



Participation in the Planning and Design of Public Open Space

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Authors	Meyer, Julie
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PARTICIPATION IN THE PLANNING AND DESIGN OF PUBLIC OPEN SPACE

A Master's Project
Presented by
Julie Meyer, MS

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Participation in the Planning and Design of Public Open Space

Julie Meyer, M.S.

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Approved as to style and content by:

John F. Ahern, chair

Paul Barten, member

Frank Slegers, member

Elizabeth Brabec, Department Head

Department of Landscape Architecture and Regional Planning

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TABLE OF CONTENTS

Acknowledgements	6
Chapter 1 Introduction	7
Chapter 2 Literature Review	14
Chapter 3 Conclusion	52
Appendix 1 Resources	64
Glossary	65
Appendix 2 Sample Exercises	67
References	69

ABSTRACT

This master's project considers public participation in regards to design of sustainable public open spaces, and recommends methods to include it in current landscape design practice

The introduction describes the scope of the project, definition and evolution of landscape design of sustainable open space and sustainability. It presents the claims that landscape architects need an understanding of the ranges of participation in order to deliver flexible, creative and sustainable public projects in a capitalist economy and that a more active participation and more creativity contributes to sustainable designs. The rationale, limitations, methods and introduction to the literature review are also presented.

The literature review reviews definitions, goals, assumptions, standards, histories, claims, typologies and practices of participatory design. It then reviews documented public participation projects. It reviews research and arguments about who participates, how power dynamics affect participation, what knowledge is needed, and how to generate it. It explores which techniques increase participation in design groups, how to translate the public's contributions into sustainable designs, and qualifications limiting participatory design.

The conclusion presents whether and how participation can strengthen possibilities for sustainable design outcomes. It presents a typology to choose the right frame to evaluate the needs of the project and take right action and offers an approach to participatory design processes from a social sustainability perspective. Finally, it articulates the range of participation that can be elicited and the range of designers' and planners' roles in evoking and deepening it.

Chapter 1 INTRODUCTION

Scope

The scope of the project examines public participation in the design aspect of community master (or comprehensive) planning (or visioning) of sustainable open space design in the United States. This project will look at what can happen to public sustainable open space design when there are high levels of public participation.

The intention is to provide useful tools and information for environmental designers and planners interested in public process. The findings of this research project may be useful for those interested in serving mainstream community members as well as marginalized clients at a neighborhood, city and/or regional scale beyond issues of open space, as much of the literature is not limited to open space applications per se.

This project originated out of the study of design practices (at the Landscape Architecture and Regional Planning Department, University of Massachusetts). Thus, the project study is focused on the production of sustainable designs, as opposed to the planning, or management, or funding of such endeavors, though in truth these are often concurrent initiatives.

Clarification of Terms

Membership as part of a “public” or a community is a complex and contested reality at the individual level (Twyman 2000). In this project, while recognizing this, the writing will default to using the term “the public” for ease of readability. Due too to authors’ varying terminology, here the “public” is interchangeable with “community,” “citizens,” “local people,” and “policy-receivers” (Twyman 2000), though a background premise of this project is that there are differing ideas of the “public,” as well as “participation,” which underlies some of the challenges of participatory activities.

The term “participation” emerged from sociology, international development, and the sciences to refer to an organized process by which the public communicates its needs and values to influence institutionalized power. Typical goals include influencing decisions made that affect large numbers of people, ensuring accountability from public officials (Arnstein 1969; Juarez and Brown 2008), solving conflicts, adjusting to social change, or engaging or modeling alternatives to institutional and social power relationships (Crewe 1997; Brown and Jennings 2003).

“Design” is a social process conducted by a range of stakeholders (Lawson 2010). For the purpose of this project, its relationship to planning, decision-making and management can be somewhat interchangeable, because these aspects are not linear. Only in an ideal progression of action would planning lead to decision-making and then to the design. The implementation of that design would then lead to its management, and ultimately an evaluation of that landscape, which would eventually need another, or revised, plan. In reality, however, sometimes these activities happen simultaneously or one activity is performed when the other is more needed.

INTRODUCTION

The term “sustainable” may be one of the most commonly evoked community visioning goals in contemporary times. Yet the term is multifaceted, contested, and evolving (Snyder 2007). Sustainability has since the 1980s been defined as the “ability to meet the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development’s (WCED) Brundtland report 1987). By the 1990s, sustainability was accepted to mean the societal developmental practice of conserving natural resources, with little emphasis on social transformation (Klein 2004). The 21st century idea of a sustainable landscape is evolving into a more nuanced, interdisciplinary understanding of society and its cultural context, together with qualities of a resilient ecosystem that can withstand and rebound under unpredictable or adverse environmental, social, or economic shocks (Thayer 1989, Corner 1992, Klein 2004, Evans and Jones 2008). An assortment of assessment tools have been presented to evaluate the sustainability of a particular place or system.

Some theorists and practitioners critique reducing the assessment of sustainability practices and results to the attainment of benchmarks (Evan and Jones 2008). Since, however, this project is based out of landscape architecture, the field’s reliance on sustainability goals will in fact be used to examine the open space projects in the literature. The Sustainable Sites Initiative (SSI) is a project of the American Society of Landscape Architects in partnership with The LBJ National Wildflower Center and the US Botanical Garden. They define sustainability as a cultural practice that promotes enduring ecosystem services and human benefits that derive from using and relating to these ecosystem functions. These services or functions include global and local climate regulation; air and water cleansing; water supply and regulation; erosion and sediment control; and attractive, useable and maintainable physical settings for people to live, work, and play (SSI 2010).

The social aspect of sustainability continues to be the least developed or defined aspect of sustainability discourse. As such, it is often effectively positioned as subordinate to or following environmental and economic goals (Steiner 2009, Dillard et al 2009). The social aspect of sustainability refers to processes and institutions that generate the sustaining of society’s well-being – that is, the fulfillment of basic needs, equity, and democratic society (Dillard et al 2009). In the design fields, as in the rest of public discourse on sustainability, the emphasis on less on its economic and social dimensions (such as equity), and more focused on the rational, deliberative commitment to ecological processes (McHarg 1969, Brown and Jennings 2003). Other designers, however, do mean by invoking the term to imply the equal weight of and indeed the interplay of the ecological, economic, and social spheres. In the twenty-first century, movements to integrate the natural and social sciences appear in multiple scales and contexts, from grassroots projects to academia (Klein 2004).

“Open space”, for the purpose of this project, is defined as the vegetated areas and networks of any scale that offer social, ecological, health benefits for a community. Public open spaces come to be organically developed by repeated use, or are planned, designed and managed for a specific use. They act to protect ecosystems that exist with

INTRODUCTION

minimal human care at best (though not without protection). They offer recreational use and opportunities to engage with nature. Especially in urban areas, streets, parks, plazas, community gardens, greenways and waterfronts are places to express cultural diversity, to see and be seen, or even be anonymous in a crowd (Alexander 1977; Thompson 2002; Francis 2010). In addition to all that, they tend also to be the site where individuals perform daily functions, memorialize and celebrate communally and otherwise physically define, symbolize, and bind a community (Carr et al. 1992; Thompson 2002).

