers at each grade level, as well as the use of workshops aimed at identifying educational objectives for different grade levels, and the complementary teaching methods for achieving those objectives. Integrating findings from the educational literature with the expertise of the teachers is believed to be an approach for producing school environments relevant and satisfactory for its diverse users.

The process developed by the design consultant, Henry Sanoff, began by an introductory meeting with the Davidson Elementary School Principal to outline a strategy for parent, teacher, and student involvement. The first step consisted of individual interviews with each of the school's thirty teachers to review the educational specifications provided by the Division of School Planning. The specifications consist of a quantification of spaces, and a listing of classroom equipment for each grade level. The obvious limitation of the 'ed specs' is that they presume a set of educational objectives and a style of teaching. During the interview process, many discrepancies were found between teachers' requirements and the ed specs, such as the location of teachers' workrooms, location of counselor's office, and general requirements for proximity between academic and administrative areas. Teachers preferred several small workrooms to be adjacent to their classroom to allow for parent tutoring and sharing ideas with other teachers, rather than the required work area designated for clusters of classrooms that would be remote from the individual classrooms. The teachers also discussed teaming, and the opportunity for teachers to collaborate more effectively. In respect to spatial concerns, they were fearful that the long noisy corridors in their present school might be repeated.

The interviews were followed by a walk-through evaluation by the teachers of the existing two-story school building. The walk-through revealed many negative features of their building, such as noisy corridors, desks located in the corridors for tutoring purposes, and play areas separated by parking.

The combined interviews and walk-through evaluation disclosed the features of the building that were valued, as well as giving voice to the aspirations for the new building. A parent-staff-teacher workshop followed the more individual activities that occurred on the previous days. This workshop was intended to created a dialogue between teachers: about their educational objectives, the variety of teaching methods generated from those objectives, and the types of places or physical settings that

would be supportive. This workshop was designed to prepare the participants for the second meeting that would engage them in the site design of their new building.

Group Interaction

Prior to planning and designing appropriate environments for adolescents, the objectives for that environment must be discussed, considered, and decided upon by the teachers, administrators, and students. The relationship between the activities students engage in, the places that accommodate those activities, and their relationship to the objectives, is the basis for designing. The objectives that are found in the educational literature describe concepts that are paramount to the development of the young adolescent. These objectives (Dorman, 1981) *include personalization of the learning environment, student control of movement, provision of adequate meeting and social gathering places, environmental flexibility to accommodate different student activities, and the ability for students to facilitate projects and studies in their areas of interest*.

While there is agreement within the education profession that these objectives may be crucial to the development of young adolescents, there is a lack of agreement about the relationship of these objectives to the places in which they ought to occur, or to the variety of possible spatial arrangements. The interpretation and philosophy of an educational program has a significant impact on how the educational objectives are evidenced and realized in the learning environment. For example, "personalization of place" is an important objective because, as the educational literature points out, the young adolescent needs to have a stake in his or her environment (Sommer, 1979). An important aspect of personalized space is the presence of designated places where adolescents can gather, free from danger, to engage in stimulating activities, conversation, and exploration of ideas. Such places may take the form of outdoor courtyards, outdoor tables and benches, or interior places such as student lounges, or corners of a larger room.

After recording observations, interviewing students and staff, the school community members were ready to consider features of the physical environment through small group discussion sessions that stressed consensus decision making. This process described as *Relating Objectives for Learning to Education* (Sanoff, 1994), allows parents and teachers to discuss, clarify their differences, and seek common understanding. The opening discussion was devoted to establishing commonly agreed upon objectives. The teachers were divided into six small groups of five people each, based on their teaching focus. They selected objective statements from a prepared list generated from the educational literature. Participants were asked to make their decisions based on group consensus to insure that all voices were heard in the deliberations. In addition to work groups clarifying their ideas and intentions about classroom education, there was a strong support for the school's interaction with the Davidson

community. Developing a sense of community emerged as an important focus for the teachers.

The ability to link teaching methods to physical settings was a new experience for the teachers, since their teaching methods were always constrained by the existing classroom. The use of photographs corresponding to the physical settings allowed participants to explore and discuss a wide range of traditional and non-traditional settings used to accommodate various teaching methods. Most importantly, the photographs describe a variety of outdoor settings suggesting the need for a more integrated indoor-outdoor environment for learning (Figure 3.9).

Figure 3.9: Photographs of learning places

This exercise was instrumental in successive interviews with groups of teachers in using the model of linking objectives to teaching methods. Teachers were able to expand the physical characteristics of the ed specs to include the objectives for each grade level, the corresponding experiences planned to achieve those objectives, and the teaching methods that might be employed. This concept allowed teachers to envision the classroom, as a spatial setting that should accommodate a variety of teaching methods.

The opportunity to use the outdoors for a variety of different activities, for small or large group activities, for reading, art, eating, and gardening, expanded the teacher's awareness of new opportunities for their new school building. This discovery found its way into the building design in the form of outdoor areas adjacent to each classroom, covered porches, and a variety of different courtyard spaces.

Children too, were involved in offering their ideas and perceptions about the new school through their art and through poetry. The art teacher and office staff of the Adams Group met with all the students in the school, for two successive days, through an art exercise where the students were asked to draw a picture of their ideal or dream school. The students made different types of drawings including floor plans, sections,

and elevations. Images such as towers, clocks, and clerestory windows all appeared in the students' drawings. One of the interesting ideas that emerged from these sessions was that the media center could open to the outdoors, a feature that was included in the building design. The students also stressed the need for daylight in the classrooms, and other areas of the building. In addition, teachers, parents and students were asked to write a wish poem stating their desires for their new school. All participants were asked to complete the phrase, *I wish my school....* shown on Figure 3.10 (Sanoff, 1994).

Figure 3.10: Wish poem

The results from each grade, and the parents and teachers responses were summarized and presented on large sheets of newsprint paper. Many of the wishes stressed the exploration of teaching methods, including team teaching and an environment that supported innovative teaching methods. There was also an interest in particular physical features, such as an atrium, bright colors, and extensive use of outdoor learning environments. The results of the wish poem, students' drawings, and all subsequent work was on exhibit in the school, as an ongoing record of events, as well as serving to inform those who were not participating of the events that had occurred.

The final workshop consisted of a building image study, and site planning exercise, in which 35 teachers, parents, and school-planning officials worked collectively. The building-image study began with a slide show depicting ten different school buildings, each representing different regional characteristics and design features. Each building was rated by the participants, and an overall priority list was established. The purpose of this exercise was to increase the participants' level of awareness to the possible variations in the visual character of school buildings. In effect,

the exercise intended to expand their vision of building images beyond their everyday experiences with school buildings (Figure 3.11).

Figure 3.11: Rating school building images

The final event was the site-planning exercise where participants were given a scaled drawing of the new site, located several blocks from their present school, and scaled building components representing all the spaces in their school building. All building components had labels fastened to the styrofoam pieces. Each of the six groups were asked to develop a building plan located on the site, considering bus drop-off, parking, soccer field, cluster patterns of classrooms, outdoor space, and appropriate orientation and daylight. At the completion of the two-hour exercise, representatives from each team presented their solution for discussion and debate. The participants (Figure 3.12) then displayed all of the solutions for review.

Similarities between solutions occurred in the deliberate use of open space and courtyards, and the clustering of kindergarten, 1st, and 2nd grade classrooms, separated from the 3rd, 4th, and 5fth grade classrooms. Team teaching appeared to guide many of these design decisions. While group members had some dissatisfaction with their solutions, they all agreed that they had a better understanding of the complexity of issues requiring simultaneous consideration. They readily admitted being more sensitive to the role of the architect, and were willing to leave the resolution of the problems to the architect.

Figure 3.!2: Parent-teacher workgroups presenting site plans

The Adams Group, and design consultant, Henry Sanoff, met after the workshop to synthesize the workshop results and to arrive at several alternative concepts that would satisfy the requirements developed through the interviews and workshops. One scheme was developed and proposed to the client group by posting large-scale drawings in key locations in the present school building. Teachers were requested to write their comments, directly on the drawings, about the proposal's positive and negative features.

After several days of allowing the teachers to discuss the proposal and to comment, the drawings were retrieved and reviewed by the design team, only to find the comments very minor in detail (Figure 3.13). All the teachers seemed to identify elements of their design ideas in the architect's submission. At this point, and until preliminary drawings were completed, the involvement of teachers was limited to personal interviews clarifying details of classroom design.

The building design contained features that were not typical of traditional schools in the area. Such features were namely, clustered classrooms to facilitate team teaching and non-graded classes corresponding to the curriculum changes occurring with all Charlotte-Mecklenburg schools, single loaded corridors with classrooms oriented toward the south and outdoor play areas for each classroom. This arrangement allowed each classroom to have a relatively private outdoor area (Figure 3.14).

A plan review conducted by the North Carolina State Department of Public Instruction raised questions about these and other unusual design features, some of which might increase the operating cost of the

Figure 3.13: Teacher's written comments about design proposal

Figure 3.14: Plan of school building

building. The Davidson school proposal was very different from any other school plan that they reviewed. Since the original intention of this project was to create a building that satisfied the needs of the teaching staff and administration, as well as the historic concerns of the community, it was

agreed to allow the community to make the final decision. A review with the teachers and principal indicated strong support for the cluster arrangement and the opportunity for greater teacher collaboration. The Superintendent's office too, supported the building concept and believed it would enhance their curriculum goals (Figure 3.15). Citizens of Davidson were equally supportive of the design solution particularly since they were providing the funds for a gymnasium to be used by the community as well. Adams comment: "If the teachers and administrators had not been involved in the process, it is pretty clear that the State and County plan reviewers would have been very forceful to have the architects change the plan. It was only through the intervention of the teachers and administrators, and the arguments they made for the curriculum, that allowed the slightly higher cost for heating to be overpowered by the gains of the curriculum."

Figure 3.15: Newspaper headline

Post-Occupancy Evaluation

Construction was completed on the Davidson Elementary School in January 1994 at which time students and teachers took occupancy. Jennifer Hyder and James Rice, using a walkthrough evaluation, systematic

observations of classroom and public space behavior, and a student-teacher questionnaire conducted a Post-Occupancy Evaluation (POE). The thrust of the POE was to validate initial design assumptions about student ownership in the building and its positive effects on their learning. Ownership was operationally linked to student's ability to personalize their environment. Additionally, learning through social interaction with peers and teachers was a factor that influenced the design of areas inside as well as outside the classroom.

To this end, observations were conducted of children's behavior in eight different classrooms. The results indicated that classrooms of younger children exhibited versatility in seating arrangements, well defined activity areas within the classroom, and continuous use of the adjacent outdoor area. Classrooms of the older children were arranged in such a way that the focus was on the teacher. Interestingly, all classrooms were designed to discourage rows of desks facing the teacher.

Thirty-six teachers and sixty students from fourth to sixth grade were surveyed. Both questionnaires focused on the classroom and adjacent areas, and how they contributed to the learning process. Distinctions were made between the influences of the teacher and the classroom environment. It was apparent from the results that the teacher's attitude towards education directly influenced the ability for students to personalize their environment. Classroom territory was extended into the hall by the exhibition of student artwork and projects. However, while teachers generally agreed to the importance of providing a variety of workspaces within the classroom to allow for spontaneity of group activity, the students felt teachers exerted considerable control over their use of the classroom environment. Consequently, personal space was perceived by the student's to be limited to their desk. Teachers, however, were enthusiastic about the way in which the classrooms were designed to facilitate group activities, and with the overall design of the building. Students, too, had very favorable comments about their new environment.

Although the students and teachers had occupied this building for only four months prior to conducting the evaluation, it was apparent that the teaching staff needed more time to settle into the building. This additional time would allow teachers to more effectively manipulate the total learning environment to accommodate their educational objectives. Consequently, a walkthrough was conducted two years after occupancy. From this walking tour it was readily apparent that teachers and students had assumed ownership in the building. Creating soft spaces carved out of the wide circulation spine extended classrooms. Teachers, with the help of students organized special activity nodes, some of which were furnished with soft, comfortable seating (Figure 3.16). Classrooms had also expanded outdoors to include gardens and a variety of student projects. Bold colors accented special places where community artists contributed their paintings and sculpture to the school. The school had become the center of the community.

Figure 3.16: School interior showing activity nodes

The intent of this project was to narrow the gap between what we know about the education of young people through the literature, and what we observe happening in everyday school environments. Observations of school buildings and classroom behavior provided insight into space use that often denies the existence of variations in types and styles of learning. Also, buildings produced without the involvement of those who will use the building can further exacerbate the rising alienation found in many schools. It is evident that a sense of ownership achieved through participation has far-reaching positive effects, especially when the viability of traditional school building standards is questioned.

UNIVERSITY AND SCHOOL DISTRICT PARTNERSHIP

Charrette Process
Community action planning
- Focus groups

Game simulation

- Goal setting
- Group interaction
  Participatory action research
- Public forum
  Strategic planning
- Visioning
  Workshop

The idea for an exemplary middle school developed collaboratively by the Wake County Public School System (WCPSS) and North Carolina State University emerged in 1988 from discussions between multi-county governments. This school, along with the model elementary and high schools planned in adjacent counties respectively, would give the multi-county area a full K-12 complement of innovative, exemplary schools.

During the next several years, WCPSS and University administrators discussed the feasibility of establishing a middle school and an affiliated Teacher Development/Outreach Program on the university campus annex. In the fall of 1993, a Planning Committee, composed of approximately 15 WCPSS teachers and administrators and 15 university professors and administrators, was established. Aided by a small planning grant, the Committee was charged with developing an educational program and governance agreement for the school and Teacher Development/ Outreach Program.

The Committee met as a whole 10 times over a two-year period and held a "community workshop" that was attended by over 150 people. Six formal task forces, numerous ad hoc groups, and meetings augmented its work with key people from community agencies as well as each of the colleges at the University.

The Centennial Campus Magnet Middle School (CCMMS) will involve an entire population of students, teachers and parents frequently engaged with faculty, students, and facilities of each of the university's 10 colleges, as well as its corporate and government partners on the university campus. CCMMS will thus be the first middle school in the country to combine the resources of a respected school system, a major university and a technologically advanced campus comprised of business, industry, educational and government agencies. This setting nurtures the following unique aspects of the school and its outreach programs:

- Extensive interaction between students and adults, including community members, industry and government researchers, and NC State professors and students.
- Exploration of adolescent concerns and real world issues through a curriculum which integrates skills and concepts of various disciplines.

- Use of cutting-edge technologies as a resource in all teaching and outreach areas.

- Maximized linkages with other educators, parents and youth-serving professionals in developing and disseminating innovative teaching/learning strategies.

- Broad opportunities for ongoing research, evaluation, teacher preparation, and professional development.

The Centennial Campus Magnet Middle School will house 600 students. Because of Centennial Campus architectural standards, no trailers or utility buildings may be added to accommodate more students. The school will consist of grades 6-8, with approximately 200 students in each grade. A pupil assignment plan in keeping with WCPSS magnet school policy will be devised prior to the opening of school to insure that the student body is racially, culturally, and socio-economically diverse and balanced for gender. The target date for the school opening is August 2000.

NC State has partnerships with off-campus agencies that can contribute to the school. Among these is the North Carolina Museum of Natural Sciences, MCNC, the North Carolina Biotechnology Center, and other state-funded agencies. CCMMS is best understood as an innovation undertaken on behalf of the other schools in the system.

Much of the expertise represented in NC State programs and services will be available to CCMMS. In addition, NC State has numerous physical resources to share in the partnership. A partial listing includes:

- High tech research and development laboratories
- Small scale manufacturing facilities
- D.H. Hill library and access to libraries of other universities
- Multi-media production studios
- Research farms and forests
- Animal stocks
- Marine stations
- International exchange programs
- Design studios
- An outdoor education/challenge ropes course
- High speed voice, video and data connections to the Information Highway

Further, there is a fast growing group of corporate and government Centennial Campus partners, including the National Weather Service, with whom links may be developed. Some of these partners are physically located on campus; others are off-campus research partners with whom technological linkages might be established.

The approach to the development of a building program has been to conduct a review of empirical literature identifying reliable findings about the impacts of the designed environment on educational performance. Research findings suggest a number of recurring problems in the physical environment of the school. These problems are often associated with the overall building complex and its direct affect upon the quality of

the physical environment. Once identified, these problems have been restated in the form of building organizing principles. They are as follows:

- Territoriality and Personalization
- Activity Pockets and Short Passages
- Common Areas
- Wayfinding

The concept of territory applies to ownership and control by individuals, small groups, larger organizations, and even countries. Territories vary in scale, from objects to rooms, homes, small-scale geographical areas, and whole nations. Territories are often marked or personalized and display the presence of an owner or occupant. Individuals or groups mark boundaries, sometimes with personal items, to demonstrate territoriality.

Territories permit people and groups to display their personalities and values through the vehicle of the physical environment. People put their personal stamp on places not only to regulate access to others but, simultaneously to present themselves to others, to express what they are and what they believe, and thereby, to establish their distinctiveness and uniqueness.

The school community comprises a number of different groups, all exercising their basic human needs by seeking ownership and a sense of belonging to the school environment. Visitors to school will feel more welcomed if there is a public zone tailored to their needs. This zone, with identifiable boundaries, allows visitors to orient themselves without feeling threatened or threatening. Community members visiting the school should be allowed to personalize this zone.

Similarly, a student entry zone is a distinctive place that students can control and personalize. It is a place where there are recognizable entry points into classrooms and other learning spaces. Students should distinguish and decorate these areas with the products of their school activities. While such markers can symbolize territorial control, all too often boundary definition is merely evidenced by the sheer occupancy of a place.

Public spaces surrounded with pockets of activity or small partially enclosed areas that contain activities will make it natural for people to pause and become involved. Building thoroughfares or indoor streets should replace unfriendly corridors where nothing ever happens. The edges of the indoor street should be lined with windows, places to sit, and with entrances to learning spaces.

Rooms next to the indoor street with windows opening onto the street are more pleasant than to walk down a corridor with blank walls. Not only do you lose the sense of where you are, but also you get the feeling that all the life in the building is on the other side of the walls. Passages should feel like rooms with plenty of daylight and windows along the walls. Long corridors can feel human by breaking down their scale through intervals of light and dark.

A common area created for every social group could be located at the center of all the spaces the group occupies, and in such a way that the paths that go in and out of the building lay tangent to it. Three characteristics of a successful common area:

1 It must be at the center of gravity of the building complex or building wing that the group occupies. It must be at the physical heart of the organization, so that it is equally accessible to everyone and serves as the center of the group.

2 Most important, it must be on the way from the entrance to special rooms, so people always pass it on the way in and out of the building. It is crucial that it not be a dead-end room that one would have to go out of one's way to find. For this reason, the paths that pass it must lay tangent to it.

3 It must have the right components in it--usually a kitchen and eating place, since eating is one of the most communal of activities, and a sitting space--so people feel like staying. It should also include an outdoor area to carry on a discussion.

In many buildings the problem of disorientation is acute. People have no idea where they are, and they experience considerable mental stress as a result. In order to be clear, a building complex must have a main circulation space, upon which entrances open to other building components.

The Academic House

The Centennial Campus Magnet Middle School, composed of three houses of approximately 200 students each, will contain four teams of 50 students and two teachers. Each of the four teams will have its own classroom or learning environment composed of several learning centers. The creation of identifiable clusters of space that students can call their own will give them a sense of group identification, while grouping students and teachers together into small interdisciplinary teams will reinforce opportunities to develop personal relationships.

The 50 student, core learning environment is the setting for a problem-centered integrated curriculum supported by a team teaching approach. The interdisciplinary team is a way of bringing teachers and students together to establish genuine learning communities. All teach the same students, and the students on the team have the same teachers in the basic academic program. Teachers and students also share the same basic physical area of the school and the same schedule.

Learning environments, therefore, need to allow for a multitude of teaching and learning strategies. Students move from independent to cooperative learning where smaller multi-use spaces support small-group instruction and group projects. While two-teacher teams will facilitate

much of this work, specialty teachers will work closely with teams in an integrative fashion. For this reason, Project Rooms are provided to enable fine arts and practical arts activities to be incorporated into team curriculum. In addition, space will accommodate NC State faculty and students, as well as community professionals, who will work extensively with students.

Research on classroom design has found that creating small learning centers within classrooms reduces classroom visual and auditory interruptions, makes learning materials more accessible, increases privacy, leads to increased substantive content questions, less non-task oriented movement, less loud conversations, longer attention spans, greater degree of engagement with learning activities, more teacher involvement with students, fewer teacher interruptions and more exploratory behavior, social interaction and cooperation among students. Learning centers within classrooms can redirect traffic, demarcate boundaries and create small areas for privacy, all of which facilitate a learning environment.

In designing the CCMMS, the intention of creating an attractive, innovative building that facilitates the school's unique goals and curriculum required the knowledge and participation of thirty experts in various aspects of middle school education. A programming process began with:

- Individual interviews
- Data sheet recording
- Data sheet review

The programming team interviewed education specialists using the format of a data sheet where information was gathered about activity objectives, user information, proximity information, and design requirements (Figure 3.17). Although the interviews were informal, the data sheet served to focus the discussion about building related information. Adjacency diagrams were prepared from the data sheets, and together with the interview results, were submitted to the specialists for approval.

A final workshop with the university-school district task force, allowed for a discussion of the completed building program and space needs. This was the last approval step prior to the documents' submission to the School Board for final approval. While there was widespread community support for the CCMMS, the site selection and project delivery process involved the University and WCPSS in discussions lasting over one year. When it was agreed that WCPSS would own the school and the University would lease the land, the building process followed the standard procedures for school construction. The North Carolina firm

Figure 3.17: Typical data sheet

of Boney architects was selected by a joint University-County review process and given the programming document to guide the design of the school. Participants involved in the initial programming process were identified to collaborate with the architect in the design review process. The initial ideas about classroom design, the outdoor environment, and the academic house generated from the collaborative planning process were well integrated in the architect's design solution (Figure 3.18). Building construction began in mid-1998 with completion scheduled for the year 2000 (Figure 3.19).

Figure 3.18a: Classroom diagram

Figure 3.18b: Classroom plan (Courtesy: Boney Architects)

Figure 3.19: Proposed building (Courtesy: Boney Architects)

MINNESOTA CENTER FOR ARTS EDUCATION

- Charrette Process
  Community action planning
- Focus groups
- Game simulation
  Goal setting
- Group interaction

Participatory action research
Public forum
Strategic planning
Visioning
•Workshop

This chapter describes an intensive, research based design process to examine current and emerging needs of the Minnesota Center for Arts Education, and to define the capital projects required addressing those needs. In contrast to current educational facility planning models, a rigorous on-site data collection process formed the basis for stating justifiable needs and their corresponding costs. For three days, staff, students, parents, and clients of the resource programs division articulated deficiencies, needs and dreams, and designed what they considered to be "ideal" spaces. The workshop began with a walk-through evaluation consisting of student and faculty interviews. Assessments of each space recorded on a Spatial Data Inventory Form determined the adequacy of space, lighting, acoustics, temperature, flexibility of use, aesthetic appeal, functional requirements, and floor area. An analysis of these data affected the development of the spatial requirements needed for subsequent stages of the process. Working in small groups, 200 participants developed 39 proposals for their new facility using a site plan of the campus, a floor plan of each building, a listing of required areas for each space and their graphic symbols. Proposals included changes in the present use, expansion of existing buildings, additional floors, and the creation of new buildings. A content analysis of the walk-throughs, interviews, and recommendations generated by the participating teams influenced the development of three proposals developed by the design team, one of which received unanimous support from students and faculty.