The state of Massachusetts defines the different types of open space that the Office of Geographic Information Systems maps, as follows:

- *Conservation land* habitat protection with minimal recreation, (i.e. trails)
- *Recreational land* outdoor facilities for relaxation and enjoyment. (i.e. city park, town forest, common, playing field, school playground, golf course, bike path, camp, fish and game club)
- *Parkways/greenways* conservation-oriented buffers along roads or waterways.
- *Agricultural land* land protected for sustaining farming practices.
- *Aquifer and watershed protection land* protection of water resources

Claims

The presence of new issues motivates a search for new answers. These issues include a continued trend towards urbanization (Thompson 2002), unprecedented change related to climate, increasing energy costs (McKibben 2010; Abbott, in France's 2008) and more. Finding ways for a community to come together to perceive, imagine, engage, and alter public space and resources is crucial to a flexible, imaginative, creative and sustainable future (McKibben 2010; Mehrhoff 1999; Smith 2010). Sustainable landscapes arguably need creatively informed design contributions, not just a mandated or legislated quantity of ideas from the most people. The presence of the gifts and talents of individuals in communities stand as an untapped resource that might be explored as a contribution towards solving problems related to sustainability.

However initiated, civic leaders and professional experts generally develop and manage open space planning and design with a relatively limited depth of public participation considering what is possible (White 1996). The range of creativity from those who participate is limited for a range of reasons, premises and constraints, which will be discussed in the literature review. The need exists for landscape architects to work from an understanding of the ranges of participation and the ranges of creativity that can be elicited in order to deliver sustainable designs. The sustainability ideal contains within it the goals of social equity, and is predicated on an informed society. Creative, equitable, informed participation will contribute to more sustainable designs of public open space.

INTRODUCTION

Rationale

Philosophical

The challenge of research in landscape architecture and the related planning and design disciplines is the weirdness of focusing on landscape, a social construct that is made real in time and space by looking at projects and cases, and individual places. Academics concerned with this philosophical challenge state the need for “systematic methods of inquiry capable of gleaning insights that transcend discrete cases, to forward the growth of knowledge in the design and planning professions” (Thering 2009, 1)

On the ground, in practice and methods, open space planning and design lends itself to multiple contributions from a variety of fields and perspectives (Nassauer 1995; Naveh 1995; Muir 1999; Tress and Tress 2001). Solving complex problems implies a process of mutual learning and understanding in order to develop and implement solutions (Schultz et al. 2001). An interdisciplinary and transdisciplinary approach towards sustainability (Tress and Tress 2002) can allow different visions of a desirable outcome to coexist as well as shape a more inclusive outcome.

There are differences between multi, inter, and transdisciplinary approaches, with overlap to participatory approaches. For example, interdisciplinary approaches to projects are when participant experts cross unrelated discipline boundaries in order to meet the project goal. Transdisciplinarity moves beyond an interdisciplinary approach, in that stakeholders and decision makers are involved throughout a project as well, not only as beneficiaries but also as contributors in continuous and mutual interaction with experts (Tress and Tress 2002).

Once the communities’ varying assumptions, motivations, perceptions of the landscape, and values are on the table (Meppen and Bourke 1999), a transdisciplinary approach can create a more iterative understanding among participants. Advocates of a transdisciplinary approach to land use decisions aim to synthesize the expertise from the academic disciplines with the everyday knowledge of the public (Tress and Tress 2002) in order to engage and manage the collective intelligence of a design team (Steiner 2009). The National Charrette Institute’s “Charrette System for Sustainability Projects” is an example of such an approach.

A transdisciplinary, communicative approach to design can create a more iterative understanding among participants. It can offer opportunities for people with different viewpoints to develop strategies together and synthesize the expertise from the academic disciplines with the everyday knowledge of the public.

A related approach, called “communicative,” offers planners and designers a way of dealing with the divergent assumptions, motivations, theories, epistemologies, perceptions, and values. That is, communicative approaches are those that create opportunities for people with multiple differences to develop strategies together (Brown 2002; Meppen and Bourke 1999).

INTRODUCTION

Operational

Few public participation workshops are formally evaluated (Helling 1998; London 2000). Those documented hold few replicable examples of large-scale success (London 2000). Since there is currently no reliable and accepted framework used for participants to see themselves in the process of initiating, doing or evaluating a participation activity, those who engage planners and designers fail to ask important questions, so as to discern whether hiring planners and designers is likely to empower or disable their aspirations (Illich 1977; McKnight 1977). An intellectual framework (Mehrhoff 2003) to evaluate decisions around participation and creativity is useful to frame choices with clarity and integrity. Both organizers and those who join a process can benefit from a framework available to all through the process, so that individual and organizational interests can be as transparent to themselves as they move through the process towards their desired outcomes (White 1996).

Fostering participation is one of the most difficult challenges of the professions (Brown and Jennings 2003) but there is a need for an updated process that is adaptable to diverse, complex, and conflicted reality of public participation for open space planning and design (Giller et al. 2008; Miessen 2007). In addition, there is the need for practitioners to learn while doing participation projects rather than mindlessly adopting so-called “best-practices,” both for the benefit of the individuals and for the projects and for the field at large. Research and documentation are necessary.

While planning and design of public open spaces is challenging, people from different cultural, political, economic, and professional backgrounds (multi-discipline teams of professional scientists, engineers, and designers, if not combined with non-technical public members) are working together to understand, manage, and solve problems, even if successes and limitations of multi-disciplinary, large-scale participation projects are undocumented (Helling 1998). Planners and designers routinely acknowledge the difficulty in describing, evaluating, and interpreting the landscape, to their peers at least, in professional publications (Krog, in Perry 2009).

Ethical

The profession of landscape architecture, the field from which this project is developed, needs to develop more explicitly what it means to work with and for the public, especially if the field aspires to address the challenges of sustainability. The profession of planning provides in its code of practice an explicit challenge to planners to develop their own “conscientiously attained concept of the public interest,” as well as moves members to be obligated in their work to “those who lack formal organization and influence” (Brown and Jennings 2003). However, landscape architects’ professional code and training lacks any formal acknowledgement of the professions’ impact on society in any specific reference to the political aspect of practice, namely that designs reinforce or alter social, institutional, economic, and ideological power structures (Brown and Jennings 2003). “...superficial engagement with people and place undermines the basis of landscape architecture today” (Hester 2011, 148).

INTRODUCTION

Individual practitioners and organizations must represent what they offer accurately to themselves and others. Professionals do not always or adequately hear and respond to a broad range of stakeholders, but might with certain mindsets. More innovation and new visions are arguably necessary to solve both short and long-term landscape problems for sustainable results. New ideas and workable solutions can and should be cultivated in groups because the design profession still does not fully hear and deliver ideas and solutions that respond to a broad range of stakeholders' interests. Notably, only about 10% of the work showcased in *Landscape Architecture* can be considered participatory design, public design or "plural design" (Crewe 1997).

However, it is possible to be clear about the kinds of outcomes expected so as not to lose focus of the best interests of the project or the clients in the name of creativity, or throw out the positive aspects of conflict, individual thinking, and competition (Badke-Schaub 2010). This project's recommendations can allow more people to influence the shaping of designs for sustainable landscapes (Steiner 2009). This project is a beginning exploration to unpack what makes an informed, creative, inclusive participatory design team project work (Fleming 1983).

Limitations

When leaders and experts share control of the process, there are no guarantees of success. Yet practitioners commonly claim both success and satisfaction (Cities of the Future Conference 2010; Hester 2011). The literature review in its showcasing of some participation projects, attempts to illuminate how participation in the projects reviewed might be contributing to sustainability of open space. Due to often minimal documentation or research rigor, however, sometimes the discernment of which models, methods, and techniques are used, as well as how accurate the claim, must be surmised.

The project acknowledges other reasons beyond the lack of public participation for the existence of unsustainable landscapes, including psychological denial and cultural lag in picking up the paradigm of sustainability (Mehrhoff 2010). Yet fully explaining these constraints will be beyond the scope of this project.

Finally, finding funding to do this kind of work, and the time to prepare, is essential to the success of participation. In order to focus and limit the research, this report creates a false simplicity that, in real projects, must be overcome. Projects must be paid for. For the purposes of discovering the best methods, however, resource budgets are taken out of the picture. It is hoped that this is a variable that can be overcome, when the project is rightly conceived. It might take longer with less money, or time to plan, but it can happen through social capital or longer timelines when money is short.

Methods

The forthcoming literature review explores what happens when participants pursue sustainability goals for their open spaces. First, the literature review summarizes dominant theories and models from scholarship and professional practice on participatory planning and design. Research focuses on the strengths, weaknesses, threats, and opportunities in the theoretical frameworks, practices, and projects.

INTRODUCTION

The research focuses on contemporary Western cultures, mostly in the U.S. The participation literature review draws heavily from project reports, casual analyses, anecdotal observations and subjective discussions, yet mostly from peer-reviewed journals, to illustrate the theoretical portion. The participatory planning and design projects are analyzed to relate the theories to actual contexts.

Conclusion

The literature review starts with participatory design definition, goals, assumptions, definitions and standards. It follows with a quick timeline of the modern history of public participation from 1850 to the twenty-first century. Then, it moves on to present claims of participatory design today at the landscape, social, and individual scale. Four typologies of participation introduced between 1969 and 2007, including the most famous, Arnstein's ladder, are introduced.

Next, models of participatory design are described. The literature review spotlights the most common – the charrettes and visioning workshops, as well as emerging models such as the World Cafe and virtual charrettes. The common practices of participatory design that is, surveys, interview and questionnaires, are described.

The literature review concludes with a section on five participatory design projects, ranging in scale from a community playground to a river restoration. The limitations, issues, and barriers to participatory design, are laid out, from the political and economic to the social and personal. A summary and synthesis underlines how the field is still developing and helps to qualify common assumptions about its practices.

Chapter 2 LITERATURE REVIEW

The literature review is focused on participation and how it applies to the planning and design of public open spaces. It begins with definitions, goals, standards, histories, and claims. It concludes with examples and discussion of practices and projects, including theoretical applications, limitations, and barriers to the sustainable design of public open space. The chapter concludes with a synthesis of how it might nevertheless support today's planning and design practices with an acknowledgement of qualifications to commonly held assumptions about its value in its application.



Park Güell, Barcelona, Spain, designed by Antoni Gaudí (WhatBarcelona.com 2010)

LITERATURE REVIEW

Participatory Design Definition and Goals

Participatory design is an organized process by which non-experts- users, residents, visitors, or stakeholders- work with planning and design experts to construct open space into valuable places. Participatory planning and design is also called public involvement, citizen engagement, citizen participation, collaborative decision-making, or facilitated problem solving (The International Association for Public Participation 2010). It can be creatively design-oriented, technically-oriented, or management and policy-oriented. It has the potential to help both leaders, experts, and users understand a place, engage across differences, and design innovative, effective changes (McKee and Nobre 2009). Thus, the practices of participatory design vary and are complex. Goals change over time (White 1996) and may be contradictory within and between individuals (McKee and Nobre 2009).

Public Participation Assumptions and Definitions

“Participation” is an organized, and sometimes institutionalized, process by which the public communicates its needs and values to influence institutionalized power (Laurian and Shaw 2008). Typical goals include influencing decisions made that affect large numbers of people, ensuring accountability from public officials (Arnstein 1969; Juarez and Brown 2008), solving conflicts, adjusting to social change, or engaging or modeling alternatives to institutional and social power relationships (Crewe 1997; Brown and Jennings 2003).

Public participation, when applied to planning and design of landscapes, is the working application of the justice aspect of sustainability by recognizing and communicating the perceptions, needs and interests of marginalized members of society. “Design is a political process,” acknowledges a leader of community design, landscape architect Randolph Hester, (Hester 1974, 1983). Planning and design affects land and people at a variety of scales beyond any specific scope of work (Brown and Jennings 2003). Designers act politically but may not see this or be trained to see this. In reality, the profession influences multiple social institutions (economic, legal, etc.), as well as individuals. Spatial design decisions, such as how space or water is allocated, affect the social realm as well as the personal.

Participation does not have a single underlying philosophical tradition or consensus of meaning. Without an explicit and shared framework of definitions and standards, many people can speak of “participation” but mean different things (White 1996). This will become clearer in the examinations of typologies that follow. The term can imply “private volunteerism that reduces the role and size of government,” as “a way of reviving public support for social reform,” or as “antigovernment individualism and corporate imperialism” (Botterill and Fisher 2004). In other words, the term can be used to serve the goals of a range of political ideologies.

Ethical concerns have been raised about public participation in complex sites and landscapes requiring technical expertise to plan and manage. Experts, designers, and scientists cannot know important information that residents and users of a site, landscape

LITERATURE REVIEW

or place will tend to perceive. There are thus arguably ethical reasons to include their interpretations and experiences as equal in weight (McKee and Nobre 2009).

Standards

Quality public open space meets user needs for comfort, safety, enjoyment, and meaning. Furthermore, they are accessible to all people who might wish to be there (Francis 2003). Evaluating existing public landscapes is beyond the scope of this project, which is focused on the process of participation in creating quality open space. The design process, however, cannot be completely separated from the standards, values, or principles that guide the design outcome. These standards come from architecture, city planning, engineering, the visual arts, or from social science theory including political science and social psychology. The most useful standards to evaluate participation will be the ones that can direct design process and outcomes most effectively. The following initiatives, born out of the last decade, intend to shape public participation practice, either indirectly as part of the design outcome or as an explicit decree.

The Project for Public Spaces (PPS) focuses on the activity of “placemaking,” and distinguishes function-oriented standards from more form-oriented ones. Function, or “program”, supports design and must be articulated first (PPS 2007). PPS asserts that communities benefit from participation in planning and outlines some minimal standards for how to do so. (PPS 2007):

“(Participatory planning) is critical to the success of a multicultural place. ... It seeks to redress the monolithic and often top-down approach to politics and planning by bringing those historically excluded voices into the decision-making process. it is a mechanism for empowering communities to make planning and development decisions for themselves rather than deferring to professional planners. The potential for the development of social capital through this process should not be underestimated.outreach requires more than simply advertising workshops and meetings. More proactive and context-specific strategies must be developed to gain resident input, especially when working with communities who have been historically excluded from the public process.”