In 1990, the state of Minnesota purchased a 33-acre campus of the former Golden Valley Lutheran College for use by the Minnesota Center for Arts Education (MCAE). The present campus consists of a main administrative/ classroom building, a secondary classroom building (GAIA) and three dormitories (Alpha, Beta and Gamma) surrounding an existing pond. While some remodeling has been done to convert the junior college campus to an arts high school and outreach educational resource center, the facilities remain totally inadequate.

In the fall of 1994, the North Central Association, which is the organization responsible for the accreditation of Minnesota schools, visited the arts high school as part of its accreditation review cycle. One of the committee's major findings was the inadequacy of school facilities, both in terms of quality and quantity. While lauding the staff for making creative use of the limited spaces, the committee concluded that physical constraints and the forced sharing of space for incompatible functions were restricting curricular focus and potential, displacing students from the classroom. Spatial limitations require all major performances be conducted off-site which is expensive and logistically difficult, creating safety hazards, and exacerbating conflict. Several research studies have concluded that educational building conditions are hurting student

performance (Goldberg and Bee, 1991). Similarly, a recent Carnegie Foundation study (1988) found that student attitudes about education are a direct reflection of their learning environment. Current educational planning models have not effectively accounted for the social, economic and political factors effecting the appropriate design of school buildings (Moore, 1993). Consequently, new models of the facility planning process are required to accommodate needed changes in school buildings.

In the Spring of 1995, the Minnesota Center for Arts Education undertook a research based design process to examine their current and emerging needs, and to define the capital projects required to adequately address those needs. The architectural firm of the Adams Group and design research consultant, Henry Sanoff from North Carolina, were selected to lead the process because of their significant experience in participatory design processes they employ to obtain information used in developing capital recommendations. For three days, all Center staff, students, some parents from the parent advisory committee, and clients of the resource programs division articulated deficiencies, needs, and dreams, and designed what they considered to be "ideal" spaces.

Post-Occupancy Evaluation

Environment-behavior research has relied heavily on detailed case studies because they answer the "how" and "why" questions and because of their unique ability to deal with the full range of evidence. Case studies allow the investigation of phenomena in real-life contexts, where multiple sources of evidence are needed for the assessment of multi-causal events (Sanoff, 1994). Assessment of building performance is necessary to correct unforeseen problems as well as to justify new construction or remodeling existing buildings. There are several categorical approaches to building evaluation. Each approach differs in time, resources and personnel required to execute a successful assessment (Preiser, Rabinowitz & White, 1988). Post-occupancy evaluation is the process of systematically evaluating buildings after construction and after occupancy. The main tasks are to generate new ideas to aid in a programming process, and to provide data for an open-ended search to increase knowledge about a setting (Sanoff 1989; Wener, 1989). In addition, for the MCAE, the major benefit of a POE, is its effectiveness in establishing a justifiable project cost, particularly when many state agencies are competing with each other for the same resources.

The POE framework includes the client-user, the physical setting including the functional requirements and user satisfaction, the immediate environmental context, and the social/historical context. On the basis of Preiser's distinct POE levels of effort- *indicative, investigative, and diagnostic*- the indicative level strategy was employed. This type of POE provides an indication of major failures and successes of a building's performance, and can easily be carried out in a short period of time. One approach to generating information quickly is described as a walk-through evaluation that provides an audit of building performance. A walk-through evaluation

and interviews constitute the first part of the on-site visit that concludes with a summary of indicators of successful and unsuccessful building features.

An assessment profile generated from touring interviews with relevant users expands participation opportunities when integrated into the design process. Clearly, different types of expertise reside with people affected by design decisions and with those who influence design decisions. Building users such as staff, students and faculty are experts in identifying unsuccessful building features. Their involvement would result in a greater meeting of social and functional needs and increasingly effective utilization of available resources (Cashden, et al., 1978). User involvement can be more effective in seeking satisfaction than responding only to building ailments identified during the POE process. People can join in a collaborative effort aimed at solving the problems identified in the POE process. The task of user participation is to identify what should be accomplished. This requires the proponents to provide clearly stated purposes and answers to questions of who, what, where and when? This requires the provision of effective communication media in order to provide suitable grounds for staff and student participation. Their involvement in a participatory process, planning for the future of the MCAE, allowed their recommendations to directly influence the development of the campus master plan.

A post-occupancy evaluation (POE) conducted on Day 1, included an on-site data collection process intended to indicate the major failures and successes of the building's performance. This required organizing all parties to be involved in the POE and the development of a research plan. Prior to the site visit, drawings of the campus were obtained as well as complete documentation of the curriculum goals, and factors affecting the demand for new and improved facilities. Data-recording sheets used in the assessment include such information as locational requirements, functional requirements, a floor plan and area of each existing space.

Two teams of two designers each had specific task assignments regarding the parts of the campus they would assess. A schedule developed for the on-site data collection process allowed each team to meet with staff, faculty and students in their respective work places to discuss and assess spatial adequacy. The walk-through assessment process required four and one half-hours on Day One to complete a review of all campus buildings.

Space Planning Workshop

A space planning exercise involving 200 students and 40 faculty members who worked collaboratively on a vision for their new campus was the agenda for Day Two. All participants assembled in the present performing arts area where they received instructions about the planning process and the procedures to be followed in this exercise. A site plan, locating all existing buildings and a floor plan of each building, was prepared in advance by the architects. Lists of required areas developed from the interviews and walk-through evaluations provided additional in-

formation for the participants. Working in groups of from five to eight people, student-faculty teams developed 39 proposals for their new facility using sets of graphic symbols corresponding to each of the activity areas (Figure 3.20). These graphic props allowed participants to reconfigure the existing spaces in units of 100 square feet. Team members were responsible for analyzing the uses of existing buildings and propose new functions if deemed appropriate. Not surprisingly, teams voluntarily formed according to their respective disciplines. Music students tended to group together as did visual arts and performing arts students. Consequently, each group's bias was apparent in their solutions since they all experienced some difficulties and inadequacies with their present working environment. The task required all groups to devote three hours to complete this phase of the planning process (Figure 3.21). The development of design alternatives constituted the activities of Day Three, with a final presentation on that evening, concluding the three-day intensive participatory process.

Figure 3.20: Graphic symbols used in the space planning process

The interviews and walk-through assessment revealed a number of problems such as:

- Overcrowding in the main building and the general computer lab.
- Classes currently held in the cafeteria and in administrative conference rooms.

- Current music space contains no rehearsal area, an inadequate number of practice rooms, a shortage of instructional space, and no acoustical treatment.

- Currently, painting and construction occurs within the theater itself, the dust and debris cause damage to lighting and sound equipment.

- Currently, performing students must use obsolete locker rooms that are poorly ventilated.

- Existing gallery area is often used by students as a spillover lounge and eating space that jeopardizes the integrity of the artwork that is exhibited.

- A general lack of meeting space has compromised the outreach efforts, causing additional expense for locating programs off campus.

Figure 3.21: Workgroups engaged in spatial planning (Photo: Henry Sanoff)

The space and site planning exercise allowed participants to consider the redistribution of all existing functions as well as to propose appropriate locations for new uses. Considering that future space needs are double the available existing facilities, participants reconsidered the campus flow of movement in order to arrive at suitable locations for all functions.

The results of the space and site planning exercise revealed considerable insight particularly about future campus development. A content analysis of the site drawings prepared by the 39 teams that participated in the exercise indicated that 38% of the teams proposed an expansion of the

existing administration/classroom building, while several solutions proposed wrapping the existing building with new additions. Expansion of the area covered by Alpha and Beta dormitories represented the most substantial agreement. A majority (72%) of all teams noted the vicinity of the dorms as the most viable area for future expansion. Proposals for the reuse or expansion of that location included additional classrooms, dance, media and performance areas.

The existing two-story, administration/classroom building has at its core the theater/dance studio. Although there were several competing uses proposed for this building, including classrooms, administration, library and dance studio, the major preference was for a visual arts area that included art studios and an adjacent gallery. Although theater and dance have similar performance requirements, it was evident from the responses that their present location was ill suited for both to function simultaneously. Similarly, an atrium with skylights was a recurring theme for the building core, especially at the second floor overlooking a dance studio or visual arts area.

Music students voiced a concern about being isolated from other arts activities and attempted to centrally relocate themselves rather than to remain in the GAIA building. The resource staff, who are presently without an identifiable workspace, opted for the GAIA building, which presently houses the music program, to locate resource programs and teacher education. While teacher education is a major community effort of the MCAE, a majority of the student responses indicated a lack of awareness of the Center's outreach function and spatial requirements, since they tended to place them in a variety of unsuitable campus locations.

An analysis of the spatial organization results led to the development of three conceptual design alternatives. Each of the alternatives embodied the ideas expressed in the student/faculty space planning exercise. All proposals included the removal of the Alpha dorm to allow for the expansion of the existing administration/classroom building. Scheme 1 located a new theater arts building to the west of the existing administration building. Scheme 2 located a new arts complex to the east of the administration building. Both schemes maintained the campus character of disconnected buildings. Scheme 3 wrapped the existing building with new functions to alter the building's image while using a classroom wing to connect the Beta dorm to the expansion of the main building, thus changing the overall character of the campus.

Plan drawings and models for each design alternative allowed the faculty to compare and evaluate the schemes. The previous day's experience of manipulating the building on the site prepared the participants to comprehend technical site drawings. Consequently, faculty arrived at consensus quickly about their preferred solution, Scheme 3 (Figure 3.22).

Figure 3.22: Design alternatives

Their agreement resulted from the ability to fund this scheme in several stages, since legislative appropriations favor staged development of projects. Since the final day of this intensive process was a Saturday, the students were not available for the presentation since they returned to their homes for the weekend. Students reviewed the plan drawings and models displayed in the school gallery when they returned on Monday. Responses to their preferences for the three design schemes indicated complete agreement with the selection of the faculty, albeit for different reasons.

Key strategic goals of the MCAE include alleviating overcrowded conditions, increasing enrollments, expanding and improving class offerings in functionally appropriate spaces, accommodating student informal social needs, preserving Center assets and resources, meeting the needs of teachers statewide, encouraging community access, and providing safe and secure buildings that comply with all applicable codes. This project addresses all of these goals with the following outcomes:

- Alleviation of overcrowding in the main building by moving mathematics classes currently held in the cafeteria and language and literary arts classes held in administrative conference rooms, into spaces designed for instructional purposes.

- Alleviation of overcrowding in the general computer lab in the main building by incorporating some computer capacity in the new classrooms.
- Provision of music and literary arts spaces that are more conducive to the art forms and which allow for capacity enrollment and for anticipated expansion.

- Provision of costume design and set construction and storage space that is independent from the theater performance area.

The proposed master plan for the MCAE allows for expansion to occur in phases in order to achieve a cohesive campus plan, and accommodate an increased student population of from 300 to 400 students. The

area necessary to meet the diverse space requirements is approximately two times the present area.

All new development is proposed to occur around the existing administration building that will be expanded to include a new Performing Arts Theater, Dance Studios, Music Rehearsal, and Technical Support Area. This addition will also contain new Science classrooms, Laboratory areas, and classrooms for Literary Arts, Social Studies, and Communications, to be located adjacent to the northwest corner of the existing facility.

A Learning Resource Center and Media Arts complex are proposed for the opposite corner of the administration building. A new entry will connect these facilities with the existing classroom building that will be expanded to include large group meeting areas and instructional studios for the Teacher Education Center.

The final report summarizing the planning process included an evaluation of the existing facilities, a comprehensive architectural program, a phased capital budget plan, and probable construction costs. A separate document prepared for legislative review and subsequent funding for 1996 presented the participatory process and the justification for the capital requests at a legislative hearing in Minneapolis. Acknowledged as an exemplary, well-documented process, the legislature awarded 7 million dollars to the MCAE for the first phase of construction consisting of a new building, adjacent to the administration/ classroom building, with space for music, literary arts, science, social studies and communications. This new instructional resources facility allows the GAIA building to be vacated and available for use by resource programs for teacher education. The Adams Group, along with several Minnesota architectural firms was short-listed for the design of the new facility. Based on the success of the participatory process employed during the first stage of this project, The Adams Group was awarded the contract to design the new performing arts building.

To facilitate the decision making process for implementing the first phase of construction, an advisory committee was established consisting of faculty, staff, students, and parents. During the elapsed two years, the students participating in the first phase of the project had graduated and a new student body was present. While it was expected that their full participation would be solicited for this phase of the project, it was equally important not to repeat the issues that were agreed to during phase one. A second workshop was conducted with students, faculty and staff to initiate the building design phase by proposing alternative design solutions according to criteria established by the newly formed building advisory committee. Criterion for evaluation were stated in the form of six questions where participants were required to select the design alternative which best satisfied each of the following questions:

- Which layout has the best location for the entrance?
- Which layout has the best circulation connecting the old and new buildings?
- Which layout provides the best security for people and property?

- Which layout creates the best informal gathering spaces for students and faculty?
- Which layout has the best arrangement for classrooms?
- Which layout has the best location for the music performance hall?
- Which layout do you like best?

Not surprisingly, more than 80% of the responses selected scheme A, a design solution similar to the proposal selected during the first phase (Figure 3.23). With substantial agreement from students, staff, and parents, the process of designing the building began. Discussions between the architect and staff members continued as detailed space requirements were developed to meet the detailed needs of the teaching staff. Computer simulations and three-dimensional models were developed to allow staff and students to visualize all elements of the building (Figure 3.24). Construction documents were prepared, reviewed and approved by all participating agencies, and construction began in the summer of 1998.

Figure 3.23: Alternative proposals developed by workgroups

Figure 3.24: Model and construction of facility (Photo: Graham Adams)

MINESOTA ACADEMIES FOR THE BLIND AND DEAF

Charrette Process
Community action planning
- Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
- Strategic planning

In the winter of 1997, the Academies undertook a master planning process to examine the current and emerging needs of both campuses, and to define the capital projects that would be required to adequately address those needs. The architectural firm of the Adams Group from Charlotte, North Carolina, and design consultant Henry Sanoff, were selected to lead the process because of their significant experience in school design and the participatory pre-design strategies they employ to obtain information used in developing capital recommendations. The Academies have two campuses that are located within a mile from each other. For three days, staff and students from the Minnesota State Academy of the Blind (MSAB) and the Minnesota State Academy of the Deaf (MSAD) articulated deficiencies, needs and desires, and designed what they considered to be ideal spaces for their respective campuses.

Academy for the Blind

The Minnesota State Academy for the Blind is presently located in a collection of five buildings constructed during the past sixty years. Current changes in the campus include the demolition of Dow Hall, and its conversion to a memorial and additional parking space. The master planning process seeks to group functionally related areas, to allow for the expansion of growth areas, and to improve pedestrian and vehicular access and movement around the campus.

The workshop began with a walkthrough evaluation consisting of staff interviews and assessments of major spaces of all campus buildings. A Spatial Data Inventory Form was prepared to assess the adequacy of floor area and functional requirements using a floor plan of each building (Figure 3.25). On the following day, the school community was involved in identifying problems and prospects for the campus. A group of twenty-three students met with a member of the design team. In an open ended discussion, describing their likes and dislikes, students commented about their need for a place of their own to hold meetings and socialize. They noted inadequate study places in the dorm, and the poor arrangement of rooms that do not allow for the needs of blind students. The lack of

Figure 3.25: Spatial data inventory form

weather protected connections between buildings was also cited as a hardship for blind students.

Staff were given a site plan locating all existing buildings, and a floor plan of the main administration/classroom building (Lyson Learning Center), and scaled cutouts of all needed spaces. Working in small groups of about five people, over fifty staff developed ten proposals for improving the campus plan. Many ideas were proposed about connecting the Lyson building with the activity building (pool and gym), and creating a new entrance to the school (Figure 3.26).

Figure 3.26: Blind and sighted faculty in the site planning workshop

An analysis of current and futures activities at the Academy resulted in the need for improvement in three main areas: Academic Learning, Vocational Learning, and in Residential Life. Through a series of six renovation and expansion projects, the campus will have the needed improvements in all campus functions including education, vocational training, physical fitness, residential life administration, and maintenance.

The administrative areas, health and physiotherapy rooms, and science classrooms will be combined to form a new building connecting the Lyson Learning Center and the Gillan Activity Center. This new facility will allow for the expansion of academic classrooms, computer classroom, and student activity room (Gopher's Burrow) in the Lysen Learning Center. The new connector building will form a clearly visible entrance to the

two main activity centers on the campus. Physical training and recreation programs will be augmented by the addition of a new wrestling area, shower and locker renovation. Residential improvements include new study halls and physical activity areas built between each dormitory wing, and the construction of a new residential wing. West Cottage will be renovated to accommodate student needs for independent living. The Industrial building will be renovated entirely for vocational training, with workshops for woodworking, metal work, graphics and science. Overall site improvements will include modifications to existing driveways to improve vehicular movement, new parking areas, new drop-off areas adjacent to academic areas, and improvements in safety crossings.

Academy for the Deaf

The Minnesota State Academy for the Deaf is presently located in several historically significant buildings constructed around an open landscaped area. In response to current and future needs at the Academy, the master planning process focused on improving residential life and vocational training at the campus. The workshop began with a walkthrough evaluation consisting of staff interviews and assessments of major spaces of all campus buildings. A Spatial Data Inventory Form was prepared to assess the adequacy of floor area and functional requirements using a floor plan of each building. On the following day, the school community was involved in identifying problems and prospects for the campus. A group of thirty students met with a member of the design team. In an open-ended discussion, students commented about the small dormitory rooms that lack privacy, the lack of vocational programs tailored to their needs, and the need for a recreational center (Figure 3.27). They view the inadequate gymnasium and lack of a swimming pool as a limitation to their personal skill development and fitness. Students also commented that the present auditorium was not suitable for signing because the floor is not sloped (Figure 3.28).

Staff were also organized into discussion groups of thirty people each. Using the nominal group technique (NGT) each participant was asked to identify and defend their two most important concerns for the future of the campus. Results from the staff discussion groups revealed

Figure 3.27: Students reviewing plans of existing buildings (Photo: Henry Sanoff)

that an important need was for an Industrial Life Skills Learning Center to provide students with a wider range of careers once they leave the school. Staff also agreed that an upgrade of Frechette Hall, the boy's dormitory, was long overdue. Cramped conditions lead to inappropriate behaviors, conflict and disagreements between students that create discipline concerns. The limited gymnasium facilities allow for only one team sport at a time. Consequently, many students have no team sports available, and special needs students never get gym time. A swimming pool was identified as a requirement for deaf students to receive swimming instructions in Sign Language, as well as to allow for intramural competition, exercise, and recreation.

Figure 3.28: Students presenting their viewpoints (Photo: Henry Sanoff)

The renovation of the overcrowded Frechette dormitory will allow for the reduction of the number of students in each room. It will require reworking the bathroom facilities and attaching additional activity rooms for skill development and group games. Tate Hall requires a reorganization of the Living Skills Training Center and shower facilities. Provisions for expanded training in independent living will be made by renovating areas in Pollard and Tate Hall to create apartments for groups of three to four students each. An analysis of campus facilities also suggests the need for a recreational center adjacent to the present gymnasium. This new facility will include a fitness center, weight training, practice courts, and swimming pool. This will vastly expand the opportunities for recreation and physical fitness training at the campus.

Updating technology, and introducing contemporary programs in photography, printing, and auto maintenance will expand opportunities for vocational training at the Academy. The industrial building, Mott Hall, will be required to undergo significant renovations to meet these new requirements. Overall site improvements will include new parking areas, new drop-off areas adjacent to academic and residential areas, and improvements in safety crossings.

MONTAGNARD CULTURAL CENTER

Charrette Process
Community action planning
- Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
Strategic planning
Visioning
- Workshop

A number of recent refugees from Viet-Nam organized themselves and proposed to construct a cultural center to preserve and document their way of life and to educate the surrounding community to their cultural uniqueness. The Highlands of Vietnam has been the setting for the Montagnard tribes who claim they were the first inhabitants of that area. Ethnologists maintain that their Polynesian heritage is distinctly different from the Vietnamese residing in the low-lying areas of the County. The ravages of the Vietnamese conflict, however, led many of the Montagnard's to their exodus from the Highlands to North Carolina, where there are approximately 1200 refugees that meet annually to renew friendships, and share memories and visions for the future.

A major distinction between refugees and immigrants is in their ability to prepare for and accept the difficulties in relocation. Immigrants often make extensive plans before their move to a new nation. Refugee's exodus is a traumatic experience. They have very little chance to plan for their new life. For example, more than one half of the first wave of Vietnamese refugees to arrive in the United States had less than 24 hours to prepare (Gold, 1992). Refugees often encounter special problems in constructing new meanings for their lives. They have the potential to merge with the dominant culture, to create their own ethnic communities, or to engage in some combination of both activities. They must recreate their relations of kinship and community-frequently out of fragmented pieces-and attempt to maintain those ties even as their children rapidly accommodate to American culture (Haines, 1996). In the attempt to rebuild meaning, "many assert themselves by retaining and passing on traditions" (Gold, 1992,200).

The Montagnard leaders in North Carolina and their design consultant, Holly Grubb (1997), from the Community Development Group, believe that a cultural-educational center can serve as a vehicle for cultural retention and learning. Recent studies attest to numerous benefits, such as social support, clearly defined roles and values, cultural preservation, economic and information resources that ethnic communities offer (Gold, 1992). Gold further describes the principle of "ethnic mobilization," a process whereby groups organize around some feature of ethnic identity in pursuit of collective ends. The idea of memory, which requires an interactive process, rises to importance, as a culture becomes more diffuse. Montagnard refugees tend to associate within small intimate networks of family and friends. These groups reinforce social and economic ties among their members and build shared, situational interpretations of ethnic identity that reflect their common experience and concerns.

The Montagnard culture is composed of many different tribes, each with its own specific type of longhouse, where extended families co-exist under a single roof. Traditionally, tribal cultures display a continuity of building forms that express their beliefs and worldview. A Montagnard cultural center can be a setting where people come together to share, particularly for this cultural group that is marked by diversity in terms of region, immigration experience, religious outlook, ideology and background. Such a facility will allow refugees to strengthen ties to the

traditional culture as they cope with the pressures to assimilate to their new surroundings.

The goal of the project is to utilize the knowledge and involvement of the relocated mountain people as an integral component of the development of the center. An open discussion of the scope of the project, led by Holly Grubb, used focus groups to generate four primary purposes:

- For the children
- Teach Americans
- Bring different tribes together
- Have a place for everyone

While there are tribal differences, there is a common understanding for the need to create a special place that will symbolically address the future and reflect on the past. To clarify value differences between tribes, a survey consisting of fifty respondents conducted at an annual Montagnard gathering, revealed broad consensus for a Cultural Resource Center and preferences for the activities expected to be included. From a list of cultural objectives generated by focus groups, thirty-two participants identified those most important and linked them to activities that could occur in the cultural center (Figure 3.29).

Unique to the Montagnard culture is the collective house that represents the communal life of the tribes. This is in contrast to the village with its family dwellings, public edifices, chief's house and the like. The Montagnard "longhouse" is connected to the symbolic aspects of the dwelling and to the co-existence of extended families under a single roof.

In a subsequent workshop, twenty-one participants made drawings of buildings reflecting their culture and developed floor plans identifying and locating the most important activities. The majority of the drawings were three-dimensional views reflecting the traditional tribal building form, the longhouse, with a 45-degree roof pitch. (Figure 3.30). The floor plans were all arranged along a north-south axis with a large social gathering space located at the main entrance. Smaller private spaces were aligned on one wall arranged repetitively along the length of the building adjacent to a long hallway. The key activity spaces generated from the participants at the annual gathering were:

- Large gathering space
- Teaching gallery
- Remembrance area
- Cultural exploration area
- Cultural discovery area
- Vocational activity area

Figure 3.29: Objectives and activities list for the cultural center

Figure 3.30: Typical participants' drawing of a tribal house

In addition to the key areas, service and production spaces were also identified. Focus groups were instrumental in developing a flow analysis of preferred relationships between spaces as well as the design requirements for each space. The same Montagnard focus groups responded to a visual preference survey depicting six variations of longhouse buildings (Figure 3.31) where they ranked each according to their preference. While this exercise elicited opinions, it equally raised the participant's sensitivity to issues related to building imageability. The most preferred image corresponded to picture "A" because of the roof shape and height off the ground. Picture "F" received positive responses to its openness and raised platform, while "B" was least preferred because it was not open enough.