Driven even more by the design outcome, the *Sustainable Sites Initiative (SSI)* program, developed in the late 2000s, was launched formally in 2009 by the American Society of Landscape Architects (ASLA), the Lady Bird Johnson Wildflower Center, and the United States Botanic Garden to offer voluntary standards for sustainable landscape design – modeled after the internationally-accepted LEED program (SSI 2009). The standards offer a “how-to” scorecard approach to sustainability and guides landscape designers to articulate the “economic, environmental and human well-being benefits of sustainable sites.”

While there is no direct mention of participation, the initiative implies engagement of “site users and neighbors to reveal local knowledge, cultural legacies, and community

LITERATURE REVIEW

needs.” This initiative is underdeveloped from a cultural literacy standpoint. Its broad, uncritical approach to human cultures makes it a challenge to rely on their standards to meaningfully “reflect” or “incorporate” “history and culture of the site.”

On the other hand, the ASLA indirectly suggests standards by their illustrations of what is a sustainable landscape. They define sustainability on an online showcase website as places that respond, regenerate, and contribute. They use “natural systems to clean air and water, restore habitats, create healthy communities, and provide economic, social, and environmental value.” They illustrate the principles with case studies from a range of scales (ASLA 2011). Revitalizing Communities with Parks

The International Association for Public Participation (IAP2) articulates a third standard. As marginalized or minority groups are rarely the professionals planning and designing landscapes, nor are they managed with minorities in mind (Rishbeth 2001), there is a need for a code of ethics to shape meaningful participation of these populations. The assumption behind these standards is that those who are affected by a decision have a right to be involved in and influence the decision-making process.

Since arguably public participation meets social goals of sustainability by recognizing the interests of all end users of landscapes, it should seek out the involvement of those affected by decisions, even in designing *how* they participate. One standard, then, is to provide participants with what they need to be involved, or access to the process (presumably training, funding, leadership, tools, childcare, transportation, etc.).

The IAP2 Code of Ethics states: Practitioners are to “incorporate the interests and concerns of all affected stakeholders.” They are to “enhance the public's participation in the decision-making process and assist decision-makers in being responsive to the public's concerns and suggestions.” Practitioners “will undertake and encourage actions that build trust and credibility for the process among all the participants,” and “consider and accurately portray the public's role in the decision-making process.” A neutral stance towards interests is also mentioned. A quality process, finally, should feed back to participants how their input made a difference.

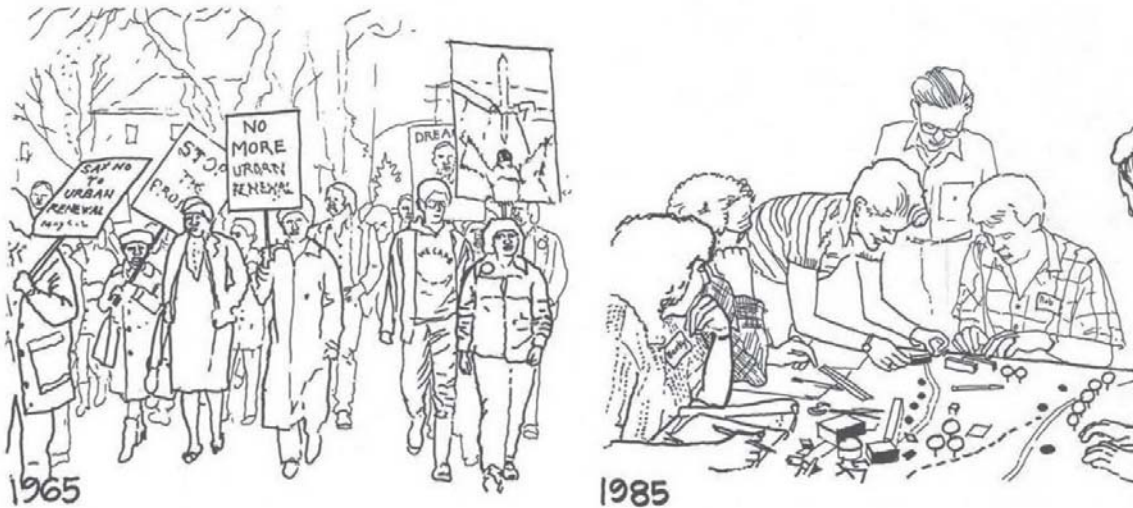
A fourth standard, entitled *Social Economic Environmental Design (SEED)*, recently evolved to help planners and designers measure and realize the social impact of their projects. The voluntary process has two steps - first, to define sustainability goals for design projects, and second, to measure success in achieving these goals. This standard measures the amount of documented community participation in project decisions. In addition, it also measures how well a project advocates for marginalized people, promotes social equality and diversity, and generates ideas that build local social capital. Organizers hope it will become as commonly utilized as the U.S. Green Building Council's independent, third-party certification program Leadership in Energy and Environmental Design (LEED).

In summary, standards such as the Project for Public Spaces, the Sustainable Sites Initiative, the International Association for Public Participation, and Social Economic Environmental Design standards can help planners and designers set specific, achievable

LITERATURE REVIEW

goals for the design process and evaluate success. Standards need further development based on research, particularly as they might change based on particular groups in unique circumstances. The research community in turn, as it refines the collective wisdom of how participation affects people and landscapes, will make the likelihood of sustainable open space more clear.

A Modern History of Public Participation in the U.S.



The faces of public participation (Hester 1989)

1850-1900

Planning and design emerged as a profession during the nineteenth century (Swaffield 2002a). By the mid nineteenth and early twentieth centuries, public agencies in places like New York City began to hire professionals to design public spaces, such as Central Park. The philosophy of the planning and design profession at that time was to serve society; the social norm at the time prevailed in that citizens were not expected to have influence on the design process (Arnstein 1969), despite the beginnings of the Populist movement of the 1880s and 1890s.

The allocation and shaping of public open space has been likened to the place "where democracy is worked out" (Thompson 2002, 60). During the emergence of the planning profession in the late 1800s, open space was the result of philanthropic but often patronizing efforts (Thompson 2002). Planners today may be more willing to practice both environmental and social sustainability.

1900-1930

At the beginning of the 20th century, many large cities began to experience the consequences of their growth without planning, regulation of development. The open space that existed - namely the public sidewalk, was congested. The idea of planning as a method of social reform continued to grow, and the idea of planning at the neighborhood scale was adopted by the planning profession (Rohe 2009).

LITERATURE REVIEW

1930-1960

Across the United States in the early twentieth century, professional planners started to replace town officials in land use decisions (Hester 1999). The rise of the “third sector,” that is, volunteerism, started in the 1930s (Botterill and Fisher 2004).

1960-1980

The planning field’s emphasis on the scientific method, the physical master plan, zoning, and regulation-making, led to low-density development and the physical segregation of activities (Fainstein 2000). At the same time, people began to react against the top-down approach of the planning field. The outrage over environmental and social problems fueled the demand for parks for under-represented communities, and resistance to urban renewal. In Britain, the rise of “Community Architecture” attempted to provide an alternative to traditional or “normative” practice with the rising acceptance of the idea of “community” (Till 1998).

Changing demographics (unemployment, immigration, etc.), as well as the previously mentioned cultural shift led to a diminished authority of the designer starting in the 1960’s and 1970’s, particularly in the United States (Crewe 1997). The participatory, advocacy, and progressive planning traditions were born out of the adversarial climate of the time, alongside the social architecture movement (Crewe and Forsyth 2003; Hester 1983; Brown and Jennings 2003; Helling 1998). Expectations grew of the public’s role in development, planning, and design (Hester 1983), moving from a norm of representation to direct participation (Laurian and Shaw 2008).