Figure 3.31: Variations of longhouse buildings

Knowledge of the Montagnard's requirements generated from the workshops provided the basis for developing design alternatives for the cultural center that represented the spirit of the community. The key factor in considering the overall site design of the facility was the location of outdoor areas in conjunction with the teaching and cultural discovery functions. A structured assessment process involving the Montagnards helped the designer to arrive at an understanding of the ritual and flow of people through the site (Figure 3.32). The results of this assessment was instrumental in the development of the final design proposal that was unanimously supported by the Montagnard community (Figure 3.33). Fund raising has begun using the project report and three-dimensional model of the future facility to describe the intentions of the Montagnards.

Figure 3.32: Assessment schedule

Figure 3.33: Design proposal (Drawing: Holly Grubb)

SCHOOL PARTICIPATORY GAMES

Relating Objectives for Learning to Education (ROLE): This exercise helps to create a dialogue between teachers, students, parents, administrators, and designers in the process of creating a new or renovating an existing school. Participants are involved in exploring aspects of the school environment by considering alternative approaches to teaching and learning. Educational objectives and learning methods were selected from the educational literature to allow participants the possibility of discussing numerous options (Figure 3.34). They are introduced to stimulate a discussion about the purpose of learning, and the types of physical settings that would enhance student learning. In planning for efficient and effective achievement of educational *objectives,* it is necessary to consider the following:

- *Learning methods* to be used to accomplish the objectives.

- *Role relationships* between student and teacher, whether student or teacher directed. The difference is primarily who makes the decision about the learning activity.

- *Settings or* environments in which *learning methods* will be accomplished.

Figure 3.34: Educational objectives and learning methods

This game is to be played by groups of three to five people. There is no limit to the number of possible groups in this exercise. To begin, each player individually selects, from the list provided, no more than four *objectives* that seem to be the most important. Brief notes should be made justifying each choice. After each player has made his or her choices, the individual lists are pooled. Through discussion, the group chooses from the aggregated list, no more than four *objectives* that are agreeable to all participants. Group members are urged to forcefully support their individual choices, even if other members did not make the same choice, until they persuade or are persuaded by others that an *objective* should or should not be included in the final list. When consensus is reached, the group should record its choices.

The game *record sheet* (Figure 3.35) is used to report the final decisions. Next, each objective should be examined to identify the appropriate *learning methods* necessary to accomplish the *objective.* Three *learning methods* should be selected for each *objective.* Individual choices are then pooled for a group discussion, and consensus about four *learning methods*

for each *objective*. Each *learning method* should be qualified whether teacher directed (TD) or child directed (CD). (Note: This approach has also been used in many non-English speaking countries).

Figure 3.35: Game record sheet

Combining these two components-*objectives* and *learning methods*-the best *setting* (Figure 3.36) should be identified to fulfill the requirements established by the group. All decisions are to be noted on the game *record sheet.* A final discussion of all groups might consist of representatives from each group reporting their collective decisions, with a total group summation of all decisions.

Figure 3.36: Photographs of educational settings matched to learning methods

Learning Environments for Children: Planning the children's center or playroom is a task requiring the specialized knowledge of the architect, as well as that of the early childhood teacher. The problem is similar to a child's puzzle. There are a number of pieces that must fit together in some logical manner. Unlike a puzzle, however, there is not only one correct solution or best fit of puzzle pieces. The differences may stem from a variety of values, goals, and needs of teachers, parents, and communities. Yet, the common aspect to all groups is the nature of activities children of all ages engage in, what they enjoy doing, and how they learn.

While goals are generalized statements about the overall purpose of an educational program such as, *to advance and develop the child's functioning knowledge of his/her environment,* learning objectives are statements that describe the desired characteristics to be achieved by each child. From the goal statement, the following learning objectives might be generated:

positive self image

language development

An activity area or learning center, is a place within the children's playroom described by materials and boundaries, where particular learning experiences occur. The basic arrangement of the playroom is a function of the appropriate learning objectives, and the organization of activity centers.

Planning appropriate environments for young children is a strategy for effectively accomplishing learning objectives. This interaction game process consists of three stages:

- Stating learning objectives;
- Identifying and matching appropriate children's activity centers; &
- Planning the playroom or center.

This structured experience can be used by groups of three to five people, although many groups can simultaneously participate. To begin, each person selects, from the list provided, no more than three objectives that seem to be most important to a particular age group, such as infants, toddlers, two-year olds, etc. (Figure 3.37). The list of objectives has been culled from the early childhood literature. Through collaboration, the participants should agree to three statements that could be incorporated into a unified program for their age group. Then, two activity centers are identified where each objective can be accomplished. All decisions can be noted on the record sheet similar to the previous exercise.

To allow the effective participation of individuals not familiar with the purposes of activity centers, short scenarios are provided for each group (Figure 3.38). In addition to a description of the activity centers, there is a list of learning objectives that can be achieved in each center. It may be evident that the same objective may be achieved by different activity centers.

Figure 3.37: Learning objectives and learning centers

The game pieces represent what is common to all children's centers. How they go together, or what pieces are included, may vary between participating groups. This exercise, however, can provide the preliminary steps in planning for physical changes.

Each of the symbol diagrams represents an activity center in the playroom, as well as activity areas in the children's center (Figure 3.39). Through comparisons between the activity symbols it is possible to decide which centers should be adjacent to one another, and which require some separation. To facilitate the planning process, a grid should be prepared to correspond with the size of the activity symbols (Figure 3.40). The sizes of the activity symbols correspond to the area necessary for the activity center, which usually accommodates two to four children. Therefore the spaces between the symbols correspond to area for movement and circulation. The rules for locating the symbols are as follows:

- Each activity symbol should be placed on a vacant grid.
- Symbols should not overlap or occupy more than one grid cell.
- Blank space between activity symbols should be provided for circulation.
- Activity centers should be located on the basis of their requirements for privacy, quiet, or accessibility to each other.

Figure 3.38: Activity scenarios

While many of the activity centers appear to be related to each other, their placement will require a decision about which are the most important relationships.

A final stage in the process explores the physical features of activity centers. Several drawings of different and unidentified centers are used to promote a discussion among participants about the appropriate character of the center and the image it evokes. While the drawings are not intended to offer design solutions, they can be instrumental in increasing participants' awareness to the "silent messages" conveyed by the physical environment.

The shape and proportion of a playroom are important factors to be considered when planning the learning centers. There are several proposed playroom shapes that represent the range of possibilities (Figure 3.41). Each playroom contains the same floor area with the floor grid divided into squares corresponding to 8ft. by 8ft. One square would approximate a learning center suitable for four children. From the list of learning centers, select six of the most appropriate and locate them in each playroom plan. When arranging the learning centers, consider space for circulation between learning centers. Group members should discuss their

conclusions about their most appropriate playroom shape. A similar exercise can be constructed for K-12 classrooms.

Figure 3.39: Graphic symbols of learning centers

Figure 3.40: Spatial layout grid

Figure 3.41: Classroom shapes

Classroom Environment Ratings: The physical assessment of classrooms can be accomplished by comparing user ratings of different settings using the same descriptive statements, as well as between the *actual* and *ideal* classroom. The technique, described as a Q-sort, consists of descriptive statements (below) printed on separate cards where students sort the cards into piles according to the issue under consideration, such as "most like my classroom" or "most not like my classroom." This technique which David (1982) describes as a Classroom Environment Q-sort is most effective when it supplements other information gathering approaches.

Classroom environment descriptive statements:

1 I have enough space to work without others crowding me.
2 My room has places where you can be by yourself if you want to.
3 I have a place of my own where I can keep my things.
4 In my room it's easy to concentrate on what you're doing.
5 I get to choose where I sit.
6 I can see everything that goes on in our room from where I sit.
7 I spend most of the day at my desk.
8 The furniture in my room is arranged to help work together easily.
9 I feel like I have a place here that belongs to me.
10 I can fix up my place the way I want it.
11 There are lots of good places to work in my room.
12 It's quiet enough for me in my room.
13 We often change the way my room is arranged.
14 My room is neatly arranged.
15 My room is clearly organized.
16 My room is just the right size for me-not too big and not too small.
17 My room is pleasant to look at.
18 My room is a special place for me.

19 There are lots of comfortable places in my room.
20 I get to help decide how our room will be arranged.
21 There are lots of interesting things to do in my room.
22 I get to help add things to my room to make it even better.
There are places for me to display my work.

Planning Outdoor Play: Planning for outdoor play is an integral part of the design process and is a vital component of a child development center. Typically perceived as a staging area for large muscle development, the outdoor play area is not only important for the child's health but contributes to the child's learning experiences (Threllfall, 1986). Outdoor play space offers opportunities for adventure, challenge, and wonder in the natural environment (Frost & Klein, 1983). The only substantial difference between indoor and outdoor activity is that one has a roof over it. Both, however, need architectural and landscape definition, and both needs to provide for the multiplicity of children's developmental needs. For example, a play yard with 12 tricycles, a rocking boat, a tumble tub, a jungle gym, a dirt area, and a sand table with water, has 17 separate play units but only four different kinds of things to do (Kritchevsky, Prescott, & Walling, 1974). Variety can be an important measure of interest. Also, complexity, or the number of subparts of a piece of equipment, such as a sandbox with play materials, water, climbing boards, and crates, can add to a child's interest.

The process of creating outdoor play spaces is age group oriented and begins with developmental objectives that help to generate the activities in which children engage (Sanoff, 1982). The teaching staff and design teamwork together to establish linkages between objectives for outdoor play, the related children's activities, and the play settings required.

To complement the indoor environment, the outdoors provides play settings that stress muscle development as well as natural settings that provide experience in the life cycle of plants and animals. The props used to enable the teachers to make spatial decisions included drawings of different play settings as well as statements of objectives and lists of activities. The planning group moves through a series of collaborative stages in which all members should reach consensus. Finally, the activities and play settings are organized into play zones which range from passive to active play, and from private to group activities (Sanoff, 1982). This part of the planning process helps to generate discussions about the purpose of outdoor play, usually dispelling many of the myths surrounding large muscle development as the primary purpose of children's outdoor activities.

Learning objectives for outdoor play are discussed in a similar way to those in the planning of the playrooms. Objectives such as problem solving, concept development, and social development, are key concerns of the teachers. Supporting activities like role playing, climbing, feeling and handling, balancing, sliding, and construction comprise the array of choices most frequently made. As a result of making these linkages, the subsequent choice of play equipment and play areas is based on a clear

understanding of the developmental needs that the outdoor play area should serve. Other types of individual or quiet activities, group games, and opportunities for exercising imagination are also appropriate for outdoor use, but may not necessarily require the construction of special equipment.

An analysis of the building site and its topography would influence the location and options for various play settings. A site map should be used as the basis for planning areas where play settings can be clustered according to similarity of requirements. Play zones include areas for drama, nature, adventure, and large muscle development. Equipment and zone choices are then related to specific site requirements, such as solar orientation.

Planning outdoor play is a method of facilitating the design of children's outdoor play areas. Participants involved in the playroom exercise can continue planning for their age group in an outdoor area contiguous to their playroom. Using the same list of educational objectives found in playroom planning, participants could select three, using the same consensus decision making process. Each objective would then be matched to three outdoor activities from the expanded list (Figure 3.42). The selected activities can then be used to identify the appropriate graphic symbol (Figure 3.43). When all the outdoor play symbols are selected they can be organized into play zones (Figure 3.44). The setting drawings, which range from active to passive play and private to group activities, are provided to aid in visualizing how the activities can be spatially organized according to the symbol diagram (Figure 3.45). Zones are a planning strategy for enabling activities with similar requirements to be clustered together. The diagrams of outdoor play equipment are drawn to scale and allow participants to organize and locate the equipment on an actual site.

Figure 3.42: Outdoor activities matched to objectives

Figure 3.43: Graphic symbols for outdoor play

Figure 3.44: Graphic symbols organized into play zones

Figure 3.45: Play settings organized into play zones

Role-Playing: Direct human involvement in decision-making integrates thought and action. With increasing participation comes the inevitability of conflict resulting from value differences among participants. An effective approach to solve a problem within a controlled set of circumstances can be achieved through role-playing, where a plot or basic conflict situation is designed. Information is given to each participant in the form of a profile which describes the character, and the factors influencing the player's behavior. A scenario describes the setting in which the role playing activity will occur. In a free role-play, compared to a structured event with rules, participants begin interacting immediately after receiving the profiles and scenario.

For example, a school building committee with broad based representation from the administration, the teaching staff, the parents and students, and the architects has the potential for conflict during many stages in the design process, particularly in the earliest stages of establishing educational goals. From the architect's point of view, one of the main objectives of a role-playing simulation is to prepare the design team for the unexpected conflicts that might occur during community meetings.

Typical profiles for the composition of such a committee are shown below. The scenario can identify the purpose of the meeting, with a playing time limited to between one and two hours. An observer can lead a follow-up discussion with the participants to ask several questions. What

kinds of decisions were made? What influenced the decisions made? What did the participants learn? What did they feel they had done wrong? Were conflict situations successfully resolved? How closely did the role-playing situation approximate a real one?

Profiles of committee members for a private alternative school:

Parent No. 1: You feel that the public schools do not understand your child. She does not get along with her teachers. They pick on her for things she does not do and accuse her wrongly. You feel that with smaller classes and better teachers, your child will be better understood and do well.
Parent No. 2: You are seeking a school where your child can be with children of his social level. The typical public school expose your child to children you would want him to become involved with—children not of his own kind.
Parent No. 3: You are seeking a school where your child would have better academic opportunities. You are interested in your child being a high achiever; getting good grades so she can succeed in life.
Parent No. 4: You, the doctor, feel that academic achievement is of utmost importance. There should be an emphasis on learning facts and information, instead of all this freedom of the child pursuing his or her own interests. Your child should learn and get good grades, so he can get into a good university.
Parent No. 5: You, as a builder, are concerned with building cost. To you, a good school means sound brick construction for a low price. You will support most ideas about education as long as they do not interfere with a sound building.
Student No. 1: You feel that it is important to have personal control over your daily activities and be involved in group projects.
Student No. 2: You feel that an athletic program is a basic need for a good educational program, because it builds healthy bodies and healthy minds.
Teacher No. 1: You believe in a strict schedule where all children do all their activities together, are assigned tasks and must fulfill their assignments.
Teacher No. 2: You believe that with appropriate materials and guidance in their use, children can proceed at their own rate and interest. They are free to question the teacher and ask for help when needed. Children can move about freely with the teacher's permission.
Architect: You are designing a school for this community. In order to successfully achieve this end, you must find out from this representative group, what the educational objectives are. The objectives of the participant's ideas may conflict. Your role is to direct the group to reach some agreement about their goals.
Principal: You feel that education is self-directed. Each child pursues his or her interests at their own rate of development. Each child receives individual instruction as required.

In addition to the analytic component of a role-play simulation, there is an emotional, dramatic element as well. Participants openly express their beliefs, opinions, all of which are a reflection of their attitudes and values. The recognition of value differences that generate conflict early in the planning process enables designers to identify means for reconciliation of those differences. Conflicts can be resolved when dissenting participants are asked to restate ideas they oppose by identifying and stating the positive features of those ideas. This procedure attempts to maintain a positive discussion while enhancing individual listening skills.

Role playing games can enable participants to analyze and practice solving specific problems that arise during the school design process. They simulate the communication of information and decisions in the actual situation in which they may be employed (Abt, 1970).

Photo Questionnaires: Buildings and spaces convey messages reflecting the inner life, activities, and social values of the users. Characteristics like shape, color, or arrangement enable the making of vividly identified mental images of the environment. These environmental cues have something to say about the people who occupy buildings as well as the people who created these buildings. Similarly, people read these cues, make judgments, and act accordingly. These messages play an important role in people's comprehension of the environment. Specific environments can be evaluated about the appropriateness of the messages conveyed. Effective methods for eliciting responses to the environment are through the use visual techniques, such as drawings, photographs, and video.

Photo questionnaires and interviews are an effective means used to elicit evaluative comments about physical settings. People interpret the identity and meaning of their environment from the interaction of, and their interaction with a wide variety of physical features. In the school environment, there are a variety of inside and outside places that evoke either good or bad feelings (Figures 3.45 a,b).

Becoming aware of perceived environmental effects is a necessary first step in striking the delicate balance between familiarity and monotony and boredom and between variety and confusion and disorientation. With understanding of how physical surroundings affect us psychologically, we can become more aware of our effects on them, and on ourselves, when we allow them to be changed. We will then start to realize the importance of our concern for our surroundings, and eventually work toward the improvement of their quality.

Figure 3.45a: Photo questionnaire: Best location to have lunch

Figure 3.45b: Photo questionnaire: Best location to attend class

Section 4

Participation in Housing

Who decides what for who is a central issue in housing and human settlement? John Turner, an advocate of self-determination, believes that when people are in control of decisions about the design, construction and management of their housing, the process and product will effect their social well being. When people have no control over the housing process, the housing produced may instead become a barrier to achieving personal fulfillment and a burden on the economy. People become invisible in the housing process to the extent that housing providers either do not see them at all or see them as stereotyped individuals. This blindness is the result of a genuine desire to improve the living conditions of as many people as possible. Providers have a fixed idea of what is considered to be good housing and consequently discount the role of the dweller in the housing process. This contention is generally based on assumptions that public participation is inefficient and time consuming, that people don't know what they want, or that people trained in housing know better about user needs than they do. On the basis of these beliefs the housing

needs of many people in the world have been reduced to specifications of codes and standards, however well intentioned they may be.

Housing is a complex world of cultural action and material practices, and not merely an artifact. The symbolic meaning and use of the house varies greatly, not only between different cultures, but also among different groups within a society (Duncan, 1985). Customs, habits, and classification of categories of the residents order its form and design. Moreover, its rooms or other kinds of spaces are usually classified, named, and used according to cultural and social conventions (Lawrence, 1989).

In most housing production systems, individual houses are often designed to be standard. Families who are greatly different in their socio-cultural needs live in houses designed for average family needs. These houses are built with the same walls, the same windows, the same shaped bedrooms, and the same shaped kitchens and bathrooms (Alexander, 1985). In recent years, studies that discussed the importance of socio-cultural factors on housing design and the failure of present housing policy to meet users socio-cultural needs have concluded the following:

- A house is not a thing that can be designed or built. It is the result of a housing process. The important act in this process is that of the user who lives there. The act of living there is the only act that makes a house something special. If the house is not a thing but an act, the act (user) becomes important (Habraken, 1986).
- Users are far more accepting of what they have designed and built than if the design had been built by someone else (Hardie, 1988).

- In most societies a house is more than a physical structure. It has a social and cultural value, whose shape is often determined by cultural tradition. So, housing options need to be socially, economically, and culturally more appropriate than those generated by theories of housing development tied to fixed notions, static formulas, and ideological commitments rooted in Western industrial society (Sanoff, 1988).

- Because housing providers place an emphasis on producing "units" to meet housing demands, there is an argument for the redefinition of housing problems as functions of mismatches between people's socio-economic and cultural situations and their housing processes and products (Turner, 1977).

In opposition to institutional methods of housing delivery, and the inability of public housing programs to meet housing demands, an informal housing system emerged in many parts of the world. Informal housing varies from country to country, and can include everything from well-constructed middle-income housing to cardboard shacks built in swamps, to multifamily housing, and to occupied condemned and dilapidated buildings. Informal settlements are defined as spontaneous settlements, in reference to the absence of governmental aid and control; uncontrolled settlements, in reference to their lack of regulation; and shan-

tytowns, in recognition of the fact that they are inhabited by low income people. The appearance of informal settlements varies according to the availability of building materials, the finances of the squatters, and the prospects for continued possessions.

The remarkable fact is that much of the world's housing is being produced and finished outside the institutional framework of the official, or subsidized housing sector, often resulting in solutions that are both socially and economically more viable than much of the lowest cost housing provided by public subsidy. The informal sector is capable to build and does build houses suited to their needs and within income capacity. Housing is built by owners themselves, often with the assistance of family and friends, and with various amounts of hired help.

A more organized approach to housing the poor is referred to as self-help, which leads to a gradual improvement housing on the basis of realistic standards and overall costs, as well as to generate income and employment within the physical and social infrastructure (Habitat, 1987). Habitat for Humanity employs the concept of mutual help where people join together to achieve a common economic end through the formation of a democratically controlled business organization, making equitable contributions to the capital required and accepting a fair share of the risks and benefits of the undertaking (Habitat, 1987). People, however, participate by providing the labor for the construction of their dwelling, but rarely in the planning and design stages. A basic assumption in human settlement planning is that it is for the people. Therefore, people should participate in the planning and management of their housing. Opinions on who should participate, in what, and how, vary widely between and among project agencies, politicians, and residents.

Most of the U.S. government's housing programs stipulated little or no role for citizens other than as users. While residents have not had a mandated role in federal housing programs, they have not been passive bystanders. Dissatisfaction with federal housing programs, high housing costs, low vacancy rates and inadequate supply stimulated resident activism to improve their living conditions. Today, there are a variety of citizen-initiated programs that represent alternatives to the traditional methods of supplying housing. The types of citizen-initiated programs that have been used as models for nationally oriented programs are (Bratt, 1987):

- Neighborhood Services Program
- Small-scale home ownership programs
- Tenant management of public housing
- Alternative management/ownership of private rental housing

Citizen-initiated housing programs have generally cycled through the stages of problem definition, program development and implementation. A model of how bottom-up, citizen-initiated programs operate are as follows (Bratt, 1987):

- Identification of serious housing need.

- Action plan developed by community group.
- Community group receives financial and technical support from public and private sector.
- Funding support maintained after program is initiated.
- Resident control and participation are maintained throughout the program.
- Consumer safeguards are incorporated into the program.

Bottom-up citizen participation processes reflect the actual needs and aspirations of the community and depend on continued citizen involvement. Langton (1978) makes the distinction between this and top-down participation. He distinguishes between citizen-initiated participation, which is bottom-up and government-initiated participation as top-down. Bratt suggests that the federal government should seek to develop top-down programs that are based on successful bottom-up programs.

WELLER STREET HOUSING CO-OP

A housing co-op, organized by eight young homemakers, allowed Liverpool's, Weller Street residents to leave their deteriorated housing yet maintain the social networks established over several generations (McDonald, 1986). They were determined not to put up with the kind of life that went on in some of the outlying housing estates. This initial Action Group expanded their numbers to 62 households before they received legal recognition as a co-operative. This group included pensioners as well as families with children.

Realizing that there were technical and legal requirements the group had to digest, they formed several sub-committees or working parties that assumed responsibility for site and space planning, education and information, and fundraising. The working parties quickly learned the language of the experts they consulted and persuaded them to express themselves more simply. While co-op members all had previous experience of dealing with officials, they believed their future dealings would be more effective as representatives of an organization. They also wanted to ensure that they were not merely informed but actually taking part in all the key negotiations with the different departments of the City Council, with the Housing Corporation, and with the Department of the Environment. Early on the co-op negotiated a development agreement with Co-operative Development Services to have complete control, to be informed at every step in the planning and design process, and to have the decisive word. The same applied to the choice of architects. The successful firm was given a working brief that made it clear that at every stage their expert was to be "on tap but not on top."