For example, in 1970, a seasoned landscape architect Lawrence Halprin designed a freeway for San Francisco, but the plan was not accepted, because the “community” was resistant to an outsider designing without their input (Halprin 1974). The argument was that public input should improve the fairness of the design process and make planning and design more suited to and supported by the people who actually lived nearby. Participation began to be understood as a project’s programmatic expression of democracy (White 1996). Design professionals followed this lead and adopted advocacy and participation methods used in development and planning (Hester 1999). The Environmental Impact Assessment emerged during the 1960s and 1970s, which purported to be a participatory process (Palerm 2000).

1980-2000

The trend continued to shift away from decisions made solely by experts, and the theories of participative democracy rose in practice in national and regional planning practice. The planner and designer roles began to be perceived in their fields as intermediaries and compromise-makers between competing needs of a relatively unified “public” (Fainstein 2000). People began to think about sustainability, and coalitions began to address environmental issues on a site scale. The rise of public participation in the U.S. inspired community action in other countries, especially in developing nations (Hester 1983, 1999; Crewe 1997; Botterill and Fisher 2004). But it also experienced a backlash against

LITERATURE REVIEW

its unproven claims (Hickey and Mohan, 2004) which mirrors the experience of participation in land use design and planning today.

Twenty-first century

Today, the focus in participatory design forums is less explicitly on power struggles between the “have” and “have-nots”, and presumably more about differences of identity and rights of cultural groups (Fainstein 2000; Bond and Thompson-Fawcett 2007; Aldred 2009). “Businesses and social movement organizations are, Brown argues, converging in terms of organizational structure and therefore ‘what works’ for each is becoming more similar” (Aldred 2009, 6).

Yet, perhaps the reality is continual subordination of marginalized groups. Funding and requirements for public participation were reduced during the 2001 Bush administration, and for the next eight years (Daniel Smith December 10, 2010, e-mail message to author). As practiced today, participatory design relies on methods developed rather independently from theories of discursive and deliberative democracy and more on research from community and organizational development (Aldred 2009) and environmental psychology (Francis 2001). .

Claims of Participatory Design Today

Participatory planning and design claims to address power relationships and imbalances between parties, and inclusively involve the less powerful in problem-solving and decision-making to enact planning and design decisions (IAP2 2010; Bond and Thompson-Fawcett 2007). Civic leaders hire trained facilitators, often planners or designers. The facilitators gather, communicate and synthesize perceptions and values of residents and users of a site, and develop this information into designs. Often, depending upon the technical complexity of the project, experts may still play a role.

Participation, with or without a strong design component, is required in many publicly-funded projects, usually by inviting developers, academics, non-profit watershed councils or environmental organizations, and the general public (Palerm 2000). Yet, in many instances, such as in environmental impact assessments, pre-defined agendas (Palerm 2000) or lack of proper preparation of participants allow for only minimal shaping of the design outcome. Whatever the level of participation, people will often accept the outcome, even if it goes partially against their interests. It depends on whether they perceive the process as fair and if they believe themselves to have competence in decision-making (Webler et al. 1995).

Most claims about public participation and participatory design are of an anecdotal or advisory nature. There are too few documented, researched evaluations of how well claims are met in project outcomes, and even fewer across multiple projects or over time (Thering 2009; Laurian and Shaw 2008). The following is a breakdown of claims for public participation related to the design and planning of landscapes or overall community development.

LITERATURE REVIEW

Landscape

- Participation protects and conserves landscapes (Cities of the Future and Urban River Restoration Conference brochure, March 2010).
- Top-down approaches tend to fail (Forester 2003). The public has a better knowledge and wisdom of the problem as well as better solutions (Forester 2003; Wates 2000). Better decision-making results from local participation (Wates 2000).

Individual

- Through the opportunity to contribute and create, it increases the sense of ownership, stewardship, and empowerment (SSI 2009) and enhances local leadership capacity (Pitera 2006).
- By working on neighborhood and landscape-scale issues, it helps individuals overcome rootlessness (Hester 1984), enhances a “sense of place” (SSI 2009), and helps meet human needs for clean water, air and stable economic climate (Benedict and McMahon 2007).
- Through an educational component, it raises understanding of environmental processes and issues and builds relationships to landscapes.
- The chance to be heard and reveal a unique understanding of a place (Arnstein 1969; White 1996; McKee and Nobre 2009), builds familiarity and trust between individuals, and across groups (SSI 2009).
- By actively participating, understanding and altering of space, participants can gain a deeper appreciation of the existence of otherwise invisible political and social structures (Miessen 2007; Brown and Jennings 2003).
- Participation builds the problem-solving capacity of the public to tackle future problems.

Social

- It develops shared expectations for design outcome (SSI 2009).
- It enhances a sense of community self-sufficiency (SSI 2009).
- By proactively anticipating or reactively adjusting to changes, it prevents and solves social and spatial conflicts,
- By generating a greater quantity of perceptions and ideas from a wide range of stakeholders, it increases the likelihood of innovations that enhance sustainable development (SSI 2009). It increases the chances that public officials and representatives will enact the will of their constituents (Arnstein 1969; Juarez and Brown 2008)
- By practicing a wider-scale decision-making process, and sharing control with civic leaders, it presents an alternative to hierarchical power relationships (Crewe 1997; Brown and Jennings 2003).

To recap, there is a wide variety of claims as to what participatory design does. Most claims converge on the idea that it involving the public in problem-solving and decision-making positively affects individuals, groups, and landscapes. There is still little formal, standard, or accepted practices in evaluation of participation in planning and design (Laurian and Shaw 2008).

Typologies of Participation

“Participatory designers must sharpen their intentions.” (Hester 2011, 149)

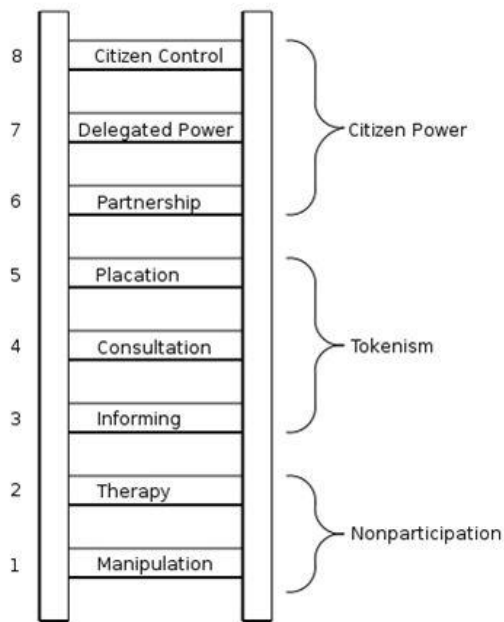
Familiarity with the variety of ways participation is conceptualized is useful to anyone trying to establish goals, roles, responsibilities, methods, or generalizations about public participation. The following four typologies are presented to introduce, not exhaustively however, the range of approaches, theories, objectives, and methods under participation. They are variously conceived as ladder, continuum, typology, and realms. Actual planning and design processes can be analyzed under the lenses of these frameworks, but in the end are too complex to be guided or understood by a single one (McKee and Noble 2009).

1. Ladder of Participation

Shelly Arnstein put the most well known typology of citizen participation forward in 1969, with the claim that everyday citizens need more power. It describes the increasingly higher ranges of decision-making and public power (Arnstein 1969). The assumption is that the more power participants wield, the more they can influence the outcome of decisions (Juarez and Brown 2008). Organizers, with this understanding, and depending on the situation and resources (Arnstein 1969), can consciously seek the appropriate level of participation for their project. For example, the “Partnership” relationship might be aimed for when there is an organized citizen-group with financial resources able to hire leaders, experts and lawyers. “Delegated Power” might be better suited for policy boards and agencies populated by citizens with responsibilities (Arnstein 1967).

Arnstein’s (1969) paper acknowledges that the model only acknowledges the differences between types of participation, and does not analyze the reasons why these differences exist. She notices further that its abstractions simplify differences between the “have and have-nots” in order to highlight the disparities. Difficulties with this typology include the confusion of terminology and possible contradictions. Who is powerful, who is a decision-maker, and who is a citizen? When “have-not” citizens denied equal access to resources gain power to make decisions, are they still “have-nots,” and if so, for how long until they become the power brokers? What is the assumption of how people should share and wield power underlying this model?

LITERATURE REVIEW



Ladder of Participation (Arnstein 1967)

Levels 1 and 2- Manipulation and Therapy

Goal: Enable those in power to educate or cure citizens.

Levels 3 and 4- Informing and Consultation

Goal: Allow "have-not" citizens the opportunity to hear and be heard but not necessarily influence.

Levels 5 Placation

Goal: Token representation, watchdogs and rubber-stamping by public.

Level 6 Partnership

Goal: redistribute power through negotiations. Joint policy boards and committees. Groundrules established and respected.

Level 7 Delegated Power

Goal: Citizens have dominant decision-making authority over a plan. They trust there will be accountability. Power-holders start the bargaining to make changes.

Level 8 Citizen Control

Goal: participants or residents govern a plan, and negotiate the conditions under which non-residents or users can make changes.


LITERATURE REVIEW

2. *Continuum of Participation*

Though this master's project is concerned with domestic applications of participatory design of open space, much can be learned from international development work (Juarez and Brown 2008). "IDEO" is one example of a humanitarian global project offering participation methods via an open-source website, though the work is focused in impoverished communities in Africa, Asia, and Latin America.

An applied research typology emerging from international development work was developed by Robert Chambers in the early 1990s. His work, inspired by other development practitioners, aimed to strengthen the capacity of impoverished rural communities. It is based on the claim that residents of a place are the best people to serve as analysts, planners, and change agents of their locale. Experience-based forms of knowledge are privileged over expert knowledge, since people on the ground are presumed to know more about the intricacies of their environment than an outsider.

Chambers contributed a way of analyzing participation when he introduced his project-based method, Participatory Rural Appraisal, or PRA (Chambers 1994; Juarez and Brown 2008; Hickey and Mohan 2004). In PRA, the consultant becomes a neutral facilitator, putting aside preconceptions about local, site-based issues in order to empower residents to develop their own local solutions. The PRA was developed in response to the established Rapid Rural Appraisal methods (RRA). The RRA, by its emphasis on rapid assessment, was critiqued for biasing centers more than edges; and listening to men, elites, and users over women, poor, or non-users of a site (Chambers 1994). PRA methods focus on group dynamics, sampling, interviewing, and visualization, in contrast with RRA which emphasizes secondary sources, observation, and limited interviewing. PRA sampling methods include mapping, modeling, transect walks. Visualization examples include making timelines and matrix scoring (Chambers 1994).

Nature of Process	Rapid Rural Appraisal (RRA)	Participatory Rural Appraisal (PRA)
		
Mode	Elicitive/extractive	Empowering
Professional's role	Investigator	Facilitator
Information owned, analyzed, and used by	Professional	Local people
Typical methods*	Secondary sources, observation, interviews with local experts	Shared visual analysis, Venn diagramming, group checking and validation
Objective	Data collection	Empowerment
Long-term outcomes	Plans, projects, publications	Sustainable local action and institutions

Note: Table adapted from Chambers 1994, 1997.

*Methods listed are only representative examples and not exhaustive. Methods have considerable overlap along the continuum, depending on the mode of the process.

Continuum of Participation (Chambers 1994-1997)

LITERATURE REVIEW

Chambers' analysis of the multiple ways participation can occur (group dynamics, sampling, interviewing, and visualization) contributed a helpful framework as well as new methods. The continuum of participation (see above table) illustrates how participants in international development and non-governmental organizations developed practices that might influence open space planning and design. Stronger links are yet to be made between landscape architecture and planning and international humanitarian development projects, despite sharing common goals (Juarez and Brown 2008).

3. Typology of Participation

Sarah White developed a third typology in 1996, focusing on how multiple variables affect participation outcomes and choice of methods. This typology framed the use of participation, as well as cast new light on the goals of those with more power. The assumptions underlying this analysis include the idea that participation affect individuals differently, depending on their perspectives, and that it involves a shifting mix of interests as the project unfolds.

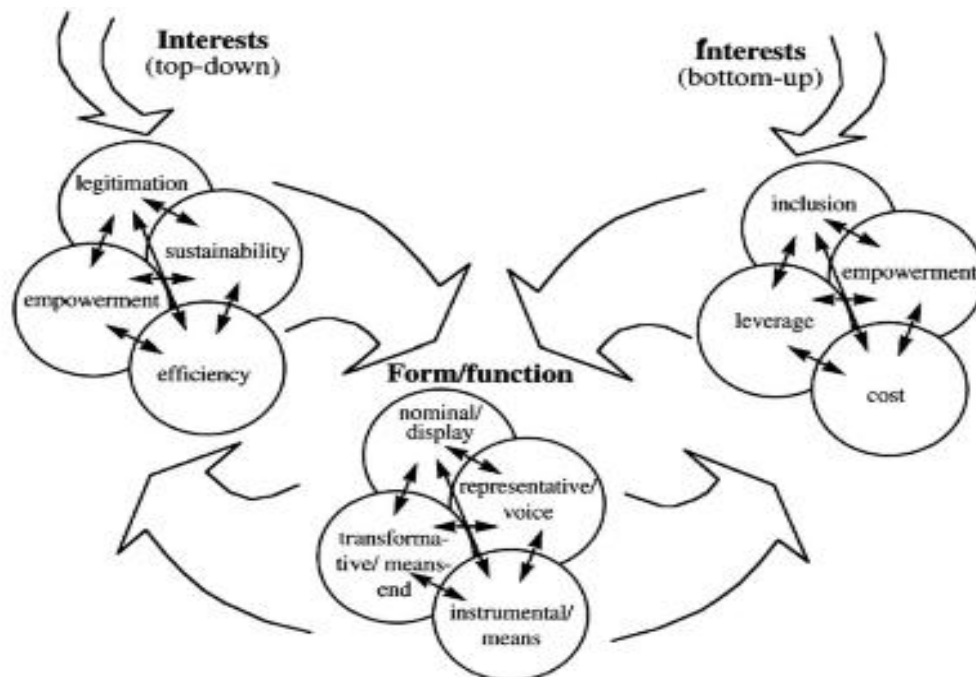
White cites four types of participation: nominal, instrumental, representative, and transformative (see table below). A "nominal" form of participation, for example, can add legitimacy to those with more power and serve participants by offering an experience of inclusion (Juarez and Brown 2008). "Top-Down" refers to the interests of the more dominant partner, while "bottom-up" points to the interests of the relatively weaker partner in the power relationship. Transformative approaches refer to the potential for increased, sustained, and meaningful involvement in decision-making, implementation, and management from the point of view of the party with less historic power.