Although there were delays in selecting an appropriate housing site, the co-op held a carnival on the selected site where members brought picks, shovels, and a pneumatic drill to open the site by digging out stone cobbles to landscape the courtyards on the completed estate. During the construction phase co-op members frequently visited the site of their new homes and found the construction workers more committed to the project because they knew each family they were working for. To produce a culturally responsive environment, and to ensure acceptance as well as affordability of the end product, it is necessary for the community to be involved in the formulation and assessment of objectives. It is only through direct involvement that it is possible to obtain the views of the local community/end users when preparing project proposals.

COMMUNAL HOUSING

Participation is not an idea that originated in the twentieth century. The beginning settlements' humans formed during their evolution were the result of community participation. Individuals grouped together in tribes to get their basic needs, namely food, clothes, shelter and social contact. The lifestyle of living together in tribes lasted until the division of tasks and responsibility began on a large scale as result of agricultural societies. Although some groups have continued as communal settlements over the years, they have no contact with modern society because of their remote locations.

The art of communal living for the most part has become extinct. Any commune started today is an experiment, yet they continue to emphasize individual ingenuity. A review of the various types of communal settlements can illustrate architectural achievements often ignored.

Experiments in communal living have sprung up throughout Europe and the USA. These experiments are usually in the tradition of free and voluntary associations of people living by principles of cooperation, mutual aid, spontaneity of relationship and organic growth. In its extreme form this tradition may be seen as a reaction against the prevailing social system, whose intentions do not provide adequately for the communal aspiration (Broido, 1971).

A movement that gained impetus in the 1970s loosely described as the human potential movement, concerned itself with the deliberate creation of conditions that existed naturally at earlier times when the 'community' was a living, social entity. One method of recreating such conditions is voluntarily to live with others and share one's life and abilities with them to a greater or lesser extent. This may be seen as an attempt to revive the old kinship system with persons who are not blood relations. Such a communal ideal goes not against the family but beyond it; it places the family in a natural setting in contrast to the isolation that is often the condition of the contemporary nuclear family (Faraday, 1970).

A successful communal atmosphere can foster human qualities of sympathy, perceptiveness and understanding that are essential for indi-

viduals to realize themselves fully. Communal living makes it easier for people to maintain a full, natural social life when they want it. In such a group situation theirs is a continuous ebb and flow of people where each individual or couple has at least their own place, and specifically designated communal places. The living arrangements allow a continuous gradation between privacy and community according to individuals' needs of the moment. Conventional self-contained single family housing units do not allow this. When two people live together their mutual dependence and isolation from others is often such that they cannot express any negative feelings without fearing a catastrophe. Psychologists believe that the ability to express both positive and negative feelings towards the same person are characteristic of emotional maturity; thus people may not be able to achieve this sort of maturity in isolated pairs. Group living can create better opportunities for an honest liberating expression of feeling without catastrophe, and reduce the tendency for people to withdraw into sullen resentment.

These conclusions are those based on the experience of people living in communes. The possible practical benefits in such matters as buying and cooking food, sharing expensive consumer durables (washing machines, etc.) and other tools and equipment, are more obvious. A significant practical advantage of communal living is probably in the sharing of certain jobs: baby-sitting, driving, nursing and housework.

The provision of pre-school education in play groups has practical child rearing advantages such as the interaction by children of different ages, and the subsequent independence developed by children for each other.

Participation in the Kibbutz

A unique practice of child rearing occurred in the early Kibbutz, which functioned like a large family of 20 boys and girls and which developed in Israel as a result of the increase in the area under cultivation and the rise in population. An examination of Israeli Kibbutzim provides a good example of levels of participation and how they change over time. The early stages of a Kibbutz, Gariin, consist of a group of young people (much like a scouting troop) committed to the egalitarian goals of Kibbutz life. They are basically lacking in structure, with some adult link to a host Kibbutz. All participate in whatever they so chose, as all is informal (Sharon, 1976).

The second stage of development, Hachshara, also lacks much structured organization. This step occurs when members of the Gariin mature enough to be committed to facilitating the reality of the Kibbutz existence. The leader from the Gariin becomes the leader who provides guidance to the group throughout Kibbutz life. The Hachshara becomes a part of the jurisdiction of the host Kibbutz, living on the host's property and becoming a part of its work force, with no group or individual power within the Kibbutz. As yet, there is no real power structure. The only committee that exists is the one for social activities. All members discuss

decisions in a voluntary, uncontrolled way; the group is young enough that its realization envelops all personal thought and interaction. The singularity of goals (realization of the Kibbutz) is enough to prevent disparity and, therefore, preclude the need for structure.

When the Hahshara moves away from the host kibbutz and gains independence, a need for some organizational structure arises. Kibbutzim are societies within themselves, encompassing production (agricultural) through consumption and repair of finished products (clothing and food delegation, tailors and shoe repair services, etc.), social activities, educational activities and jobs. The goals of the Kibbutzim are to be autonomous and relatively self-sufficient; to equitably distribute work, responsibilities and benefits; to democratically make decisions that by definition effect all. Every member of the Kibbutz is a member of the general assembly that has final power in almost all decisions. This is the place where all people meet in their various roles and relations and try to develop a consensus. In the early stages of a Kibbutz this is usually an easy accomplishment as all are committed to and enveloped by the ideals of Kibbutz. There is still, however, a need for power differentiation. The Kibbutz must deal with the external realities, such as obtaining loans and selling products, which effect them. It is necessary to delegate authority and responsibility to individuals and groups smaller than the general assembly in order for the daily routines to take place. Roles frequently change, and elected positions are subject to swift turnover if desired by the members of the Kibbutz.

Through role and power differentiation, while the ideals of Kibbutz life are burning strong, consensus remains and all are part of decision-making. As the Kibbutz matures, it grows in population and heterogeneity, and daily operations require increasingly complex management. Members have different physical limitations that must be considered, at times producing conflicts between individual needs and general Kibbutz goals. When there is overwhelming consensus among members (in early stages), this does not present much of a problem as the individual, voluntary or through peer pressure, give in to the general welfare. But, in older Kibbutzim, where heterogeneity and size give way to divisions and a lack of primary commitment to the Kibbutz, such conflicts become more problematic. Without ideological commitments to induce compliance, and without general awareness and pressure to conform, organizational authority becomes an imposing force. Apathy is still considered to be deviant behavior, but a lower level of commitment is expected. People are less aware of all that is going on (particularly because there is so much going on due to size). Occasionally Kibbutzim run campaigns to increase participation, but such rarely have lasting effects. This atmosphere has given rise to the development of discipline committees and "field courts."

The self-governance and management in all aspects of life that was (and still is) the initial goals of Kibbutzim are subjected to severe compromise over time. Growth and change, largely due to early success, necessitate stratification of functions and differentiation of power and exclusion of many in decision making processes.

As with business corporations, there is a level of participation that is appropriate for individual situations. The Kibbutz, its functions and

needs and problems vary over time. In order to succeed, members must adapt power differentials and levels of participation to fit the current situation. The experiences of the Kibbutzim exhibit the need for authority and less participation, as an organization becomes more complex. Complete self-management is not optimal when the complexity of the organization requires experts. Additionally, people do not always want to participate, requiring the others to accept the responsibility and have the power to do so.

These economic, social and ideological developments affected the physical layout and building character of the Kibbutz. While there are several types of villages in Israel, none could serve as a model for Kibbutz community based on collective life, work and land. The early Kibbutz of the twenties, built as a rectangular courtyard, with dwelling quarters on one side, farm buildings on the other side and the dining hall, later added the children's houses in a central position. This compact layout enabled the farmers to see all that was going on in the various parts of the settlement and shortened the walks from living quarters to stables and orchards. As the population increased and the economy burgeoned, the new farm buildings began to move beyond the courtyard and an urgent need for functional planning arose. By the forties and fifties many of the older Kibbutzim extended their agricultural branches, added workshops and factories, and increased in numbers. Many of them reached or exceeded a population of 800-1000, including children, new immigrants and students. This population is regarded as an efficient number for a productive economy and a social optimum for a culturally and socially flourishing collective ambiance. The settlement plans based on those population data conceived of functional building zones separated by garden strips, each of them able to organically expand.

The residential zone consists of single or two-story buildings containing several small apartments, every building being surrounded by trees and gardens (Figure 4.1). The Kibbutz tries to create for each couple an environment of privacy and serenity. The children's area, located in the residential zone, consists of different houses designed according to age groups: the babies are in the infant houses, the toddlers in a second group, older children in kindergarten. At the age of six they enter the first class of elementary school, and at twelve, the adolescent's society. The various children's houses form closed units for each age group, and consist of dormitories, playroom and classrooms, with an adjoining courtyard for the children's outdoor activities. The adolescent's society is one in which 200-300 youngsters aged twelve to eighteen, learn, study, live and work together. This society may be an organic part of one large Kibbutz, or may serve three or four smaller Kibbutzim. Organized as a small educational, social entity, general subjects are taught as in any school, except that agricultural topics are stressed. The youngsters run their own lives according to the Kibbutz pattern, through general meetings and committees. Teachers participate and guide but do not dictate or interfere directly.

Figure 4.1: Kibbutz dwelling (Photo: Goeff Sifrin)

The layout of the buildings needed for adolescents generally resembles that of the Kibbutz itself. There are several housing units, for 30 boys and girls, each one containing bedrooms and a classroom, where they study and work. The central Kibbutz building is the dining hall, in which the members meet at least three times a day for their main meals. In the evenings, lectures, election meetings, discussions, social events and festivities take place (Figure 4.2). The dining hall usually opens on to a central lawn, surrounded by other public buildings: the secretariat, library and reading room, a service buffet, club rooms and lecture rooms. The lawn itself serves the whole Kibbutz population, including the children, as a rest and play area. In the summer, members use the lawn for open-air cinema performances or lectures. The Kibbutz then, has its roots in economic viability, unlike the communes of the 1960s and 1970s that proposed alternative lifestyles.

Figure 4.2: Kibbutz site plan (Courtesy: Settlement Development, Jewish Agency, Jerusalem, Israel)

Dome Culture

The use of domes as social pivots, and their symbolic newness and geometric simplicity, were more important to their builders than their advantages as a mass produced, lightweight modular component, and efficient hi-tech commodity expressed by Buckminster Fuller. Being a mathematical form, the emphasis when building a dome is on individuals working together rather than in the more personal modes of building where there is a need for mutual agreements over style.

The Red Rockers (1973) wanted to create a structure that was free of traditional symbols--a new kind of space in which to create new selves. They also required a space that was large enough to house the original eleven men and women, as well as a space voluminous enough to assume different shapes as their needs changed. A 60-foot dome was created, followed by a celebration attended by 180 people holding hands in the predinner circle (Figure 4.3).

Figure 4.3: Dome dwelling

The first winter the inhabitants all slept in a circle along the walls of the dome. By the second winter, new additions included a child's room and a mezzanine-sleeping platform that extended three quarters of the way around the dome's circumference. The platform improved the lives of the residents since it was considerably warmer in the winter time, and most of the beds had a splendid view through the windows that served to heat the dome on sunny winter days.

During the summer time most of the Red Rocker moved out of the dome into Tipis or temporary shelters. Subsequently many people built small houses--sleeping spaces designed for one, two or three people and without kitchen facilities. After three years of living in a 'heap,' most of the dome residents decided that in order to keep becoming new people, to keep growing and changing, they needed more privacy. They still continued to be a communal family but they needed a new kind of shelter to encourage personal growth. The dome continued to be a center and the mezzanine platform was converted into a crafts area.

Christiania

This movement had its counterpart in other parts of the world, especially in Denmark with the free town of Christiania, an area of 22 hectares less that one kilometer from the center of Copenhagen. At the southwest end of the town stands solidly built four to six story military barracks and factories, while towards the northwest it becomes increasingly rural with small clusters of farmlike buildings surrounded by trees. A reed-lined river crossed only by a wooden footbridge, traverses the site. The military used the place as a camp and munitions factory from the middle of the nineteenth century until 1970, when they moved elsewhere and boarded up the site. It was to become the property of the Ministry of

Culture for educational and cultural institutions, but, being a prime site, the land value was high and the city authorities wanted it for housing, new roads, sports facilities and more lucrative uses. While the authorities procrastinated a few hundred people invaded the area in 1971 and took over the vacant buildings. The free town of Christiania was declared.

In the ensuing years the population has grown to almost 800 with many more during the summer months. It is the largest squatter settlement in Europe. Many different types of lifestyles can be found in Christiania, from people living in self-built huts, families living in small wooden houses (Figure 4.4) to collective communal living in converted factories and munitions storage buildings (Wates, 1978).

Most people are in their 30s and 40s, but there are a scattering of older people and children, many of whom were born there. They come from a variety of social backgrounds and include professionals as well as some people who would normally be described as deviants: alcoholics, drug addicts, runaway children and so on. Many of them might otherwise be in social institutions but in Christiania they are tolerated.

People come to Christiania because they are not willing or able to adapt to the ordinary demands imposed by society and find there a refuge where they can be accepted and function in a "non-institutional fellowship", as some call it (Figure 4.5). While some of the inhabitants have moved from a hopeless or personal situation, others come from a positive desire to develop alternative ways of living. Instead of institutional rules, orders, and control, they want to create a society based on acceptance of everyone without asking about the past, upon non-intervention, low standards of material consumption, reuse of materials, biodynamic food and so on. While some people have fulltime employment outside, the majority have created jobs for themselves inside the community.

Figure 4.4: Christiania self-built houses (Photo: Jorgen Peder Hansen)

Figure 4.5: Christiania new housing (Photo: Henry Sanoff)

A variety of enterprises have grown up: restaurants, bars, bakeries and workshops making everything from boots to bicycles. The town has its own art gallery, radio station, kindergarten, and a health clinic that is devoted mainly to herbal and homeopathic medicine.

Christiania has a decentralized structure with 11 districts, each of which settles both problems and conflicts at bi-weekly meetings. Open meetings of the whole community are also held regularly or more frequently in times of crisis. Various working groups exist to deal with particular aspects of community life like information, publicity, external negotiations, cleaning up, tree planting, health and fire protection and festival organization.

From a physical planning point of view Christiania appears to be spontaneous and totally based on the practice and ingenuity of the users. Since the normal building restraints have been removed, individuals and groups are free to shape their spaces, buildings and furniture to suit their own needs. Every house, room, table and stove is different because of the different requirements of its users and makers. The factories and munitions depots have been modified and decorated by their new inhabitants. Balconies, rooftop platforms and greenhouses have been added using timber from demolition sites. Other people have built complete houses from scratch.

Different areas of Christiania have developed different characteristics and different atmospheres (Figure 4.6). There is a downtown where a conglomeration of bars and small stalls gives the place the appearance of a wild west town.

Figure 4.6: Christiania entrance (Photo: Henry Sanoff)

Inevitably the authorities have tried to crush Christiania because it is seen as a threat to the established order and traditional values. When the initial occupation occurred in 1970 the government considered it impracticable to evict the inhabitants immediately, as there were no ready plans for the site. Three years later it was agreed to allow the situation to continue as a "social experiment" for three years, however, the city authorities required that building conditions be brought up to legal standards. When the Ministry of Defense, the legal owner, calculated that this would cost 3 million dollars that was not forthcoming, they cut off water and electricity and began demolition of the worst buildings. Both moves were defeated by legal action. When the agreement came to an end in 1976, the authorities decided to terminate Christiania but were met with opposition from the residents and from a wide section of the public who were in favor of continuing Christiania as a social experiment.

Cohousing

Other new forms of group living developed in Denmark, Holland and Sweden have been inspired by practical rather than religious or ideological concerns. Cohousing began as a grass-roots movement that grew out of people's dissatisfaction with existing housing choices. Its initiators were influenced by the popularity of shared households, where unrelated people share a traditional house, and generally from the cooperative movement. A cohousing community is distinct in that each consists of individual households with private dwellings and shared common facilities (McCamant & Durrett, 1989). Cohousing communities are unique in their extensive common facilities, and more importantly, that the residents themselves are responsible for organizing, planning, and managing.

A group of families who wanted a greater sense of community than was available in suburban subdivisions or apartment complexes built the first cohousing community in 1972 in Denmark. Architect Jan Gudmund-

Hoyer and many families met to discuss the advantages of living together. This resulted in a small number of them attempting to buy a site suited to their goal of collective development. All agreed that the development should be designed to be open for community activities. After many difficulties in locating a site and obtaining loans they succeeded in constructing 33 individually owned houses and a community center situated near Copenhagen in an area named Skraplanet (Figure 4.7). The houses were built close to each other on the south slope of the site so all the houses had an open view of the South. For this reason, all of the houses had flat roofs. The basic house units were all alike, both for economic reasons and to conform to the desire for similar conditions within the collective. There was direct access to each house from the common areas, paths and open squares. In each house, the living room had a window to the communal area outside, so that visual contact would encourage spontaneous visits.

This was the first of the communal housing projects that had continued existence in spite of divorces, children growing up and leaving,

Figure 4.7: Plan of Skraplanet

Figure 4.8: Skraplanet co-housing (Photo: Jan Gudmund-Hoyer)

and inflation (Figure 4.8). In all of the co-operative housing developments in Denmark, France, Germany, Sweden and the United States, the social experiment of households living together, and sharing facilities is seen as beneficial (Fromm, 1991). Dining together is available almost every evening when families rotate cooking responsibilities. Unlike most communes in Denmark, young professionals with one or two children have been the pioneers of communal housing, primarily because they have the income to experiment.

The development has a community center containing a nursery school, hobby workshop, bar, meeting room and an arrangement by which parents with school age children look after each other's children after school. The residents eat together in the community house four times a week. The idea of designing the development in an open way, with the houses strongly integrated in the community, has provided, in practice the expected high level of activity among the residents. Both large and small cooperative groups have been established, and there are club activities, regular community meals, and other joint functions of many kinds.

The first American cohousing development located in Davis, California opened in 1991. This development includes all the elements of European cohousing such as resident participation in the development process and pragmatic social objectives. Most American cohousing developments look and function similar to Danish cohousing with low rise attached housing clustered on the site, a centrally located separate common house, and parking at the periphery of the site. American cohousing often differs from the European in financing and tenure, and in overall dimensions. They do not differ in the intentions of the residents to create a supportive living environment and a sense of community.

Sustainable living has been a goal of American cohousing groups because it provides an organizational framework for buying and maintaining alternative technologies and systems. Cohousing participants realize that sustainable design has a great deal to do with location near services, not necessarily building on farmland, but rather in existing metropolitan areas, and in higher densities. Cohousing appears to be one

method of revitalizing urban neighborhoods, bringing in home ownership and stability, plus providing a built-in sense of security for the cohousing residents.

Several studies conducted on North American cohousing communities revealed that these developments have a diverse mix of ages, incomes, religions, family make-up and sexual orientations. There is not much racial or cultural diversity (Pais, 1995). Resident's satisfaction with the development process in the first wave of cohousing communities is understandably low, since a timely delivery process is yet unresolved. In a post-occupancy evaluation survey, a majority of the respondents used the word community' or words associated with the feeling of community such as 'a sense of family' and 'support' in describing the advantages of cohousing. American cohousing provides a strong sense of community. That this community is much harder to develop than was envisioned, that it requires large amounts of time to maintain, that making decisions together is not as smooth as anticipated, and that often a sense of privacy is decreased--that is the cost. And that there are Americans willing to pay the costs demonstrates the value of community to them, and of the cohousing concept as an alternative to the American Dream.

FARMWORKER HOUSING

Charrette Process
Community action planning
- Focus groups
- Game simulation

Goal setting
- Group interaction

Participatory action research
Public forum
Strategic planning
Visioning
- Workshop

In North Carolina, where agriculture provides a significant portion of the state's income, farmworkers contribute significantly to the economic development of the state. The 70,000 migrant laborers who come to improve their own economic situation contribute to the state's economic prosperity as well.

The primary reason for improving the conditions in which farmworkers live is that they, just like anyone else, deserve a safe and appropriate dwelling. Justifications such as "this is better than where they live at home" are unfounded and inappropriate, for a variety of reasons. The only opportunity for workers to voice concerns is when housing conditions are so bad that they do not meet the Department of Labor regulations

Studies have noted the current abundance of agricultural laborers as one reason that farm labor contractors are unwilling to provide housing, or the appropriate level of housing, for workers. As labor camps age and maintenance costs to meet OSHA standards increase, employers often close the camp, raze the buildings, or sell the camp to a third party to manage rather than invest in needed repairs (National Farmworker Housing Survey, 1980). "From the perspective of the grower who needs

apple pickers, a shelter need not offer much for two weeks; from the point of view of the migrant, living in barns and using privies can be a way of life week after week, month after month" (National Farmworker Housing Survey, 1980).

The public is generally unaware of farmworker housing needs. The press rarely covers issues of sub-standard farmworker living conditions. Housing problems are frequently balanced with arguments about 'increased prices for a head of lettuce' or 'growers' responsibilities for housing.' The first statement implies that if people were willing to pay more for fruits and vegetables, then farmworkers could be paid enough to afford decent housing. The second ignores the importance of seasonal labor to the overall economy of the state, not solely for the well being of growers.

According to the National Farmworker Housing Survey, health status indicators show that migrant workers' health is worse than that of the general population--25% higher infant mortality, with 9 times as many births occurring outside of hospitals; 20% higher death rates from influenza and pneumonia; 2.5 times more deaths from tuberculosis. These factors are important indications that housing conditions reflect many opposing forces, and highlight the need to improve conditions so that housing supports the needs of farmworkers.

The need to produce new housing units in North Carolina is being accelerated by the scouting program initiated by the Department of Labor in 1996. Inspectors are actively searching for occupied but unregistered migrant housing units throughout the state. The location of all camps is being precisely recorded using global positioning technology. This system will help to locate and eliminate unregulated and inappropriate migrant housing.

A National Farmworker Housing Survey (1980) estimated that of the 500 camps they inspected in their survey, only 3% are public owned and 92% are privately owned. Another 5% is owned by employer related cooperatives. The Survey indicates that dormitory style arrangements were found to be most prevalent in the Carolinas. At that time over 60 % of the buildings inspected in the Carolinas were found to expose the occupants to the elements, and that buildings in that region were consistently in the poorest condition. The Carolinas offered fewer facilities per occupant than any other area of the country. Family composition also affects housing adequacy; three or four individual workers can share housing designed for families, but housing designed for individuals--typically barracks and dormitories--lack the space and privacy necessary for families (National Farmworker Housing Survey).

Crowding is an important concern in farmworker housing since the suggested square footage per person is extremely limited. Small, restricted spaces are considered "cramped" and can result in disruptive behavior, heightened stress, confrontations or violations of personal space. Crowding stress is a function of the consequences of having to interact with too many other people. Research findings suggest that architectural solutions that fail to provide suitable space easily converted to semiprivate, defensi-

ble space, have unpleasant and stressful consequences for residents (Baum and Valins, 1974).

The health implications of the inadequate supply and quality of farmworker housing are alarming. Housing conditions that directly relate to disease are associated with cold, damp interiors where there is an increased incidence of ear and respiratory infections in farmworkers as compared to the general population. The presence of a toilet within a sleeping area is associated with an increased incidence of gastrointestinal distress, anorexia, and gastroenteritis. Substandard and unheated rooms are associated with an increased incidence of measles and upper respiratory infections. Single-bed usage by families is associated with an increased incidence of impetigo and emotional distress. Multi-use sleeping rooms are associated with an increased incidence of bronchiectasis, disseminated tuberculosis, influenza, and tonsillitis. The lack of laundry and hygienic facilities leads to bathing and laundering in the kitchen sinks, exposing food preparation surfaces to the pesticides and fertilizers that workers are exposed to in the fields.