White's typology highlights the political aspect of participation. By focusing on *who* participates, and the *level* of participation as well the relationship, it is claimed that empowerment *can* be initiated from top-down as well as from bottom-up, if those in power are working in solidarity with those with less power (a contradictory and complex experience). White points out that it is usually the ones with more power that identify the abstract issue of disempowerment and mobilize to equalize matters, as those with less means might be working for more tangible and short-range goals (White 1996). When power dynamics shift in a place, funders, non-profits and civic leaders must realign relationships amongst themselves to share the power with newcomers (London 2000).

LITERATURE REVIEW

Form	Top-Down	Bottom-Up	Function
Nominal	Legitimation: lends credibility and authority to governmental body or organization sponsoring the participatory activity	Inclusion: allows participants to be members of the participatory group, should some benefit (to the participant) arise	Display: function is primarily for demonstrating that participation has been part of the process
Instrumental	Efficiency: participatory activity provides labor for essential services in an efficient manner for the government or sponsoring agency	Cost: participation is viewed as a cost by participants, detracting time and resources from other activities, but participants are willing if they view the activity as a necessity	Means: functions primarily as a way of providing services desired by both the top-downs and the bottom-ups
Representative	Sustainability: governmental body or sponsoring agency seeks participation in order to ensure viability of a program over the long term	Leverage: process gives local people a voice in the project and they use that voice to influence decisions	Voice: representative in allowing people to express their own interests and influence decisions, but program comes from the top down.
Transformative	Empowerment frequently perceived as a bottom-up strategy, but impetus often comes from top down when organization establishes empowerment as a priority	Empowerment: intent is to empower locals to plan and act for themselves	Means/End: functions as a means for providing services, but also as the end in itself as locals exert control over their future

Typology of Participation (White 1996)



White's Four Dynamics (White 1996)

Another contribution to the understanding of participation is the illustration of the dynamic aspect of power (see figure above). It acknowledges that the diversity of interests and involvement in participation changes over time. People leave the process for numerous reasons, for example, the need for a break, disillusionment, or impatience.

In the figure above, clusters represent people's interests and the forms and functions of participation. Small, dark, 2-way arrows represent the tension between elements. Large arrows coming into the "form and function" cluster represent the conflicting dynamic

LITERATURE REVIEW

between top-down and bottom-up forces. Large arrows emerging out of the “form and function” cluster, and into the “interests” clusters, show how form and function affects people’s sense of their own interests. Arrows from the top represent effects from elements external to the project.

In sum, White’s model of participation, while one of the more developed of the four typologies, acknowledges the complexity of communities, the interdependent relationships between those with more power and those with less, and the shifting nature of power itself.

4. Seven Realms of Children’s Participation

Mark Francis, an urban designer and landscape architect out of University of California, Davis, is a critic, historian, researcher, and practitioner of participatory design for public space. Francis and Lorenzo delineated seven realms of children’s participation in city planning and design in 2002. Despite the focus on one segment of humanity and on city planning, this framework can broaden perspective on how all people are conceived to participate in the planning and design of public space.

Perhaps the most established form of children’s participation, the *Institutionalization Approach*, organizes and mandates children to plan and design, but always within a structure established by adults. City officials and child advocates develop new methods, and contribute case studies to the literature but confoundedly do not deliver what children want and need, according to Francis (Francis and Lorenzo 2002).

More radically, the *Romantic Approach* is a construct where children envision, plan, and define cities together with minimal adult guidance. School-settings are common starting points, because that is where children are already gathered. The World’s Futures Society, World Wildlife Fund, and Childhood City have contribute innovative methods, document case studies, open doors for inclusive participation, and provide examples of what places would look like if planned entirely by children.

The *Needs Approach* is a largely academic effort to understand and apply the spatial preferences of children. Kevin Lynch is a well-known leader, as is the Environmental Design Research Association, American Horticultural Society, and Urban Parks Institute. All contribute research about children but tend not to include them as generators, investigators, or disseminators of this information.

In the *Learning Approach*, children are seen as students participating through environmental education. In this approach, learning outcomes, such as understanding what a landscape architect does, are equally important as physical changes in the landscape. Landscapes for Learning and professional guilds have advanced these methods of participation while they design children-friendly environments. But as above, designers and civic leaders do not tend to follow research advances. Participatory design often tends to increase learning about environments but leave physical places untransformed.

LITERATURE REVIEW

In the *Advocacy Approach*, planners make decisions with children's needs in mind. Typically, a citizen group will lead this effort, though national contributors to this arena include Randy Hester, the Association of Community Design Centers, Congress for New Urbanism, and private firms. These leaders propose theories, and practice methods for public participation for many underrepresented groups. Critics cite the lack of holistic integration with this method, and the lack of implementation of plans. Francis and Lorenzo argue that the lack of effective consensus building with established, powerful, adversarial or indifferent groups has made this approach less effective.

Similarly, the *Rights Approach* sees children as underrepresented citizens. The focus is to establish mandates on childrens' direct involvement in planning and design. UNICEF, Save the Children, international aid organizations, and individual leaders contribute some innovate research methods worldwide and develop plans for communities and regions involving children directly.

Finally, the *Proactive Approach* rests on the assumption that it is possible for planners and designers to do this work *with* children. Its strength lies in its success in applying research on the needs of children into projects that involve their active engagement. Planners and designers trained in facilitation work for *both* the empowerment of young people *and* to make substantive changes to the environment. Academic landscape architects and urban designers such as Randy Hester and Marcia McNally, movements like the Inclusive City, some Community Design Centers, and related private and public groups advance this approach. The requirement that the leaders of this work have special training and skills means that this approach is not always possible, though it is becoming a more common form of participation (Francis and Lorenzo 2002).

APPROACH	GOALS
Institutionalization	Normalize inclusion of children in planning and design
Romantic	Child-defined places
Needs	Define needs of children then incorporate them into design
Learning	Teach children about architecture
Advocacy	Represent needs of children
Rights	Mandate children's participation
Proactive	A synthesis of applied research to design implementation

Seven Realms of Children's Participation in City Planning and Design (Francis and Lorenzo 2002)

Models of Participatory Design

The next section of the literature review characterizes four models of participatory design: traditional methods, formal and informal participation, and the arts. This section will concentrate on the formal and informal design processes, since the traditional method tends to limit participation and the latter tends to limit developments of designs. The experimental World Café model and electronic design charrettes may become increasingly popular because they offer more participant flexibility and less pressure to work face-to-face with strangers.