Department of Defense housing requirements for enlisted soldiers, for example, was examined because they provide a basis for minimal housing requirements based on health. Old standards that called for a minimum of 72 sq. ft. per person of living/sleeping space (excluding bath, lavatory, entry foyer, and other shared amenities), are currently being converted to newly adopted standards requiring an absolute minimum of 85 sq. ft. of living/sleeping space per person.

In the old standards, two people shared a room, and two rooms shared a bathroom, with each room having its own sink. People had their own wardrobe for storage. New standards suggest that each person have his or her own room, and share a bathroom and living areas. In converting buildings to these new requirements, if this preferred arrangement couldn't be achieved, it is stated that under no circumstances shall more than four persons share a room.

Field Visits

Several visits to farm labor camps of various revealed a number of undesirable conditions. A poor physical and social environment characterizes most of the sleeping areas. Sleeping areas were often overcrowded with very little concern for privacy and territoriality needs. Bathrooms showed a lack of consideration for privacy and hygiene needs. Showers and toilets are located in the same space with too few facilities for the number of people. Dining areas lacked security and observed low hygiene standards. Individual privacy was lacking with no access to the kitchen facilities. From the siting of housing units it was apparent that no consideration was given to orientation, arrangement, or accessibility of buildings. Workers had to travel long distances between sleeping areas and communal buildings while family housing units were often integrated with single men's housing. There was an obvious lack of adequate

place for social activity, for any consideration of children's needs, or space or provisions for outdoor sports in all facilities visited.

Design Workshop

A series of workshops were held with different groups of farm workers in different locations to substantiate the results of field observations as well as to identify housing priorities.The workshops were conducted with the aid of a translator so the workers could express themselves in their native language. Farmworkers played a spatial layout game to discern their preferences for individual and communal living conditions. Wood blocks represented single men's housing units, family housing units, bathroom units, kitchen units and a dining facility, allowed participants to arrange an ideal farmworker housing community (Figure 4.9). The rules of the game required that they play in groups of five people, and reach a consensus about their preferences. The environments created by the teams demonstrated the following patterns:

- Communal facilities such as the dining hall were located at the center of the site.
- Small social spaces were created through the arrangement of the dwelling units.
- Family housing was separated from single men's housing.
- Family houses were always allocated their own kitchen and bath facilities.
- Single men were usually allocated their own bathrooms, but rarely their own kitchen facilities.
- Single men associated the dining hall as the social facility.
- Families associated the child care facility as the social center.
- Trees were used to create separation and privacy.

Figure 4.9: Farmworkers engaged in the planning process (Photo: Holly Grubb)

From the results of this game specific design guidelines were developed:

- Ventilate all livable areas for good hygiene.
- Separate showers and toilets for privacy and hygiene.
- Provide secure storage space in the rooms.
- Privacy should be attainable in the sleeping area.
- Provide and maintain sufficient levels of security.
- Provide access to electrical outlets for each occupant.
- Provide access to the kitchen facilities.
- Provide and maintain both indoor and outdoor recreation areas.
- Provide children's outdoor play areas.
- Orient buildings to take advantage of the natural resources for pleasant view and control of temperature
- Provide easy access to community buildings.
- Provide separation between family and female housing units from those of the single men.

The second series of participatory workshops conducted had two purposes:

1 To identify the needs of the farmworkers and,
2 To familiarize farmworkers with the design process.

First in this series was an opportunity for the participants to get to know each other. Two exercises were performed in a group setting: 'My favorite place...' and 'I wish my home... where participants were asked to complete each of the phrases.

The participants' responses in this exercise indicate a fondness for the outdoors, and a desire for more accessible natural spaces in which to rest and relax. This desire is highly compatible with the limited amount of space in which most farmworkers live. Rarely is space provided for activities other than sleeping, eating, and washing. By necessity, farmworkers may spend a great deal of their leisure time outside. Several responses also indicate that the workers desire a space that they are able to personalize. The person whose favorite place was his car liked that it was his, and liked the feeling of being in control that being there gave to him. Also, it was a place where he enjoyed being alone. Because of the hardships posed by a migratory lifestyle, the participants desired spaces that had an appearance and feeling of permanence, security and accessibility.

The second exercise, I WISH MY HOME... was an opportunity for workers to specifically express their housing preferences particularly since the migrant work force is made up of individuals from a variety of differ-

ent countries and regions who may not have shared experiences. Therefore, it is not appropriate to assume that housing preferences of one group of migrants will be appropriate for all. However, it was observed that the desire of the migrants was limited to basic necessities and none exceed what should be present in any housing environment.

Most of the workers' wishes should be met by the existing state regulations. The one condition that was expressed in, I Wish My Home, which the regulations cannot address, is that of ownership. However, this can be interpreted as a desire for some control over their environment, and a sense of belonging because it was personalized to reflect the desires of the inhabitants.

The second workshop sought worker responses to what trade-offs they made to obtain privacy. Attitudes towards bedroom and bathroom spaces were investigated. Participants were given worksheets showing alternative floor plans, and asked to select the preferred locations for specific activities. and why. They were encouraged to make suggestions for changes by marking the plans to indicate a preferred arrangement. Farmworker responses indicated a strong desire for privacy in both the bedroom and the bathroom.

Loft spaces were the preferred option for the bedrooms because they afforded the most privacy. In the bathroom, people accepted fewer fixtures in order to have more privacy. This indicates the willingness of people to prefer the opportunity to get clean quickly for the opportunity to get clean privately. Examples of questionnaires in English and Spanish are illustrated below (Figure 4.10).

Figure 4.10: Housing trade-offs

Bedroom Schemes: Workers preferred Scheme Three because it provides the most privacy since the loft divides the sleeping area. Scheme Two, with sleeping areas separated by storage units was also acceptable. Scheme One was the least preferred because of the lack of physical separation. Results from these activities emphasize the importance of privacy for farmworkers, a concern not usually recognized by housing providers.
Bathroom Schemes: Scheme Three was the preferred because it provided the most privacy in the shower area, and the most enclosed locker area. Scheme's One and Two provide a greater number of showers, but were less preferred. Scheme Two was always rejected because it provided no privacy in the shower. Conditions in the bathroom should assure privacy so workers clean themselves of pesticides when returning from fields.

Results from comparisons made between the housing schemes generated a number of housing and related users needs described as follows:

Housing Needs: 'Personal space,' somewhere to claim as your own, that other people do not have access to unless invited, is a space that does not require sharing. A lack of physical barriers may cause people to put up psychological barriers. 'Privacy,' another basic need, is the ability to control the access others have to your activities, or your interaction with others. Having only a bedroom to retreat to may make a person feel isolated, when all that is desired is a place for quiet activity. Dormitory style rooms can turn into passageways, disrupting the lives of occupants of the space. 'Personalization' allows for people to make a space feel as though it belongs to them, such as displaying personal articles or deciding about the arrangement of items in the space.
Bathroom Needs: Addressing health concerns is an important issue in a shared bathroom. The most important relationship is between the shower and personal storage facilities. This allows a person to enter the shower area, retrieve toiletries, and get clean before entering the living or dining area. This is of particular concern for farmworkers who need to remove pesticides when coming home from the fields. Having and entrance into the bathroom directly from the outside allows workers to enter the bathroom without having to contaminate their living spaces with dirt and pesticides. In a single family home, soap, shampoo and towels are kept in the bathroom, and do not have to be carried to and from the bedroom at each use. Having ample and secure storage in the bathroom area makes the functioning of the facility more home-like. Everyone who uses a particular bathroom should have a place there to store personal items. This will help to establish regular users of each bathroom. It will be easier to have workers participate in the upkeep of the space if they feel some connection with the space. Unpleasant smells can make a place seem crowded. Spaces that are always damp can grow mold and bacteria.
Sleeping Needs: A sense of privacy will enhance occupants' sense of ownership of the space. A buffer zone between public and private areas helps

to define the boundaries of a person's territory. For example, giving each occupant an individual entry clearly distinguishes their space from those belonging to the community. People should be able to secure personal belongings and display items to create a more home-like setting. Family pictures and mementos are an important part of a person's ability to connect with those who are far away. Personalization of a space will help inhabitants care more about where they are living, and will encourage them to participate in maintaining the space.

From the workshop it was clear that farmworkers preferred housing that was home-like. While the length of stay at one particular location may be for a short duration, farmworkers live in temporary housing more or less permanently, or for an extended length of time: the situation can be considered permanent, but the location itself is temporary. Therefore, provisions for appropriate housing are necessary for any worker irrespective of the amount of time a particular worker remains in one location. Similarly, a comparable level of housing should be provided in all locations as that worker moves from farm to farm.

To this end, a series of design guidelines (Figure 4.11) and floorplans (Figure 4.12) were developed in order to ameliorate the present intolerable situation. The Agricultural Safety and Health Council of State of North Carolina Department of Labor endorsed these efforts in order to raise the awareness of the significance of housing design for farmworkers. These guidelines were published in the 1998 document, Introduction to Migrant Housing Inspections in North Carolina.

Figure 4.11: Housing design guidelines

Figure 4.12: Floorplan for eight single farmworkers

ASSISTED LIVING HOUSING

Charrette Process
Community action planning
Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
- Strategic planning

Visioning
- Workshop

Assisted living represents a significant movement in large-scale elderly housing and health care. It provides individualized care to vulnerable frail older people in a residential environment. Regnier (1994) views it as "combining the residential qualities and the friendly scale of board and care housing with the professionalism and sophistication of a typical personal care setting targeted towards residents who in the past would have normally resided in intermediate and skilled nursing facilities." A composite list of environment-behavior principles adapted from Regnier and Pynoos (1987) translated into qualities of assisted living facilities include:

- Appear residential in character
- Support informal social interaction
- Provide residential privacy
- Promote orientation to assist wayfinding
- Promote individuality and choice
- Provide a challenging and stimulating environment
- Provide opportunities for personalization

While there is a growing environment-behavior literature describing the desired characteristics of assisted-living housing, the elderly, a rich resource of knowledge and experience, have often been excluded from the

design process. The elderly should not be viewed as a homogenous group with the same needs and desires, but as unique individuals with a common goal—living life with dignity.

In December 1993, the Moore County Department of Aging requested assistance from the Community Development Group in designing assisted-living housing and a senior enrichment center for Moore County. The design teams work included assessing Moore County's existing services and facilities for the elderly community, planning and conducting participatory workshops, and proposing alternatives for the enrichment facility. The workshops were especially helpful in educating the Moore County Department of Aging (MCDOA) on how to best address the variety of community concerns while getting the most from the county's resources. In the process, the Moore County Department of Aging developed an understanding of the relationship between social issues that are significant to older adults, and the ways the built environment can facilitate those specific issues.

Moore County, nationally known for its golfing resorts and retirement communities, is located in the central portion of North Carolina. The resort industry in the southern part of the county, concentrated around Pinehurst and Southern Pines contrasts with the predominantly rural agricultural regions of the county. Moore County supports one of the largest concentrations of older adults on the East Coast of the United States, many of who relocate to the area specifically for retirement in the county's upscale communities. On the other hand, there is also a significant segment of the elderly population living below the poverty level, mainly in the northern part of the county. Presently, twenty-seven percent of Moore County’s population is sixty or older. By the year 2010, the percentage of older is expected to increase by 70%. The resource map displays the concentration of services in the southern part of the county, noting existing medical, housing, social services and cultural facilities. An assessment of the social and physical conditions of the county's elderly population revealed the need increased housing options to include provisions for those who are independent, who require some assistance, and who require substantial assistance. From the geriatric literature, it was gleaned that concerns for security, social interaction and accessibility are important consideration when designing for the elderly.

A community development approach that included planning and conducting participatory workshops was especially relevant for MCDOA's plans because it allowed for the integration of a variety of community concerns that would maximize the use of the county's resources. Any effective program for the elderly requires their insight and participation. To this end, workshops engaged county senior citizens, the Board of Aging, and Department of Aging administrators.

An important factor in the development of participatory workshops is readability of the materials for participants not trained in design or planning. Consequently, color used to differentiate different areas enabled the readability of drawings and three-dimensional models. Another factor is the opportunity for all participants in the workshop to be heard. To this end, all workshops evolve in three stages. First, participants usu-

ally work in small groups from three to five people. Next, participants make individual decisions, discuss their decisions in their respective group and try to reach consensus. Finally, each group's decisions are publicly presented to all participants in the workshop.

An initial community workshop focused on site alternatives that proposed several housing arrangements where thirty participants, including citizens and members of the Board of Aging, rated each proposal on the basis of criteria such as:

- Provides the best connection between the senior center and the housing types.
- Offers the best opportunities for social interaction.
- Has the most suitable relationship between housing types.
- Provides the best sense of security.
- If you were to live here, which plan would you choose?

Workshop results indicated that most of the participants preferred privacy, or the scattered site development (Figure 4.13). A second workshop with the county's elderly focused on alternatives for congregate housing. A predominantly, rural elderly population participated in this workshop, many of whom could not read due to illiteracy or poor vision. The intention was to expand the participant's awareness of housing options since their experience was primarily with traditional retirement housing. Most participants associated any form of retirement housing with a "nursing home." Four plan arrangements allowed participants to examine differences between group homes, and between cluster and conventional housing. Criteria for evaluating alternatives included security, social interaction, privacy, circulation and orientation. They unanimously rejected any housing arrangement that appeared ‘institutional.’ Their primary concerns were with privacy and maintaining independence. They preferred a housing arrangement that allowed for, yet did not force social interaction.

Figure 4.13: Housing and senior center site alternatives

The third workshop introduced alternative conceptual plans to introduce participants to key social issues requiring consideration when planning their senior center. The most preferred plan received the highest ratings for "social interaction." Plan alternatives were rank ordered according to successfully accommodating the following criteria:

- circulation
- security
- social interaction
- wayfinding
- stimulation, and
- preference

The final workshop allowed participants to identify the activity spaces that would occur in their senior center. Beginning with goal setting, small groups of elderly participants selected and matched goals with key activity spaces. A layout sheet divided into grids allowed participants to develop in a conceptual floor plan using graphic symbols corresponding to the activities. Workshop results suggested those goals of physical fitness and nutrition received the highest priorities. Improving the public image of the elderly and making new friends were also important goals. This workshop had the distinct advantage of giving and receiving information. Workshop materials allowed participants to manipulate activities on a "gameboard" and generate building concepts such as the clustering of social activities around a lounge (Figure 4.14).

Figure 4.14: Senior center gameboard

Involving the elderly in the design decisions to promote a healing environment informed the Moore County Department of Aging staff of a number of unmet needs. This knowledge was instrumental in shaping the Department's recommendations to the County Commissioner's for future housing and senior center facilities.

HOUSING GAMES

Housing Trade-Offs: The concept of trade-off is integral to the participatory process, comparing competitive alternatives, particularly according to the types of amenities offered. Trade-offs imply compromises, exchanges, or substitutability between and among multiple-often mutually exclusive-goals; it reflects the need to give up or sacrifice something in order to gain something. Community groups are often confronted with choice that must be weighed for their appropriateness, since there are often constraints that limit the range of choices. People involved in making trade-offs can evaluate the costs and benefits of available options.

The basic method of most trade-off games is that players are confronted with a number of environmental features, each with several possible quality levels. Typically, each quality level has an associated cost, defined in terms of dollars, or points. Game participants are allocated a budget and allowed to 'purchase' the quality levels they desire. However, by making the total budget insufficient to permit purchase of the highest level of all qualities, the players are forced to make trade-offs (Robinson, 1987).

This technique was successfully used in a Habitat Owner-Built Housing Process. A neighborhood housing service agency identified ten relatively low-income families, who agreed to utilize personal labor as a form of equity in reducing labor cost. Construction cost was the major constraint within which future homeowners would be required to make spatial choices. While construction cost is always an important consideration, there are also certain family life styles that are influential in making planning decisions. Often, people who are confronting a purchase decision look to market availability for a suitable selection rather than examining their workflow and living patterns. Concepts such as family solidarity, use of leisure time, or child rearing practices may influence living patterns and residential preferences in different ways. The

opportunity to confront the complexities of spatial interaction, conflicting goals, and privacy needs between members of a family prior to purchase can have a dramatic effect on the selection of a suitable choice.

In order to make the decision process "transparent'" in reflecting the value differences among the families, workshops were organized in which decisions about the house were divided into categories of activities, house image, and site arrangements. Faced with budget limitations that influenced the size of the dwelling and level of amenities, families were able to use the housing trade-off exercise as a preliminary step in discovering their particular residential needs.

The first planning workshop introduced the trade-off concept by subdividing the dwelling into activity components such as living-dining and kitchen, or living and dining and kitchen. Three options were provided for the living-eating component of the dwelling, each requiring a different amount of area, signified by the number in the left corner of the picture (Figure 4.15). Similar components were developed for the adults and children's sleeping areas. Each family was allotted of 45 points that corresponded to their budget and reflected the total area of the dwelling. All family members worked through the process in family groups, making trade-offs between spatial alternatives that provided more or less space for personal or family activities.

Figure 4.15: House activities trade-off game

The house image exercise considered a series of dwelling photographs that describe subtle and profound character differences (Figure 4.16). This exercise is important in suggesting the ways that buildings convey clues about the values of the people who own and occupy them

(Becker, 1977). Future homeowners should consciously recognize this environmental message, reflecting the inner life, actions, and social conceptions of the occupants. In Housing Image, individuals in small groups make personal choices and discuss their decisions within the group. The process allows families to learn about each other's values and become aware of the meaning conveyed by different buildings.

The Site Alternatives session allows participants to describe preference for a variety of site planning characteristic. Through the use of

Figure 4.16: House image exercise

drawings, different residential arrangements are depicted that show variations in the amount and type of open space, the location of parking, and the density of the site. While it is improbable that one particular site plan will satisfy all of the participants' requirements, responses suggest the type of site arrangements that meet individual needs. Once participants become familiar with the drawings, the best solutions were chosen for outdoor children's play, privacy, neighborhood activities, and physical security. Individual selections were pooled within small groups for discussion and consensus.

An alternate approach for exploring site options with users is the use of photographs that convey different densities by house type, such as high- and low- rise buildings. The choice of photographic images, whether new or old and single- or multi-family also suggests the character and location of residential areas, such as inner city or suburban (Figure 4.17).

House Model Game: This three dimensional game developed by Jeff Bishop (1987), provides each player with an opportunity to propose a housing layout based on personal preference. The eventual design is a result of a trade-off and the opportunity to evaluate a range of ideas from within the group. The game can be used to achieve a wide variety of objectives, some related to physical and social aspects of housing layout, others to the development of personal and group decision-making. The Houses Game can be used to consider both urban and rural sites.

The appropriate size of group can vary considerably. It has worked well with groups of 30 people, from ages 9 and upward. No special

Figure 4.17: Housing density score sheet

equipment is necessary. House models can be constructed as shown in Figure 4.18, and reproduced from any piece of folded paper. The site can be a blank sheet of legal size paper. Each house comes with a private back garden and 12 houses and gardens must be accommodated on the site. Basic site planning criteria are that:

- There should be a path to each house

- There should be sunlight in every garden
- Each house must have somewhere to park a car, and
- There must be some public open space.

The objectives of the exercise are to find a layout that is *attractive*, *easy to use*, and as *cheap* as possible. Roads and parking can be drawn on the site as appropriate. Things for participants to think about are: privacy, deliveries, safety, noise, views, landscaping, climate, wheelchairs, gardens, bicycles, energy conservation, and wayfinding (Figure 4.19). As

Figure 4.18: Construction of house model (Photo: Jeff Bishop)

individuals complete the exercise, they should fasten their models to the site and evaluate each others solution according to the original criteria on a five point scale from very *attractive* to very *unattractive*, very *easy* to live in to *not easy* to live in, and very *cheap* to very *expensive*. A group discussion of the results could focus on the basic alternatives as well as the assumptions initially made by each player to the question, for whom were you designing?

Figure 4.19: Large scale housing layout

Trade-off games are a means of permitting citizens to participate more fully in the planning and decision making-processes that affect their lives and senses of well-being (Robinson, 1987).

Planning for Real

An active method of engaging people in the planning process is Planning for Real (Gibson, n.d.), a kit complete with cutout buildings, neighborhood facilities, information cards and case histories, devised and used mainly in Britain for neighborhood improvement. Its aim is to facilitate communication between professionals and the public. Local people initially construct a model large enough to allow everyone to participate and to focus on tangible issues. It is constructed in sections and moved to various locations in the community, such as churches, shopping centers and schools. The kit contains 150 suggestions marked on cutouts that people then arrange on the model gradually arriving at consensus. A model works, argues Gibson, its developer, because it begins to establish working relationships between professionals, citizens, and public officials (Figure 4.20). The model enables people to see the problems and possibilities as a whole, making them more confident and adept at exploring ways to overcome problems and arriving at solutions. Finally, participants make concrete proposals such as additions to buildings, gardens, playgrounds as well as neighborhood improvements.

Participants in this process felt that the model allowed them to reach a "common ground quicker, because with words everybody's words are the same; but the imagination may be different" (Gibson, 1980, 204).

Figure 4.20: Planning for Real kit

Section 5
Urban and Rural Environments

Traditional approaches to urban and neighborhood development were based on the master planning model, where policies and action strategies were linked to physical information, such as land use and building condition. More recently, this approach has been replaced by a goal based planning model, where policies and actions are derived from social as well as physical information (e.g., client-user goals, census data, and demographic factors). The complexity of big cities with large numbers of people and institutions usually results in a fragmentation of functions, a division of power, roles and responsibilities so there is a likelihood of many disconnection's between dimensions of a community. In a small town the dimensions of cultural norms, social structure, local economy, and decision making are much more interconnected than in a big city. Thus, the goal based development plan used in the town of Bangalow, Australia, made connections between awareness, perception, decision making, and implementation.

Current interest in small towns is associated with the concern for what are believed to be the more manageable scales of human activity. The philosophies of smallness-seekers run the gamut from the anarchists who believe in minimal external control; to the critics of urbanization who find large cities unlivable in, and even unmanageable.

As a result, the apparent changes to the small town have been from an autonomous and distinctive place to live, to one that is no longer independent, or even separable. Once characterized by limited growth and minimum resident control, small communities are experiencing a renewed interest with people returning to the small town being significantly different from those who never left it. There are also indications that small town residents voice higher satisfaction with work, housing, and leisure time activity, and the rate of participation tends to be higher in small communities.

Despite the higher subjective senses of quality of life, small towns are in need of help particularly from the planners who stamp out master plans that look alike. The idiosyncrasies and characteristics of each small town are ignored. Every town has a personality, a unique combination of elements that creates its identity. A town's character, or sense of place, is shaped by its architectural style, the natural setting, cultural diversity, use of materials, and countless other local conditions that distinguish one place from another. The relationships of all these elements to each other are important aspects of a town's identity (Sanoff, 1981).

There are four action-modes that are generally used in small town revitalization (Swanson, Cohen, & Swanson, 1979). In some of them, proposed action is a one shot effort, while in others, activities are undertaken sequentially or simultaneously. In some of them, values are made explicit at the outset, while others project values that are implicit, not clarified, or justified. In some outside experts play a prominent role, while in others local residents dominate the process.

The **categorical** approach tends to carry out one substantive project at a time. The presumption is that each problem may be solved in relative isolation, without regard to its interconnections to other problems. Recreation problems, housing problems, infrastructure problems all receive separate treatments, while the cumulative direction for the community structure goes unattended. State and federal grants and programs, where support is available, nurture this piecemeal approach by specific problem areas. This approach encourages local people to think in categorical terms.

The **comprehensive planning** approach intends to overcome the piecemeal one through an overall assessment of community facilities and services. The major problems in a community are identified and recommendations are made, often without an analysis of the impact on the residents. This approach examines the problems, but never sets them in a perspective of how they relate to social structures, decision making systems, and community values.

The **integrative** approach attempts to involve people in a process where they identify their own needs and preferred courses of action. These considerations are part of process of organizing, choosing priorities, mobilizing support for the proposal, and engaging in the implementation of the project. Thus a specific problem such as housing, sewage, or social services, may be the beginning of a deeper exploration of the community's problem. The integrative approach tries to connect problems to the social, political, and value context of the community. In doing so, the solutions to housing problems may be found in the social structure or political system, instead of in narrowly defined rehabilitation or construction actions that commonly emerge from the categorical approach.

The **dialogical** approach emphasizes *values clarification.* It is concerned with having local residents articulate their values up front, to understand how they help or constrain achieving desired goals, and to decide the necessary changes they must make. In many community improvement projects, the values being reinforced have tended to be those of the dominant persons or groups in town. To avoid this, those who advocate the dialogical format of community problem solving encourage

community discussions of internal dynamics and values before engaging in specific projects. Basically, this is a process of community education where residents become aware of the forces acting upon a community from within and from outside.

This balance of elements that creates a town's identity is under constant pressure for change. For this reason it is important that new development and change be guided by a *conservation philosophy,* a conscious policy of respect for the existing environment, and for the unique identity of towns. Thus a renewed awareness is necessary to guide change within certain desired limits. Awareness is the beginning of a process leading to the understanding of problems, clarification of objectives, and the consequences of the strategies for change.

'SWOT' Analysis

The revitalization of a neighborhood or a small town requires knowledge about the internal conditions as well as those external forces that might impinge upon its development. Such an investigation is referred to by Bernie Jones (1990) as an environmental scan and includes the SWOT—strengths, weaknesses, opportunities, and threats. The information needed in a neighborhood or small town planning process is in the categories of physical, social and economic. Jones identifies 13 areas of needed information:

- Natural environments
- Existing land uses
- Zoning
- Circulation
- Utilities
- Housing
- Community facilities and services
- Urban design features
- General physical condition
- History
- Demography
- Social analysis
- Economic base

A method for organizing this information is by the SWOT categories, using a map to annotate and identify positive as well as negative features. A useful techniques for integrating the data is to compose a *scenario,* describing what the community would be like at some point in the future if certain trends are continued or reversed. The KEEPS game is an exercise that can enable the public to be aware of the strategies for reversing undesirable trends.

RICHMOND NEIGHBORHOOD CHARRETTE

- Charrette Process
  Community action planning
- Focus groups
  Game simulation
- Goal setting
- Group interaction
  Participatory action research
  Public forum
  Strategic planning
  Visioning
- Workshop

Highland Park is a low-income neighborhood in Richmond, Virginia where Highland Park Restoration and Preservation Program, Inc. (HP RAPP), a non-profit community based corporation, has a mission that includes creating and designing model neighborhood programs. Proposed as a model for future development throughout the community, a nine-block "Adopt-a-Block" incubator and the adjacent commercial strip were designated by the community for total revitalization.

The aim of the charrette process was to involve residents, especially skilled community leaders, and invited architects and planners to share their ideas regarding community development. A planned one-day event allowed neighborhood residents to have the opportunity to select key issues, and identify appropriate goals and strategies for their implementation. Community leaders and professionals participated in the charrette process as a resource to the residents to assure that informed decisions would be made.

An initial meeting of local leaders, project coordinator, Jeff Levine, and invited consultant, Henry Sanoff, which constituted the Core Planning Team, resulted in identifying four major development areas for discussion at the charrette. They included Business Development, Housing, Image and Safety, and Education and Culture. From this discussion, resource teams consisting of area specialists in each of the key issue areas generated appropriate goals and strategies for their implementation (Figure 5.1). Every effort was made to include goals and strategies for presentation at the charrette that were realistic and achievable. This approach allowed area residents to examine a broad range of possible options from which to make choices. Preparation for the charrette included:

- A promotion campaign including graphics material and banners to announce the forthcoming meeting;

- Venue selection for the event, including the organization of space, equipment, food and media coordination;
- Data collection to inform participants about loan programs and the Community Reinvestment Act, information on historical development, housing conditions, crime, and area demographics; and a

- Follow-up report and plan of action.

Figure 5.1: Richmond's major development areas

The aim of the workshop was to allow each participant to select three goals with the highest priority for each respective key issue, and elect to participate in one of the key issue groups. The procedure for achieving this was to provide each participant with 12 colored tabs (3 red, 3 yellow, 3 green, 3 blue) corresponding to the key issues. After hearing the presentation of key issues by the chairperson of each issue group, participants individually selected three goals they felt were important to the four key issues, and fastened the colored tab next to that goal statement (Figure 5.2).

Individuals then selected a group in which they wished to participate. Group sizes ranged from 20 to 40 people with a trained facilitator keeping the discussion focused. Each group received a list of strategies prepared by the resource team along with the goals achieving the highest

priorities. Group discussions focused on matching strategies to goals, and developing of an action plan for each strategy. Action plans answered the question of "who, how, and when?"

Figure 5.2: Participants selecting key goals

Upon choosing the pertinent strategies for implementing a particular goal, a recorder completed a 'strategy card,' indicating the strategy, goal, key issue and action plan. Action plans identified how to implement each strategy, who would be involved with the implementation, and the time frame for implementation. Design implications for certain strategies required the presence of volunteer architects who provided sketches to clarify the ideas (Figure 5.3a & b). Completed cards were reproduced for overhead presentation at the end of the charrette, and copies distributed to each participant.

Figure 5.3a: Architects sketches at the charrette

Figure 5.3b: Architects sketches at the charrette

The impact of the charrette during the 6 years following the participatory event had a number of significant achievements. The Business Development goals were:

- To improve businesses in the main commercial area,
- To nurture small businesses,
- To provide opportunities for increased employment in the area, &
- To provide for a concentration of a wide variety of goods, services and activities in the area.

A student and faculty team from Hampton University developed a business plan and a model of the area showing how businesses could function. The plan was to create a catalyst for economic development along the main commercial strip. Recognizing the lack of sufficient business in the area as well as limited funds, a proposal was developed to seek support from the City of Richmond to establish an enterprise zone. In the housing development area, the key goals established during the charrette were:

- To rehabilitate deteriorated housing,
- To maintain the present density of the neighborhood,
- To promote home ownership, and
- To create infill housing sympathetic to the Victorian character of the area.

Through the support of local about thirty houses have been rehabilitated (Figure 5.4) by the architectural firm of Shelter Design, and designs for new infill housing have been prepared. A major historic property now houses the offices of HP RAPP. For the Image and Safety development area, the key goals were:

- To create a distinct and continuous landscape street and open space character,
- To improve maintenance and encourage small scale improvements to existing buildings and sites,
- To preserve and improve the distinctive visual and architectural character of the Adopt-a-Block area in Highland Park,
- To preserve the history of Highland Park,
- To preserve architecturally and historically important buildings, and
- To create a safe neighborhood.

Figure 5.4: Completed projects (Photo: Jeff Levine)

This was achieved by the resident's creation of a crimewatch program, a periodic neighborhood clean up and landscape improvement program, through the adopt-a-block model. The creation of the arboretum, also outgrowth of the charrette is a neighborhood park located on a vacant lot supporting a billboard. It was a pro-bono project developed by landscape architect, Charles Snead with the assistance of Shelter Design.

Key goals of the Education and Culture development area were:

- To sponsor art, cultural, and special events to attract people to the area.

- To promote a racially, culturally, ethnically integrated community.

The achievement of these goals required the involvement of the youth in the community development process. Operation Architecture, an environmental awareness program, involved middle school students in a process of rediscovering the historical characteristics of their community. Partnerships between HP RAPP and local schools helped to establish periodic parent/children festivals as well as a number of ecologically oriented projects conducted by students in the classroom and in the community.

The citywide effect of the charrette was the adopt-a-block process, the block watch and the community festivals, where a community coordinator has extended these activities to other communities. Many charrettes have occurred since the initial event. Exploring such topics as crime prevention through environmental design, residents and local police met at Virginia Commonwealth University to explore streetscape and neighborhood watch strategies. Building Better Communities, a series of inner city neighborhood charrettes brought participants from different communities to the Museum of Art to discuss various collaborative approaches.

THE TOWN OF BANGALOW, AUSTRALIA

- Charrette Process
  Community action planning
- Focus groups
  Fishbowl planning
- Game simulation
- Goal setting
- Group interaction
  Participatory action research
  Public forum
  Strategic planning
  Take part
  Visioning
- Workshop

Bangalow is a small Australian town in New South Wales, with a population of 780 people. The township and its immediate surrounding rural area consist of a population of 3000 people. Bangalow lies in the valley of Byron Creek, 12kms. West of Byron Bay. With the coming of the railway in 1894 and the clearing of the "Big Scrub" rainforest, Bangalow thrived as a dairying district. The comparative wealth of the early 1900's is evidenced by the fine commercial buildings in the town center. The town's historic character was noted in an assessment of environmental heritage (Shellshear, 1983) and efforts have been extended to reinforce the town's continuity with the past.

The town of Bangalow was where a design resource team spent four days helping to preserve the town's past and to shape a new future. The team consisted of this author, and four architecture students from the University of Sydney, as well as several local architects and planners who served as consultants and information resources. This "charrette" process, a period of intensive planning, was decided as the most expedient and time effective strategy to enable the town to reassess its future, since a proposed by-pass off the Pacific Highway would dramatically effect the potential of Bangalow as a rural tourist center and gateway to the hinterlands.

The visit of the design team began with a meeting of community leaders followed by a bus and walking tour with interested citizens. The tour provided the design team with additional insights about the community from local professionals who had conducted feasibility studies of the implications of the by-pass.

The second day consisted of interviews with interested townspeople who presented conflicting opinions and attitudes about the town's future. The purpose of the interviews was to identify the range of issues, from the resident's perspective, that seemed to be crucial to the economic and social development of Bangalow.

Resource Team Schedule

Evening before Team arrival and informal social event

Day One

8:00-9:30am Breakfast briefing with community leaders and resource people

9:30-1:00pm Driving tour of Bangalow and surrounds with community leaders and local professionals. Included in the tour was industrial and residential, areas, educational institutions, and the by-pass location.

1:00-2:00pm Working lunch

2:00-4:00pm Walking tour of Bangalow

6:00-8:00pm Resource team discussion and preparation for Day Two interviews

Day Two

8:00-8:30am Working breakfast

8:30-10:30am Interviews with interested individuals and community leaders

10:30-12:30pm Model making and drawing workshop with school children

12:30-1:30pm Working lunch

1:30-5:30pm Interviews continue

6:00-12 midnight Resource team preparation of workshop materials

Day Three

8:00-9:00am Working breakfast

9:00-12 noon Preparation for workshop

12:00-1:00pm Working lunch

1:00-6:00pm Preparation for workshop

6:30-9:00pm Community workshop

9:00-10:30pm Dinner with Director of Arts Council of NSW, community consultants, and community leaders

Day Four

8:00-9:00am Working breakfast

9:00-12 noon Measure key buildings and sites in the community

12:00-1:00pm Working lunch

1:00-6:00pm Continued gathering of information for future design/planning

6:00-8:30pm Dinner with community leaders for workshop summary

Resident interest was displayed for converting Bangalow into a "heritage village with true charm," while opposing views expressed belief in "not looking back." Many seemed to agree, however, that recognition of the town's history was important. Gateways to Bangalow emerged as a popular issue as well as signage and streetscape enhancement. Keen interest was shown for replacing the traditional verandahs (covered porches) and encouraging reluctant shopkeepers to invest in Main Street improvements.

Many residents also cited new and improved facilities for the visual and performing arts as a need, with an emphasis on places for the town's youth. Some people lamented the problem of resident apathy, while others remarked about the "good community feeling." It was generally recognized that the community was heterogeneous, with many new families with young children moving to town. Consequently, the services in Bangalow were inadequate, forcing residents to shop in nearby towns. While most residents seemed optimistic about Bangalow's future, there was concern about their ability to satisfy all authorities that impose conflicting and arbitrary regulations on new development. Similarly, a popular view expressed was to limit residential development and ensure that green views from Main Street are preserved.

The results of the interviews provided the necessary background to prepare for a community-wide workshop that was held at the local bowling club on the third evening. This event was planned to provide an opportunity for the residents of Bangalow to meet face to face to consider the goals and strategies that would enable their ideas to be implemented. Public participation in Bangalow's future through a community workshop, was a strategy for bringing together different generations of residents, an event that had not previously occurred in the town. The design team relied upon the expertise of the community participants to shape their future by developing a list of goal statements prepared from previous interviews.

The objective for design intervention was to develop a process whereby citizens could identify important issues, outline specific alternatives and implementation procedures, so they could change the plan as they felt it should change. Since conflicting values are inherent in any goal oriented process, an approach was developed which encouraged community members to clarify their differences through a game simulation, where goals and implementation strategies were the key factors that participants could manipulate.

Since Bangalow's young people represent the future of the town, a special children's workshop was conducted with 5th and 6th grade students from the public school. The young people were involved in developing models of their future town as well as wall murals depicting their likes and dislikes (Figure 5.5). The message from the ten and eleven year old children was clear; *more stuff for the kids*. Activities such as a pinball parlor, skating rink and park were specific features identified, though

there was a general feeling that Bangalow lacked the necessary services and amenities associated with a self-sufficient community. The results of this two-hour activity were exhibited at the community workshop, held at the Bangalow Bowling Club. Special activities were developed for the younger children attending the community workshop while their parents were engaged in the goal setting process. The children viewed a 20-minute video of their school workshop showing the making of their art-work.

Figure 5.5: Children making models of their future town (Photo: Henry Sanoff)

To begin the community workshop, small groups of five persons each were formed where players selected from a goal list provided, four statements that seemed important in developing the town. The individual lists were then pooled, and through a process of collaboration, four mutually agreed upon statements were selected by consensus. Through a similar process, complimentary strategies were selected that could effectively accomplish each of the goal choices. During both phases of the process, group members were urged to support their individual choices, and persuade the total group to include their own particular selection (Figure 5.6).

GOALS

- **Recognize the area's natural and scenic resources as major assets**
- **Heighten public awareness to the town's unique historical character**
- **Provide youth oriented activities**
- **Improve gateways to the town**
- **Enhance the community's natural resources**

- Promote downtown revitalization
- Package and promote an image of innovation and tradition
- Encourage the arts to contribute to the development of the community
- Promote the town's historic resources
- Create avenues for public/private partnerships for community development

Figure 5.6: Twenty workgroups participating in the planning session (Photo: Henry Sanoff)

The process provided the impetus for discussions with town members, and the subsequent development of goals reflecting the wide range of possibilities for the town of Bangalow. The citizens of Bangalow explored many ideas. These were summarized by *a concern for the town's unique heritage, and the provision for services and facilities for special populations and interest groups.*

In addition to the goal setting exercise, the design team prepared sketches of proposed changes to features of the town that were identified by the residents during the interviews. This part of the workshop focused on six different aspects of the town, including the town entrance, building signage, infill and open space, adaptive reuse of vacant buildings. The intent was to allow participants to compare the existing situation with proposed changes in order to fully realize the potential impact of the changes (Figure 5.7).

The results of the workshop were analyzed by clustering similar goals and compatible strategies, together with comments made about changes in the town's appearance. On the fourth day, a strategic plan was proposed to enable the residents of Bangalow to move towards their

stated goals. The components of a strategic plan included a statement of purpose, drawing upon the goals at the community workshop, such as:

To recognize the area's natural and scenic resources as major assets.

Figure 5.7: Comparison of existing situation to proposed changes

This statement defines what should be accomplished through the strategic plan, and will be the responsibility of the participants in the process to shape this statement into a series of tangible outcomes. Since the goals are broad statements of intent, strategies are measurable tasks that support the accomplishment of goals. Action steps further advance the strategies by specifying activities that contribute to their achievement (Figure 5.8).

GOAL:
To create a permanent home for performing and visual arts organizations in Bangalow

STRATEGY:
Renovate the Art gallery into the Bangalow Center for the Arts.
Establish steering committee to oversee facility planning and fund raising.

Action Steps	Responsibility	Timeline
Appoint committee	Spirit of Bangalow, Inc.	September 1990
Have support committee work with office staff	Spirit of Bangalow, Inc.	October 1990
Hold national design competition	Committee	March 1991
Hire capital campaign consultant and begin fundraising	Committee	June 1991
Select architect	Committee	September 1991

Figure 5.8: An Example of Strategies and Action Steps

Implementation of the strategic plan required the formation of a new organization to provide the needed communication and coordination between civic, historic, government, and arts related organizations. Although this would be an independent organization, it would bring together representatives from existing groups with the intention of integrating economic development and the cultural life of the town. Twenty-five people agreed to become part of a steering committee, with task forces created in Natural Resource Development, Urban Design, Cultural Facilities, Cultural Tourism, and Media Communication Education. The identification of the task forces resulted from an analysis of the patterns of goal statements generated at the workshop.

Two months after the formation of a new organization called, the Spirit of Bangalow, task forces reported significant progress towards fund raising and implementation of numerous projects including a community park, restoration of an old movie theater into an arts center, and the restoration of verandahs. One year after the initial community workshop, substantial changes were made including the addition of several verandahs (Figure 5.9) and a children's park.

Participation in neighborhoods and with community organizations is widely recognized as a solution to many social problems. Over the last two decades, people in many neighborhoods and small towns have come together to create their own community based organizations to tackle problems which government and the private sector have long neglected. They have formed countless block clubs, self-help groups, neighborhood associations, community organizing fund drives, and community devel-

opment corporations. The public demand for participation, especially in planning, has grown to where governments have begun to incorporate into their legislation, compulsory provisions for public participation and public authorities have come to regard public involvement as a normal part of their practice (Shearer, 1984). In many situations it can be observed that the participation process is not considered a separate exercise from the design process.

Figure 5.9: New verandahs added to the streetscape

Community participation is a complex concept. Planning for effective participation requires an analysis of the issues to be discussed; the individuals or groups that are to be affected the resources that will be needed, and the goals for which the participation is being initiated. While it is necessary to identify goals and objectives in planning for participation, it is also necessary to analyze the techniques that are available and the resources they require. Techniques such as surveys, review boards, neighborhood meetings, conferences, task forces, workshops, and interviews, represent a few of the options available to participatory designers. When people participate in the creation of their environment, they need the feeling of control; it is the only way their needs and values can be taken into consideration.

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and included Helen O'Moore, Stacey Pollard, and Vicki Reynolds, all from the town of Bangalow.

TOWN OF MURFREESBORO, NORTH CAROLINA

- Charrette Process
  Community action planning
- Focus groups
- Game simulation
- Goal setting
  Group interaction
  Participatory action research
  Public forum
  Strategic planning
- Visioning
- Workshop

Growth and development is not only a problem for large cities but for small towns as well. Yet, the methods used for citizen involvement are equally suitable for use in urban neighborhoods. This case study describes the delicate balance necessary between citizen learning and effective decision making.

In recent years, the town of Murfreesboro, North Carolina under the direction of the Murfreesboro Historic Association (MHA), rehabilitated and reused several of its old, historically significant buildings. As a result, the community benefited by the addition of space with the potential to support a variety of activities, but also retains its important educational and cultural resources as reminders of the town's physical, social and economic development. In order for the MHA to make effective decisions and guide the future of the historic district, the Community Development Group devised a growth plan (Sanoff, 1978).

The concept of conservation through adaptive use has been applied in many communities throughout the country and is widely recognized as a viable approach in small communities as well as in urban areas. The increasing demand for residential and commercial development coupled with the continual deterioration of older structures within a community, raised questions concerning the importance of conserving old buildings. The dozens of reasons for preservation can be grouped into four main headings: cultural memory, successful proxemics, environmental diversity, and economic gain. They are described as follows:

- Cultural memory-Buildings are tangible reminders of the accomplishments and growth that a community made throughout its history. Different architectural styles are a physical record of the environment, in which the community's ancestors worked and lived.

- Successful proxemics-This refers to the relationship between people, the activities they engage in, and the places where they perform these activities. Before the development of the automobile as the primary means of transportation and the development of land use zoning, most neighborhoods displayed the characteristics of successful proxemics. Places of employment, schools, churches, and the neighborhood stores were within walking distance of one's home. Today, the social interaction that once occurred as a result of walking to and from work or to the neighborhood store has been lost. Consequently, the feeling of town or neighborhood identity has diminished.

- Environmental diversity- People's everyday environment is becoming increasingly more homogeneous in appearance and in use. Zoning regulations, with restrictions on land use and density, building appearance, location of a building on its site, were intended to produce an orderly environment, but the result is often homogeneity. Rapid, uncontrolled growth, too, created communities that are automobile dependent. These influences make the preservation of older buildings and neighborhoods, with their diversity of building types, a desirable alternative to many of the newer monotonous environments.

- Economic gain-Recycling old buildings to new uses make it economical to save them while retaining much of the original building. Investments in rehabilitation not only add to the cultural resources of a community but have also produced a higher market value for the improved property.

The town of Murfreesboro still contains neighborhoods that have successful proxemics. Recognizing that these neighborhoods, like others throughout the United States have adapted due to the growing pressures for change, an alternative approach to development was deemed a necessity. Faced with limited resources and infrequent professional assistance, the MHA sought assistance to develop a process where citizens groups could identify important issues, explore alternative solutions, and select implementation procedures so they could change the plan as they felt it should change. Since conflicting values are inherent in any goal-oriented process, an approach was developed that encouraged community members to clarify their differences through a design game where goals and strategies were the key elements that participants could manipulate. Knowledge of Emerging Environmental Preservation Strategies (KEEPS) provided groups interested in preserving the many qualities unique to older neighborhoods with an understanding of the strategies open to them. Organizing and planning for the preservation of the qualities the community had identified as important, relied upon the consideration of:

- The environmental qualities the group chose to develop,
- Their goals,

- The type of strategies the community could realistically use to accomplish their goals.

This exercise prepared community residents to engage in the design development process. The KEEPS game provided the impetus for discussions with community members and the subsequent development of goals reflecting the wide range of possibilities for the town of Murfreesboro. Community members utilizing the nominal group technique (NGT) where individuals proposed, discussed, and compared statements, and finally established their priorities generated ten goal statements for the town. They are listed in order of importance as follows:

1 Preserve the history of Murfreesboro.
2 Preserve architecturally and historically important buildings.
3 Boost community interest and civic pride.
4 Control change in the historic district.
5 Use the river and ravines to full potential.
6 Restore many homes to period authenticity.
7 Influence restoration in other parts of town.
8 Involve more people in MHA's plans.
9 Improve business along Main Street,
10 Eliminate non-historic homes from the historic district.

The historic district and its adjacent environment was then subdivided into target areas, a particular geographic entity defined by physical and/or social boundaries or certain characteristics that make one area unique from others directly adjacent. In addition to the geographic areas, issues such as visual quality, historic district image, and regulation of development, were pertinent to each of the designated areas. For each geographic area or issue there were specific goals generated by community members, qualities unique to that particular area, and alternative plans and policies to achieve the stated goals. The alternative plans developed by the design team consisted of two parts--the general policy and suggestions for implementation.

The general policy consisted of a statement describing an ideal future for each particular area of the town. For example, for the Williams Street-South Side area (Figure 5.10), the general policy for the first alternative plan was as follows: "The historic district should be expanded to include the half-block to the south of Williams Street between Sycamore Street and Second Street." The suggestions for implementation consisted of a group of statements describing the design recommendations for realizing the general policy. For example, for the Williams Street South-Side area, an implementation suggestion was to "encourage rehabilitation of the commercial businesses on the William Street extension."

Typically, there were at least two options that could be pursued for each target area. The policies described an ideal future based on enhancing the target area qualities and satisfying the goals. The effects of each policy were predicted in order to indicate the type of results that would be expected if the policy were to be followed. To further clarify the process,

combining verbs and objects created the general and specific suggestions for policy implementation. For example, the verb "restore" was applied to an object (s) "the West main Street group of significant buildings."

Within each alternative plan the suggestions for implementation were arranged according to their own priority system of three categories of importance. For each geographic target area, specific questions were

Figure 5.10: Sample worksheet describing goals and qualities of the area

asked by participants in order to determine which alternative plan to pursue. Key questions were prepared since the development process for the town was to be continued for at least twenty years. The questions were intended to alert community members to the inevitability of changing goals and area qualities that would require adding to the list of plan alternatives.

A community design workbook, prepared for the residents of the town, identified 15 geographic areas for Murfreesboro's continuing preservation efforts to emphasize the town's colonial past. The workbook, describing the community participation process as a component of the strategic plan, was given a First Award in the Progressive Architecture awards program. In the past two decades the workbook has been the primary resource in the development of Historic Murfreesboro. In addition to the restoration and reuse of many older buildings, vacant buildings in the rural area have been moved to the historic district (Figure 5.11), restored, and given new uses (Figure 5.12).

Figure 5.11: Building being relocated to the historic district

Today, Murfreesboro reflects the commitment of its citizens in creating a major tourist attraction with tour guides acquainting visitors with the town's natural and historic assets. Murfreesboro's continuing preservation efforts emphasize the town's colonial past but extend also to those

things revered in living memory. The 1922 Murfreesboro High School, as an example, has been recently acquired and restored by the Historical Association to provide auditorium space for cultural events as well as exhibition rooms for special collections.

Figure 5.13: vacant building relocated to the historic district and restored

MONROE DOWNTOWN REVITALIZATION

Charrette Process
- Community action planning

Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
- Strategic planning

Visioning
- Workshop

In the early part of the 20th century, the town of Monroe was a major passenger and freight junction for the entire East Coast. By the 1960's previous decades of rapid growth led many residents out of established neighborhoods into subdivisions and a shift of business from the traditional downtown to the outskirts of town leaving many vacant buildings in the downtown area.

After witnessing the dramatic physical change to the townscape produced by the destruction of much of Monroe's traditional architectural heritage, civic and business leaders initiated a visioning process to answer the question, "What kind of town do we want to be?" A series of workshops organized by a design team led by Henry Sanoff, allowed community members to rediscover the town's assets as well as create a vision of a downtown which is a healthy, safe and convenient place that provides a pleasant and attractive atmosphere for living, shopping, recreation, civic, cultural and service functions. The vision also stated that new development in forms and patterns preserve and enhance the existing character of the downtown area (Figure 5.13). The Union Observer, a county news section of the Charlotte Observer, and the Monroe weekly paper, The Enquirer Journal, reported on the visioning process, announced forthcoming workshops, and presented design recommendations in a series of illustrated articles.

From the initial vision statement, a follow-up workshop allowed 60 Monroe citizens, working in small groups, to identify the goals that would achieve their vision. Consensus was arrived at to four general categories of goals:

- Preservation
- Participation
- Regeneration
- Visualization

Preservation, declared the residents, enhances the value of places and objects of historical, cultural, or architectural value to the community. Therefore:

- Preserve architecturally historic important buildings.
- Develop historic attractions in downtown.

Figure 5.13: Issues related to the downtown

Successful community development occurs when people who live and work in a community participate in the process of planning, development, and implementation. Therefore:

- Heighten the public's awareness of the downtown's unique physical character.
- Increase public participation in the development of downtown.

Downtown should thrive again as an activity center and a place to do business. Therefore:

- Improve business activities in downtown.
- Develop new activities and community facilities downtown.

New development should be compatible with the character of the original downtown architecture and provide an image of downtown as a place to enjoy and remember. Therefore:

- Improve the visual character in downtown.
- Develop guidelines to maintain a consistent downtown image.

A third workshop consisted of 10 maps corresponding to different sections of the downtown, each of which had a special character (Figure 5.14). Community members, working in small groups, identified and prioritized key issues in each section. The recommendations receiving the greatest agreement were the need for a civic center, by reusing a vacant, historically significant building to provide for cultural activities in downtown. Housing for the elderly to be provided in an existing hotel, too, received consensus from the workshop participants. There was also agreement to convert several of Monroe's older buildings to accommodate the increasing demand for downtown office space.

Figure 5.14: Key issues prioritized for each section of the downtown

Implementation strategies consisted of policies as well as design proposals. To allow community members to visualize the impact of the strategies, photographs of existing settings were used as a basis for proposing modifications to those settings. Figure 5.15 illustrates several implementation strategies and their proposed physical outcomes, allowing community members to establish priorities for the most salient strategies to pursue.

Design proposals were developed for a community park, elderly housing, downtown commercial and office space, a pedestrian mall con-

necting a proposed civic center with retail shops in a vacant department store and adjacent warehouse, and a variety of landscape improvements.

Figure 5.15: Proposed improvements

People, if given the opportunity and after acquiring the appropriate knowledge necessary to develop their own strategies, can achieve the ability to determine the course of their own lives. The sense of self-confidence they develop is in itself empowering. Empowerment can be looked at as a positive outcome of self-discovery, and the ability to dialogue with different people. Confidence to engage in group processes is in itself a liberating action (White, 1994). When individuals become self-reliant, their behavior will change – from dependence to independence and from alienation to involvement. A community of self-reliant people will be capable of diagnosing its own problems, and of developing innovative solutions. The recent community design movement in Japan reflects the self-determination and confidence of people who unite together to define community needs. Public participation, however, is a relatively new idea in Japan since planning decisions are usually made at the national level, leaving citizens on the periphery of the decision-making process. Consequently, there is increasing interest in applying participation methods reported to have been successful in implementing plans that previously met the needs of townspeople.

Recurring urban problems in Japanese cities led the Nippon Seinenkan Foundation, a community development organization, to request my design assistance to conduct three projects that incorporate citizen participation in finding appropriate solutions. Employing the *Design Games* (1979) approach to community participation, design teams were formed in the cities of Arakawa, Ohya and Nanao based on their request for design assistance, and led through intensive three-day sessions that began with fact-finding, and concluded with community participation workshops. Projects varied in size and scope and included the revitalization of a historic shopping lane in the city of Arakawa, the preservation and revitalization of the historic town of Ohya (famous for its stone used by Frank Lloyd Wright in the construction of the Imperial Hotel in Tokyo), and the identification of appropriate uses for a land-fill area in the resort town of Nanao. This intensive process involved citizens of all ages and community leaders in rediscovering their community problems and assets through walking tours, structured interviews and focus group discussions.

Volunteer architects, planners and interested citizens prepared graphic materials for a variety of workshops that included a streetscape computer simulation where participants could identify key visual features; graphic symbols that depicted spatial activities for participants to select and locate on a map; and design recommendations of targeted improvement areas. Workshops were conducted with school children, and with community members in a shopping mall, in a regional museum, and

in a city hall. Participation in the workshops ranged from forty to eighty people. The final step in the participation process consisted of developing action plans to implement the ideas generated from the workshops.

Workshop at Yamanakaka Lake

Forty architects, landscape architects and community planners met for two days in May 1996, at a conference center at Yamanakaka Lake near Mt. Fuji, to develop a planning strategy for each of three projects to occur during the next several days. Representatives included design team members of each project area and volunteers from various parts of Japan interested in participating in the projects and learning about the design games participation process. The two-day program opened with introductions and project area descriptions. Participants then joined in several exercises allowing them to experience the objectives of design games and how they differ from other participatory processes. The objectives included:

- To form small groups to encourage equal participation.
- To employ consensus decision making to encourage participants to listen to each other.
- To structure games that allow participants to understand the design process.
- To emphasize goal setting as a primary activator for solving environmental problems
- To use goal setting to activate the process of strategy selection.

On the second day of the workshop, participants formed working groups around the project areas and applied design games principles to their particular issues. Each group was equally responsible for the organization of the three-day project that would occur in their town (Figure 5.16). The results of this planning workshop prepared design team members for the events to occur in their community.

Figure 5.16: Planning team

NAKAMACHI SHOPPING LANE IN ARAKAWA

- Charrette Process
  Community action planning
  Focus groups
- Game simulation
- Goal setting
- Group interaction
  Participatory action research
  Public forum
  Strategic planning
  Visioning
- Workshop

Lying in the northeastern section of metropolitan Tokyo, Arakawa is one of 23 city wards with a population of 180,000 people. Arakawa retains much of the townspeople's traditional lifestyles, typified by many small shops and crafts people. The city is known for the Nakamachi shopping lane, one of the oldest districts of this type in Tokyo. The closing of an elementary school on the shopping lane, however, resulted in several vacant shops that formerly catered to young children. Also, recent plans by the Tokyo Metropolitan Government call for a new supermarket to be built very close to this historic shopping lane. Recognizing these problems, the local merchant's association called the Nakamachi Merchants Federation, subsidized by local government, has been working to find ways of ameliorating the conditions facing the future of this shopping district.

Consequently, the marketing division of local government, a small group of individuals dedicated to preserving the character of Nakamachi, assumed responsibility for bringing a citizen participation process to Arakawa by requesting assistance from the Nippon Seinenkan Foundation. One of the major areas of interest to the Foundation is community development, though this project represented the first community action effort initiated by the organization. The Foundation served as the conduit between the town and the community design consultant.

Several important factors were revealed when the design consultant and members of local government went on an initial walking tour of the area. While there was a sign of vitality in the Nakamachi area, most of the shoppers and shop owners were elderly people. Merchants typically lived above their shops, while shoppers either walked or arrived by bicycle. The shops mainly sell fresh vegetables, fruit and seafood, and take pride in their merchandise. The small privately owned shops possess individual character and feature personal-touch shopping based on trust and face-to-face communication between shopper and customer (Figure 5.17).

An extremely narrow shopping lane accommodates cyclers and walkers. Shoppers, presumably protected by a three foot, painted green strip, designated for pedestrians, were not easily contained within the designated area. Shop owners also encroach onto the green pedestrian area with the display of their merchandise. While there seemed to be an awareness of the problems connected with the shopping lane, there appeared to be no clearly organized process within local government for resolving these difficulties, especially since major planning efforts were directed towards a new supermarket.

Figure 5.17: Nakamachi shopping lane (Photo: Henry Sanoff)

Fact-finding was the starting point of the three-day community design process in Arakawa. A previously publicized meeting attracted twenty-seven interested citizens who met in the Arakawa branch of the Tokyo Chamber of Commerce building. Participants at the meeting included shop owners, local citizens, and volunteer designers and planners. The goal of this initial meeting was to have local residents rediscover the shopping lane through a walking tour. On the tour citizens used disposable cameras to photograph the *liked* and *least-liked* features of the shopping lane. Citizen generated photos provided important reference points in the community workshop that followed since the results were displayed on a large map of the district (Figure 5.18). To gain additional insights into the problems and future prospects of the shopping area, several design team members conducted interviews of thirty, randomly selected shop owners. A three-person photographic team from Keio and Tokyo University working in Tokyo's Urban Simulation Laboratory videotaped the interview process and photographed segments of the shopping lane (Figure 5.19).

Team members and citizens accumulated a considerable amount of information necessary for developing the workshop materials. Information consisted of concerns expressed by shop owners and residents, as well as visual documentation of key features of the area. This material

Figure 5.18: Photos of problem areas located on a map of shopping lane

formed the basis of a two-part community workshop that began with goal setting. The intent of the workshop was to incorporate the citizens' ideas into a process where they could discuss and prioritize goals and identify the appropriate implementation strategies. Working in small groups of five people, all workshop attendees had an equal opportunity to participate since each made individual choices, defended their decisions, yet reached group consensus. Summarizing the results of each group provided the design team with a list of prioritized goals and implementation strategies. The key goals that received the highest level of agreement were:

- Encouraging young shoppers to the district
- Improving the visual quality of the shopping lane
- Provide safety for shoppers from bicycles
- Make the market friendly to elderly shoppers

Implementation strategies included converting the vacant school building into a community center, using vacant shops for parking bicycles and resting places, putting electric wires underground and providing merchandise to encourage young shoppers. Associations made between goal setting and finding appropriate implementation strategies enhanced participants' awareness of the process of environmental change.

Clusters of individual buildings, sequentially photographed were assembled into four streetscapes (Figure 5.20). Participants wrote comments on streetscape segment sheets included in their workshop packet. Their observations were then presented to the entire group

Figure 5.19: Interviews with shoppers and merchants

through a video monitor. Visual simulation of the shopping lane allowed workshop participants to point out specific features to be changed and those to be preserved. With the aid of a miniature video camera, it was possible to move the camera along the streetscape as the images were projected on a video monitor for all the workshop participants to observe.

Citizen's comments stressed the visual unsightliness of parked bicycles and vending machines, the visual disharmony of graphic materials including building advertising, and the lack of an identifiable entry to the shopping lane. Conclusions reached and observations of the design games workshop approach were communicated to the public through local and national newspaper reports.

Combining the responses to the goal setting process and the visual simulation, a clear agenda emerged towards a mutually acceptable direction. The agenda included the following:

- The visual simulation strategy would be continued to convey design proposals to the problem areas identified in the workshop.

- All visual images would be displayed for public viewing and additional comments.

- The merchant's association in partnership with local government would develop and enforce improvement policies.

Figure 5.20: Streetscape images being assembled (Photo: Henry Sanoff)

Merchants were excited to have straightforward comments from the residents and shoppers. While they occasionally exchange views, they rarely have an opportunity for discussions with their customers on an equal footing. Residents, too, were pleased to discuss their ideas about community development. Although local government does hold regular meetings with residents to get their input, responsible officials neither makes comments on the opinions offered or provide sufficient information about the topic under discussion. Normally, residents never participate in the meetings organized by the Business Promotion Section of the ward because they are organized for private business people. Therefore the atmosphere of the workshop was unique and attracted the interest of ward officials and key business leaders in Arakawa. Consequently, plans are underway to reuse the vacant school building as a community center and to provide for bicycle storage in a vacant shop.

OHYA:THE ROCK CITY

- Charrette Process
  Community action planning
  Focus groups
- Game simulation
- Goal setting
- Group interaction
- Participatory action research
  Public forum
  Strategic planning
  Visioning
- Workshop

Utsunomiya is a city whose historical roots can be traced back to the 17th century. Today, it is one of the major inland industrial areas of Japan. Utsunomiya is also the home of the Ohya rock, a soft stone that resulted from volcano eruptions and crust movement (famous for its use by Frank Lloyd Wright in the construction of the Imperial Hotel in Tokyo). Stone quarries and stone houses reflect the historic character of the area, however many of the mines are abandoned and dangerous, while other underground spaces are underutilized. Although the original stone is still quarried, a poor imitation of the stone is becoming increasingly popular. Today, Ohya is in a state of decline.

A local advocacy group composed of architects and planners from government and the private sector formed since city bureaucracy has not been able to implement any plans thus far considered. It is also believed that citizens distrust bureaucrats since townspeople are on the periphery of the decision-making process, and often lose interest in plans generated by local government. A local leader commented, "The district of Ohya has been wandering between lightness and darkness, reality and imagination. Though plans are proposed one after another, the reception from the townspeople is stone cold. There are many problems in the town, however, there are also many good sights and resources."

This special interest group has entitled this project, "Only the residents can warm the heart of Ohya." They believe that it is both in the interest of the city and the residents to have a forthright discussion about what is needed and move to implement plans that meet those needs. A community participation workshop was identified as an appropriate catalyst to initiate change in Ohya.

The three-day process in Ohya began with a meeting of the 35 person, volunteer design team. Some of the team members came from other cities in Japan with an interest in learning about the design games approach. The Shiroyama community hall building, which also functions as an agency of Utsunomia City Hall, served as the home base for preparation of the workshop and community meetings. A bank of computers and

drawing materials was made available in a large multi-purpose meeting room occupied by the design team for three days.

Since many team members were volunteers unfamiliar with the area, informing the team about the attributes and problems in the district was the first step in the process. Volunteer citizens from the Women's Group in Ohya, led walking tours throughout the district to inform design team members about the problems and prospects of Ohya. Team members then conducted a map interview by dividing the district into five sampling areas, where 100 residents were surveyed. Interviewees located on a map of Ohya, their favorite and least favorite places in Ohya (Figure 5.21a). Teams then went out to photograph the problem areas identified during the interviews.

Middle school students from two elementary schools also participated in the design process by conveying their ideas through drawings, to the design team. Sixth grade students drew and described features they would like to see in Ohya (Figure 5.21b). Over 100 drawings were assembled and subsequently covered the walls of the workshop venue. Involvement of the adolescents in this process also engaged their teachers in this exploratory process. Parents, too, became involved in thinking about the future of Ohya as their children discussed the school drawing project. This awareness and information gathering step concluded the first day of the community design process.

Figure 5.21a: Historic building constructed of local stonework

An analysis of the children's drawings, interview results, and photographic survey revealed nine types of problem areas. They consisted of vacant buildings, danger zones for cars and pedestrians, lack of historic

markers, lack of recreation areas for young children, and inaccessibility to the district's historic river.

Figure 5.21b: Student's drawing ideas for their community

Preparation of workshop materials occurred on the second day of the intensive community design process. With the assistance of graduate architecture students from Utsunomiya University, design proposals were generated in response to the problem areas. Photographs of targeted problem areas served as a basis for developing the design alternatives. Design proposals that entailed the removal of debris and other minor modifications were developed through computer graphics methods. At the same time, other team members brainstormed possible goals and implementation strategies that might be selected in conjunction with the design proposals.

The aim of the community design workshop was to encourage participants to select and prioritize goals, and to find appropriate implementation strategies associated with specific design proposals. Each participant received a workshop packet that included goal statements and illustrations of design proposals. These allowed participants to record their decisions for later use by design team members.

A typical custom in Japan is for interested citizens to register in advance for the community workshop. The City Hall meeting room was organized with sixteen tables, each accommodating five people. This arrangement allowed all participants to voice their opinion by making and discussing their individual choices. Eighty people, of all ages, from Ohya and Utsunomiya joined the design team in the one-day workshop. Many children who participated in the drawing exercise were present, along with their parents and teachers. Elderly citizens, who had never experi-

enced such a community meeting, felt comfortable in sharing their knowledge and experience with younger participants.

To familiarize citizens with the events leading up to the workshop, a five-minute video opened the meeting. It consisted of a series of 60 still images of the walking tour, the interviews, the children's exercise, and the preparation of workshop materials, recorded with a digital camera during the entire process.

Goal setting was the opening workshop activity that engaged participants in a lively discussion as they revealed their concerns about the future of Ohya. Work groups devoted two hours discussing community goals and how they may benefit its citizens. Goals that topped each group's list of priorities were:

- Places for children to play
- Tourist development
- Preservation of Ohya's streetscape
- Preservation of the town's natural resources
- Revitalization of the characteristics of Ohya

Appropriate signage to historic areas and historic markers were described as effective physical methods for promoting tourism. Street and monument lighting was noted as important elements necessary to make the town visible and active at night. Revitalization of the river for fishing and recreation was seen to be equally appropriate for tourists and residents. Participants also agreed that abandoned mines should be filled and underground spaces could be developed for theatrical and musical performances.

A traditional lunch prepared by a woman's group and served by residents of the city, allowed workshop participants to continue their discussions as well as learn more about each other's interest. Work groups continued into the afternoon as they reviewed nine design proposals developed from the initial resident survey of undesirable community features (Figure 5.22). Participants made individual decisions and collaborated to reach agreement as they prioritized those physical features that would have the greatest impact on Ohya. Each working group presented their recommendations to the larger group to allow the design team to identify issues for discussion at subsequent workshops.

It was encouraging and impressive to see elderly people, especially women, who rarely have an opportunity to express their opinions, to actively participate in the discussions. In local areas, meetings tend to be male-dominated allowing for few occasions for discussions between men and women. Similarly, participants were comfortable in being able to openly express their agreement as well as their opposition to the design proposals. Workshop participants also enjoyed seeing the student's drawings on the wall and the elementary school students were equally proud of their contribution.

A follow-up community workshop consisted of specific design solutions for promoting tourist activities, the highest priority action issue. Projects were identified that could be accomplished by citizens as well as

Figure 5.22: Design proposals for problem areas in the community

those that would require local government support. To build on the momentum of the community workshops, several citizen participation projects were identified where work could begin immediately. They consisted of stone markers at designated locations around Ohya to inform tourists of the key community attractions (Figure 5.23). A street lighting design proposal was also developed and presented to local government officials for implementation. The local design team has effectively aroused the community into participating in a major revitalization process where citizens have taken a leadership role in effecting change.

Figure 5.24: Stone markers-A citizens project

NANAO LANDFILL

- Charrette Process
  Community action planning
  Focus groups
- Game simulation
- Goal setting
- Group interaction
  Participatory action research
- Public forum
- Strategic planning
  Visioning
- Workshop

The port city of Nanao has historical significance for its cultural assets and traditional performing arts. Fishing villages scattered along the coast of the Japan Sea in the Nanao vicinity lend visual interest to this area in the Ishikawa Prefecture. Nanao is also the Sister City to Monterey, California, and features a fisherman's wharf, not unlike those settings found in California.

Recently, the city reclaimed an eight-acre area next to fisherman's wharf that is scheduled to be filled by 1998. Originally, the reclamation was part of "Nanao: Marine City Project, proposed by the Junior Chamber of Commerce in 1989 as a symbolic "greenland." Subsequent research by the Transport Ministry concluded in the authorization of the prefecture to proceed with the reclamation plan which later became a part of the port project. The basic plan was prepared without consultation with the citizens; consequently, a citizens group organized and submitted their own request to the mayor of Nanao. With a goal of motivating people to think about their city, the Nanao Secretariat invited people of all ages to participate in planning the new uses for this reclaimed area.

A small group of architects and planners from Nanao formed a volunteer design team and initiated a community planning process. The three-day design process in Nanao began when a chartered boat tour took the design team, sixty, middle and high school students, their teachers and several parents around the future edge of the land to visualize the scale of the site. Adolescents and teenagers were selected to participate in this tour because they had been excluded from previous discussions about the future of this reclaimed area. On board, they freely discussed their ideas for this area as they realized the scale of the area and the type of activities that could be accommodated.

The community participation program in Nanao included a search through previous newspapers for articles describing the intent of the landfill, a review of previous proposals, and a public opinion survey conducted during the Noto International Tent Village festival. Such a review provided insight into possible activities for the new site, which included cultural, recreational and athletic activities. While the eight-acre site could enhance the breadth of activities currently available in Nanao,

citizens would be required to make trade-offs to select the most suitable for the community.

Recognizing that the workshop would include adolescents, teenagers and adults, an appropriate strategy was needed to engage all participants at their level of competence. Consequently, a mapping design game using graphic symbols to correspond to land uses formed the basis of the community workshop (Figure 5.24). Design team members prepared over 50 symbols for different spatial activities. While symbols were identical in size, each corresponded to a specific unit of area. Activity data sheets included the population capacity, the area requirement, and the number of symbol units that would need to be fastened to a large map of the land fill.

Figure 5.24: Symbols and area requirements for outdoor activities

The community workshop was held in a central area at the fisherman's wharf shopping mall on a Sunday morning (Figure 5.25). This public venue would give the community workshop high visibility to members of the community. Adolescent's and teenagers worked together in small groups of three to five people. In addition to using the symbols to locate appropriate activities on a map, students used the map as a base to construct a three-dimensional model of their proposals. Each team was provided with a package of model making materials including straws, foam pieces, colored paper, a variety of plastic shapes and glue. Team members collaborated in each step of the process.

Figure 5.25: Workshop consisting of twelve workgroups (Photo: Henry Sanoff)

Adults began the process by identifying community goals and linking them to appropriate activities. Key goals included the need for a landscape that included the use of water, places for recreation, and the need for a place to hold regular events such as concerts or even a flea market. Activities to satisfy these goals included flower gardens, a landscaped plaza, a children's play area, a park with a water feature, a restaurant, and a concert hall. All groups produced design solutions, at the same scale, for the landfill area (Figure 5.26 & 5.27). Representatives from each group concluded the workshop by a brief presentation of their ideas. While it was assumed that each group would opt for activities suited to their age and interests, participants were surprised when students selected activities that would allow for their parents recreational activities as well as for their interests.

Figure 5.26: Workgroups developing ideas for the landfill (Photo: Henry Sanoff)

Figure 5.27: Children's workgroups (Photo: Henry Sanoff)

Representatives of each planning team presented their landfill proposals to the larger community, of about 250 residents at the local art museum. An open question and answer process revealed a supportive response to many of the ideas proposed and unanimous agreement about the viability of the community design process (Figure 5.28).

Following the community presentation, design teams developed charts and models based on the workshop results for presentation at the local high school for the students comments, as well as from resident groups. From the student's reactions and resident's comments about the proposals, design models were subsequently exhibited at the Montrey Plaza, the site of the original workshop. A review of the comments allowed the design team to develop one design proposal. This proposal reflected the community's interests, which was contrasted with that of lo-

cal government that did not involve the community in their decisions. A comparison between the two proposals, made by the residents indicated that the prefecture proposal did not effectively use the view, did not reflect a unified concept, and did not use the open stage area effectively. Two proposals, one developed by the prefecture and one developed by the community design process were presented to the residents of Nanao to allow the broader community to select an appropriate solution.

Figure 5.28: Presentation of proposal to the larger community (Photo: Henry Sanoff)

Through this broad community process the results of the design team were favored and a citizen's council was organized by the prefecture government to assure the results of the workshop were considered in the final scheme (Figure 5.29). To facilitate this process, people who organized the workshop became participants in the citizen's council.

A formal evaluation of the charrette process revealed it to be very successful. Part of this success is attributed to the attention to detail and organization typical of many Japanese events. The spirit of collective decision making, an integral aspect of Japanese culture, was evident at every stage of pre-planning, and during the charrette process. People typically registered in advance of the workshop that allowed key logistics problems to be solved prior to the arrival of the design team. Participants represented all levels of decision making and community interests. In all cases the press documented the process and the major results, informing the public of the events and decisions that had taken place.

Figure 5.29: Design proposal for the park

In Japan, design games workshops are viewed as an important approach for achieving public involvement in decision-making processes. A growing number of Japanese professionals and citizens believe it is necessary for the public to share in decisions that determine the quality and direction of their lives. In the past six years, many benefits have resulted from the design games approach for communities, users, and designers. First, there are bi-annual national conferences devoted to gaming workshops where participants are required to present community projects that employed gaming strategies for citizen's participation. Two national conferences have been held since 1993, with over 400 attendees in each, and about one hundred completed projects to date, all of which were initiated by local citizens groups. The first national conference was held in Kochi in 1993, and the second, two years later in the northern part of Kyushu.

DIAMACHI FUREAI PARK

Charrette Process

- Community action planning
- Focus groups
- Game simulation
- Goal setting
- Group interaction

Participatory action research
Public forum
Strategic planning
Visioning

- Workshop

Nagoya, a city in Japan of 2 million people is divided into 16 wards. Showa, a ward of 100,000 people located in the center of Nagoya, is where children usually play in their home, in the street, or in parking lots because it is the only neighborhood in the city with a few parks. Yoshie Ohno, a concerned mother of three children approached the officials at Nagoya City Hall to request a safe outdoor place for children to play and meet other children. While public officials were sympathetic to her request, they did not generate any action. Later she learned that a neighborhood nursery school was planning to build a park for their children, so she met with the school head to propose a collaborative project between parents and staff of the nursery school, and neighborhood residents. An initial meeting of neighborhood parents and children resulted in an agreement of four wishes:

1 Children cannot safely play outside, therefore they wished for a place to play ball, to jump rope, and to swing and slide.

2 Parents wished for a place to easily meet with their neighbors.

3 Community members wished for a park to serve children and their parents, elderly, and handicapped people.

4 Parents and nursery school staff wished they could work together and agreed to "make a park."

Local park officials and community members developed a process for securing City Hall approval for the park by initiating a signature collecting campaign. A petition signed by over 18, 000 people requesting the park was presented to the Mayor of Nagoya. The petition indicated that Showa ward had no park, compared to other wards in the city, and their neighborhood, Gokiso was a suitable location. They particularly stressed the fact that children have the right to be able to play safely out-of-doors.

The Nagoya City Council approved the request for the park and instructed the community leaders to search for an appropriate location for the park. Organized visits to other community parks allowed neighborhood residents to become acquainted with a variety of options. A questionnaire circulated throughout the community identified the possible locations, the park theme, and the activities for the park. Neighborhood residents conducted the questionnaire, held meetings with

city hall officials, photographed key features of other parks, developed a business plan, and identified professional needs. The neighborhood organization sought advice from consultants about how children play, how to construct a park, and how to develop a design game to allow community members to participate in the design process. A designer from Nagoya City Hall also volunteered to provide the professional guidance necessary to construct the park. The points agreed to by all community members were that the park is neighborhood based, and that neighbors would be the primary users and therefore responsible for its upkeep. Five basic themes evolved from the neighborhood survey:

- Children want a place to play ball.
- Parents and young children needed a place of their own.
- Shade trees and flower gardens were needed.
- Water should be integrated into the park.
- The park should be accessible and welcome handicapped people.

A design game workshop involving residents of the neighborhood answered several important questions:

- How can our park help in achieving a strong sense of community?
- How can we make a good park?
- What are the conditions for a good park?

The workshop included approximately 60 children and their parents, elderly and handicapped people from the neighborhood, working together for one day, to design their park. A design kit, prepared in advance, included a catalog of pieces of play equipment, a game board, and a variety of colored markers, scissors, etc. Young children made drawings of the features they would like to see in the park, while older children and adults worked in groups of six people to construct three-dimensional scale models of their park. Each team presented their ideas for appropriate activities for children of all ages, as well as to evaluate their schemes ability to satisfy the following criteria:

- Adequate space for young children to play.
- Adequate space to play ball.
- Space for children of all age levels to play.
- Quiet space for resting.
- Safety zone around each piece of equipment.
- Accessible for handicapped people.
- Safe and secure environment.
- Ability for a car to enter the park.

Design proposals included a slide and swings for the younger children, ball playing for the older children, and a garden and sitting area for parents to observe their children and for neighbors to meet (Figure 5.30).

Figure 5.30: Workshop preparing design proposals for the park

Plans and a construction schedule were prepared when agreement about the types of park activities was reached. Construction of the park was primarily a volunteer effort that included children and adults from the community. Children and their parents designed and made the mosaic work on the concrete bench and walls that were constructed by 95 volunteers from the community (Figure 5.31). Completion of the park occurred in three months.

The operation of the park, too, is a volunteer effort. Play leaders help to organize children's activities in the park, while other volunteers participate in planting, watering, and various types of routine maintenance (Figure 5.32).

Figure 5.31: Community members constructing mosaic wall

User Responses to the Park

A young mother, who recently moved to the neighborhood, is a daily visitor to the park because her children meet with other children to form playgroups. Young children were happy to run barefoot and play

with mud and water. Older adults report that the park is a source of information about activities and events in the city.

The park is also the location of many festivals where as many as 600 people attend. Typical festivals include a variety of games and locally prepared food and a bazaar. During the Star Festival, bamboo is decorated with colored paper, and at the Full Moon Festival, bowls are made from mud and painted. Boy scouts hold a periodic festival and students from the nearby college frequently help visitors to the park.

Figure 5.31: Community constructed fountain in the park

THERAPUTIC GARDENS

A community garden called "Flower Land" was created in the Setagaya district of Tokyo at a time when concepts of "universal design" were not part of the vocabulary. Consequently, the garden was not designed to be

accessible to people with disabilities. A landscape architect and community designer, Naho Mochizuki, who was also teaching courses on horticultural therapy proposed a community workshop to renovate the existing garden to make it more accessible for all community residents. The purpose of the workshop was:

- To generate community participation in redesigning the community garden.

- To provide a learning experience for people on the value of working together and learning from each other.

- To educate people on the concept of "universal design" and horticultural therapy through a green project.

Factors considered in achieving a successful project included the identification of areas that could be improved with the greatest impact, the creation of a garden that would serve as an educational experience, and a process that would result in planting in the spring.

A series of six workshops were held over a period of several months. Participants included neighborhood residents in wheelchairs and with visual impairments, district officials and community designers. The opening session began with a discussion of the principles of "universal design" followed by a first hand evaluation of accessibility of Flower Land by the workshop participants. The evaluation was conducted with the use of blindfolds and wheelchairs to allow participants to identify problems areas where changes were needed.

A second workshop session was held to identify the areas where improvements could be made and a planning process for the community garden. Specific tasks were established for small work groups which included braille guides of Flower Land for the blind, guided tours for the disabled, and planning work areas for the disabled. The third session focused on creating models and design solutions based on the ideas developed by each of the work groups. A forth session focused on implementing the design ideas. With the assistance of a carpenter, many residents participated in constructing a multi-purpose work table for people in wheelchairs, a raised flower bed with workbenches for the blind and various wind chimes and hanging wooden pots.

With the coming of spring, the fifth session was held to develop a planting plan and train guides for the garden. Training was needed to prepare volunteer guides to assist people with disabilities. The intent was to create a garden that is safe and exciting to all the senses. The completed garden was named "Kizuki Garden which means "taking the root of a tree" and "gained awareness." Not only was the workshop process a valuable experience for the participants, it was instrumental in the formation of a community development volunteer group "Group Shepherd's Purse," supported by local government.

Today, Kizuki Garden is managed and maintained by horticulture students of the original course at Flower Land, and programs for people

with and without disabilities are planned and implemented by the members of Group Shepherd's Purse (Figure 5.32).

Figure 5.32: Theraputic garden

URBAN PARTICIPATORY GAMES

Urban Infill: At the core of urban design is the streetscape. What we describe as infill is also referred to as redevelopment, which is a renewal or recycling process. Infill requires less energy to build and maintain and

denser development conserves energy and building materials. Infill is also good for communities because fuel, pollution and travel time caused by commuting are reduced.

Today, neglect and rapid decay have placed many streetscapes in need of replacement or repair. Also, an empty sight is often a blighted site. Often, however, when action is proposed in communities without the support of historic-district or similar regulations, the visual impact of a proposed action does not lend itself readily to analysis, and recognized guidelines are lacking to evaluate their significance and to weigh their beneficial or detrimental consequences. These problems have led to charges of insensitivity and even litigation against those responsible for urban development projects.

In order to insure that there is some continuity in the process of restoring older streetscapes, it is necessary to evaluate new building proposals very carefully. This is best achieved by comparing each new proposal with design guidelines to insure the preservation of those unique qualities that make older buildings visually distinctive. Compatibility in a streetscape can be attained if certain characteristics are maintained through the collective development of design guidelines. Such features include:

- Setbacks
- Character
- Scale
- Building use
- Roof silhouette
- Surface variation
- Use of Ornamentation
- Proportion of window and door openings
- Relative height

The Best-Fit Slide Rule: This is a discussion tool developed to examine streetscape infill solutions and their consequences (Sanoff, 1990). It is a visual guide for determining compatibility by identifying those factors to be considered when contemplating new construction. As a strategy for discussion, it can bring together professionals, public officials, landowners, and citizens' groups to explore the consequences of various infill alternatives prior to construction. Developing an awareness of the complex issues related to streetscape infill, through a hypothetical exercise, can enable community members to focus on the social, economic, and visual implications of changing the fabric of an existing streetscape. Since participants respond to a design situation with different values and beliefs, the exercise offers the opportunity for participants to share those differences and learn from each other.

The slide rule is most effectively used in small group settings where participants make individual choices, defend their decisions, and reach consensus about the most appropriate fit. The process requires each group member to select one of thirteen options for the infill of the residential

streetscape (Figure 5.33). Participants then try to maintain their positions and debate them, but the final goal of the exercise is a solution that is acceptable to the group.

The process requires each participant to select one of the thirteen options for the infill site located in the center of a hypothetical urban residential street. The choices include alternative building uses as well as visual appearance. Typically, the issues participants discuss are related to the impact of changing uses depicted by business or commercial additions and their corresponding parking requirements, and increased traffic. Similarly, concerns about residential stability are as integral to the discussions as is architectural style.

Since people respond to a design situation with different values and beliefs, the exercise offers the participants an opportunity to share those differences and learn from each other. Participants use the game props to clarify and reconcile differences.

Developing an awareness of the complex issues pertaining to infill, through an abstract exercise, can enable community members to focus on the social, economic, and visual implications of changing the fabric of an existing residential streetscape. The technique of using a hypothetical street as a stimulus for generating a discussion of important issues permits all participants to learn from each other without being encumbered with and confounded by the personal, political, economic, and site constraints of a real situation. To follow-up on the discussion generated by the participants in the Best-Fit Slide Rule exercise, the actual streetscape under consideration could be presented in a similar way, together with alternative infill proposals. At this point, participants may already be aware of such issues as building use, ornamentation, roof silhouette, relative height, proportion of door and window openings and surface variation, so the discussion can also include issues related to the streetscape. The visual impact of a building's image is significant in conveying connotations associated with building alternatives.

Knowledge of Emerging Environmental Strategies (KEEPS): This game is designed to provide groups interested in preserving the many environmental qualities unique to older neighborhoods, districts and towns with an understanding of the strategies open to them (Figure 5.34). Organizing and planning for the preservation of the qualities identified relies upon the consideration of (Sanoff, 1978):

- The environmental qualities the group seeks to develop
- Individual goals
- The strategies the group can use to accomplish their goals

Figure 5.33: Best Fit Slide Rule

To begin, each player identifies and records those neighborhood or town qualities that were lost or need to be retained. Group members should record and discuss the qualities each has identified. Next, from the goal list provided, each player should select no more than four goals that seem to be important in developing the environmental qualities the group has decided upon. When all the members of the group have made their

individual choices, the individual lists are pooled. Through discussion the grip must choose a total of four goals, with the additional constraint that the four statements must be incorporated into a unified conservation program. Players are urged to forcefully support their individual choices, even if other members of the group differ. Discussion should continue until group members persuade or are persuaded to include four goals that reflect the group's priorities. This may require considerable discussion.

When consensus is reached, the group should enter its choices on a record sheet. Next, using the strategies list, each player should select no more than four implementation strategies that can be used to effectively accomplish each of the goal choices. Each goal should be worked through completely before starting a new one. Some strategies, however, may relate to more than one goal. After all members of the group have made their strategy selections, the lists should be pooled to arrive at the final group choices.

The completed record sheet now contains the framework of a collaboratively generated action program. If several groups are engaged in the exercise simultaneously, the results should be combined and used as a framework for future discussions.

Figure 5.34: Knowledge of Emerging Environmental Preservation Strategies (KEEPS)

ORGANIZATIONALPARTICIPATION

In an era of organizational complexity and change, maintaining organizational health relies upon cooperation and collaboration across organizations and also within organizations. Participatory empowerment, where employees have decision-making power, is also regarded as a key factor in achieving healthy organizations. Liedtka (1996) and others sug-

gest that the ability to build collaborative relationships is regarded as the basis for future organizational success. This combination of collective decision making with individual responsibility demands an atmosphere of trust. Trust is essentially developed through interpersonal interaction that provides a basis for dealing effectively with change (Ring & Van de Ven, 1994). Face-to-face communication is pivotal in establishing effective interaction and appropriate flows of information, the foundation from which cooperation is possible. Out of this cooperation will develop ideas, decisions, and strategies, all of which rely upon the development of consensus. The more group members are involved in a decision-making process, the more likely they will develop feelings of teamwork and cooperation, thereby increasing their motivation, commitment, and contribution to the group.

Pettigrew and Whipp (1993) emphasize the requirement for organizations to understand their environments, pointing to the need for them to become open learning systems in order to effectively deal with the challenges that changing environments produce. Interaction with the environment implies listening, but may also necessitate internal adjustments within the organizational structure. Corporate CEO's are discovering that to implement changes they must first know the organization culture before introducing such techniques as quality circles, a form of teaming and participatory management. Quality circles are different than committees or task forces since leaders and members are trained in specific techniques of the circle process, including brainstorming and consensus decision making. The circle itself determines what problems will be analyzed and solved. The quality circle is a participative management tool designed to systematically harness the brainpower of employee's to solve an organization's problems of productivity and quality. A quality circle facilitator is similar to a public meeting facilitator (Creighton, 1995).

The elements in an organization that refer to its "culture" include, expectations and assumptions about how good members should behave; common language and understanding about the meaning of words and events; major policies; symbolic meaning assigned to the design and use of space; the look and feel of the organization and its members; and commonly held values about what is worth doing and how it should be done (Becker & Steele, 1995). To create an effective design and planning process professionals must understand how the organization makes decisions, the basis on which those decisions are made, and the role it assigns to the physical environment. Culture is a critical determinant of how well an organization is able to deal with change. It is through culture, largely in terms of attitudes, values and patterns of behavior that it can be transformed to better deal with its environment (More, 1998). Organizing this process is referred to as strategic planning, where its most important product may be the process itself.

Good strategic planning is a participative process in terms of reflecting an organization's vision about how it should operate and the actions needed to prosper in that envisioned environment. Fundamental to this view is the understanding that there are many "stakeholders" in the planning process and participants have different views about what is,

what ought to be, why things are the way they are, and how they can be changed. The core of this approach is that individuals or groups have a stake in what the organization does by being able to affect or being affected by an organization's operations.

Clarifying information and its underlying assumptions becomes a major objective of the strategic planning process. A participative view of the strategic planning process outlined by Mason and Mitroff (1981) are embedded in the following factors:

> Participative. Many individuals must be actively involved since the information they possess is varied.
>
> Adversarial. Opposition must be designed into the planning process to allow doubt to surface and be publicly debated.
>
> Integrative. A coherent plan of action, corresponding to a shared vision of the future is needed to guide the strategic planning process.
>
> Supportive. Managers must be actively involved in the process so they understand the rationale for various decisions.

This approach opens the way for people to find and pursue points of communality involving their own interests and those of the organizations for which they work. This approach can also serve to enhance the performance and experience of everyone involved in an organization. People do indeed gain satisfaction from feeling competent, in control, and free to choose for themselves. Personal involvement in shaping their workplace will aid the development of responsibility, cooperation, and self-motivation. Studies in small group behavior produced evidence for the "participation hypothesis." Verba (1961) states that "significant changes in human behavior can be brought about rapidly only if the persons who are expected to change participate in deciding what the change shall be and how it shall be made."

In a classic study reported in the Herman Miller magazine, Ideas, Sommer (1979) noted that allowing employees to select their own furniture from sample items of furniture assembled in a vacant warehouse resulted in a layout that was decentralized, modest, and personal, with the individual station at its core. The office had an unplanned quality to it as the total environment arrangement evolved from the sum of individual decisions. Different employees had different equipment and furnishings and were more satisfied with their work setting than were those in a comparable sample of employees who worked in a setting furnished from a single furniture system prescribed by expert space planners. Of particular interest here is that the warehouse building has been denied design awards while the later has received several. One juror described his denial of the award on the basis of the plan's "residential quality" and "lack of discipline and control of the interiors." In the latter case, visual order and social control becomes the goal, not productivity or user satisfaction.

The argument that employees want everyone treated in a visibly identical fashion does not hold up when employees participate in a procedure that allows them a genuine opportunity to make informed choices. Similarly, the appearance of order is based on the premise that the designed environment is created for users that are more or less identical. Yet, we have seen from the results of this and other research that there are many differences among individuals, and that these differences should be reflected in the complexity and variation of processes of environmental support applied to them.

A Steelcase/Harris (1987) survey of American office workers has shown that they are permitted much less participation in decisions about their work, and workplace, than they want. Research (Brill, Margolis & Konar, 1984; Becker, 1988) has shown that increased employee involvement is associated with greater satisfaction with work environment and a stronger commitment to decisions made about it.

A poll of the Lloyds of London building, conducted by Becker (1988), revealed that 75 percent of the people working there found the new building less satisfactory than its predecessor, a consequence of not involving occupants in decisions about their workplace. Eighteen months after occupancy major changes were required to one of the most expensive buildings ever built.

In the case of Xerox Corporation, a history of union-management relations had built an organizational culture of trust and cooperation. Although this collaboration reduced the level of conflict, the worker participation program was initially limited to shop floor problems that could be resolved without changing the labor contract or infringing on management decisions. As a result of declining international competitiveness, a cost study team was formed to study machines and work flow, allocations of cost, rethinking jobs and work rules and increasing worker responsibilities. They proposed new ways of thinking about problems and new social processes for resolving those problems which led to basic changes in structures and processes of participation-in effect changes in organizational culture in Xerox manufacturing plants (Whyte, 1991).

There are many ways of involving employees in planning and design decisions. Some companies use surveys; others use structured focus groups to react to schematic design proposals. In some instances, employees may actually help design their own workstations by selecting their furniture or laying out their own work areas. The key is to involve employees in decisions they care about and to demonstrate to them that their ideas actually contributed to the final decision. Involving employees in workplace decisions can also save organizations thousands of dollars by reducing the likelihood that money will be allocated to physical design solutions that workers consider unacceptable.

The process begins with the problems people who work in an organization are currently facing. Instead of beginning in the conventional fashion with a review of literature, stating the hypothesis, and finding a target organization to test out the method, the process begins by discovering the problems existing in the organization. Working with the members of an organization and diagnosing their problems helps to focus the litera-

ture search as well as the previous experience of the researcher/professional. Gustavsen (1985) and Elden and Levin (1991) describe this notion of the reformation of the workplace as a "democratic dialogue." He goes on to propose nine criteria for evaluating the degree of democracy in a dialogue aimed at democratizing work (Gustavsen, 1985:474-475):

- The dialogue is a process of exchange between participants.
- All individuals concerned must have the possibility to participate.
- All participants should be active in the discussions.
- All participants in the process are equal.
- Work experience is the basis for participation.
- At least some of the participants' experiences must be considered legitimate.
- All participants must develop an understanding of the issues at stake.
- Initially, all arguments pertaining to the issue under discussion are legitimate.
- The dialogue must continually generate agreement that leads to investigation and action.

A key component in maintaining a healthy organization in the future is a continuous strategic planning process engaged in daily by all levels of the organization (Dahlberg, Connell & Landrum, 1997). Organizations will require a clear organizational vision of how they will do what they will do. Karl Marx longed for the day when workers, through revolution, would own the means of production. Instead, they are the literal owners, because the means of production in most organizations these days resides in the heads and hands of the workers themselves; if they leave almost nothing is left (Handy, 1997).

GLOSSARY OF PARTICIPATION PROCESSES AND TECHNIQUES

The projects in this book employ a wide range of participatory processes and techniques. They all require different resources and respond to different objectives identified by the community group. Each technique is briefly defined below, and their deployment is noted at the

beginning of each project. The table shown in Figure 5.35 identifies the attributes associated with each technique.

Charrette: A process that convenes interest groups in intensive interactive meetings lasting several days.
Community action planning: A process that empowers communities to design, implement and manage their own community programs.
Focus groups: A structured interview consisting of several individuals permitting discussion of ideas.
Game simulation: A technique of abstracting the essential elements of a problem without the normal constraints.
Group interaction: Interpersonal techniques used to facilitate group interaction and problem solving.
Participatory action research: An empowerment process that involves participants in research and decision-making.
Public forum: An open meeting held by an organization or agency to present information about a project at any time during the process.
Strategic planning: A process for developing strategies and action plans to identify and resolve issues.
Visioning: A process to think about how the community should be and find ways to identify, strengthen and work towards those ends.
Workshop: Working sessions to discuss issues in order to reach an understanding of their importance.

Section 6

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