LITERATURE REVIEW

Traditional Methods

Private design firms typically do this type of design development. They are hired by municipalities, community development corporations, or land trusts, or they submit ideas via competitions. They create waterfront studies, open space plans, remediation or restoration ideas, sometimes in conjunction with community development plans. This is what landscape architecture programs train students to perform: to be designers working as pragmatic experts for prospective or paying clients, to deliver a design product that is visually sophisticated and appropriately phased, will stand up in court against liability concerns, and is conceived and rendered with minimal input from stakeholders. Even community design centers can look more like traditional firms' practice, such as the Asheville CDC in the photo below, when efforts are not made to realign power relationships.

Formal Design Methods

Also known as a Community Planning Forum, Charrettes, Visioning or Design Workshops, they are characterized by a large number of participants and then to last for a longer duration than the others. The majority of the idea-generating and decision-making tends to be held by the planners and designers but there is more input than in the traditional method. The structure tends towards strict, particularly via a controlled program and short deadlines to help focus the mind to produce deliverables.

The charrette or visioning session, workshop or event is the most widely adopted participatory type of process in land use planning and design. Charrettes and community visioning workshops are a public meeting where a group of residents and other stakeholders related to a place come together to develop a shared view of their future. These formal design methods are used as an adjunct and an overlay to traditional planning, especially when concerns go beyond zoning issues. These access points into planning and design can promote awareness of change as well as promote long-term involvement in thinking about places, beyond solving short-term problems (American Planning Association 2010).

A charrette can be defined as a time-limited, organized group of professional planners and designers working with the public to generate ideas on physical design and land use development (Condon 2008). The charrette usually takes between three and seven days, with smaller public workshops preceding the main event (Mehrhoff 1999). Usually up to a day is allocated to produce principles, goals, objectives, and sometimes numerical or performance targets. These public formal sessions tend to progress from open public forums, to diagramming, to detailed plans and perspective drawings. The charrette has risen in popularity, and funding from the U.S. Endowment for the Arts grew to meet this need starting in the late 1980's (Condon 2008).

There are two types of charrettes: visioning and implementation. Visioning charrettes produce speculative drawings and accompanying narratives while acknowledging existing policy and market constraints. The team includes designers and stakeholders.

LITERATURE REVIEW

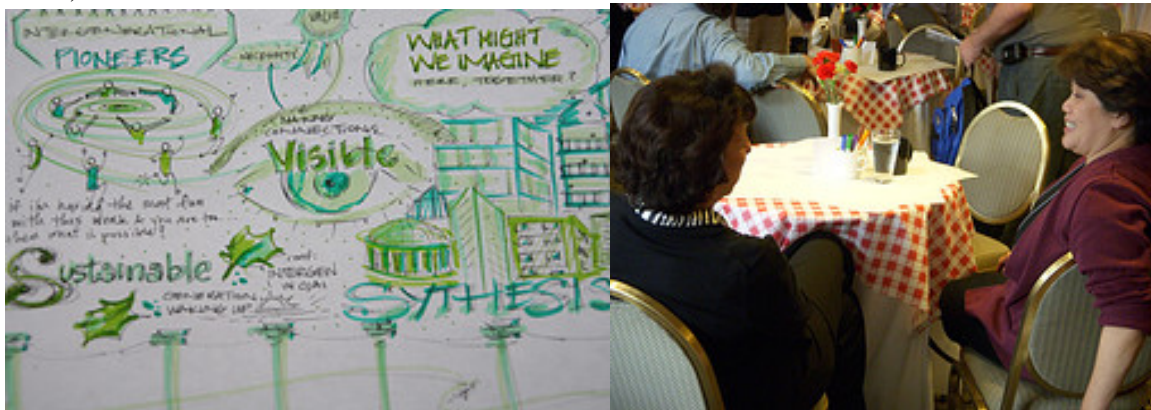
Implementation charrettes produce an executable plan and regulatory documents. This type of charrette is often more time-compressed and requires more responsibility from the participants (Condon 2008).

Informal Design Sessions

Also known as forums, Open Space Technology, Parish Maps/Places of the Heart, Rountables, or World Café's, these participatory methods are characterized by a small group size compared to the formal sessions. The duration tends to be more modest as well. The majority of the idea-generating is by participants, through a looser structure. The focus can be on finding common ground, learning, and/or social and individual empowerment.

Conducting interviews at the beginning of a project to record people's pre-perceptions, and why they decided to participate, can help to increase participation by building relationships, small successes, and trust (Perry 2009). Beginning with a fair, festival, or informal meeting on-site draws people to the open space and is thus a strategy to kick-start awareness and cultivate energy for a longer-term commitment to participation (Carr et al. 1992).

Juanita Brown and David Isaacs developed the World Café model in the 1990s. The goal is social and individual empowerment by creating settings in which participants, through the intersubjectivity of structured small group conversations, enable easier and “win-win” responses to otherwise challenging and problematic issues (Aldred 2009). The premise underlying the World Café model is that common ground can be found within a diverse society. In the words of the founders, it is “a conversational process based on a set of integrated design principles that reveal a deeper living network pattern through which we co-evolve our collective future” (World Café, www.worldcafe.org accessed December 1, 2010).



Informal design methods (World Café 2010)

This method is typically a short meeting, set in a comfortable café-like environment, structured by a series of simultaneous conversations at each small table in response to predetermined questions. During the event, participants change tables to meet with different people and share the concerns and ideas raised at their previous table. They are asked to identify common ground, learn new views and co-create together in response to each question (International Association for Public Participation 2011).

LITERATURE REVIEW

Potential problems with this practice include social pressure against perceiving social injustices as debilitating influences, and an interpretation of ‘empowerment’ that could falsely encourage a sense of control over one’s environment (Aldred 2009). Focusing only on what is working well, not attending to problems, and framing issues to lead to a positive response could obscure the possibility that past successes cannot always be replicated. Sometimes success is a result of a rare confluence of funding and other types of support (Aldred 2009).

The Arts

The fourth model is the arts. Fair, festivals, public performances and spectacles, festivals, or artist-in-residence sponsored projects. They can range widely in size from small or large and last for short or long periods. The majority idea-generating is by participants or the organizers; indeed, little decision-making is formally cultivated but many decisions might indeed “happen.” The structure can feel loose but may be heavily programmed. The focus is on gathering public awareness and support of open space, to draw people to the open space, to kick-start awareness and cultivate energy for a longer-term commitment to participation. In the photo above, the participants are gathering for a parade named “Re-story-ing Chelsea Creek,” sponsored by a restoration organization. Its aim is to raise awareness of the Chelsea Creek, MA watershed near Boston via street performances.

There are hundreds of activities associated with the participatory design of public spaces, and this collection is merely a way to start to understand their similarities and distinctions. There are probably other types of design practices that have not been found and with a broader research scale, might reconfigure these categories to better include them. But for now, they serve as a convenient way to see how the ranges of public participation as described in the typology section might find their way into practice. Next, the particular activities that can be found within the four categories above are broken down more finely.

Practices of Participatory Design

The following list are common participatory design and planning activities:

- Focus groups, study circles
- Public forums and workshops
- Newsletters, websites, blogs, social media
- Lectures and performances
- Soliciting knowledge from advocates of non-participants
- Story-telling (including “photo-voice” (McKee and Nobre 2009) and video)
- Graphic recording of conversations (such as “mind” maps)
- Mapping exercises and community tours

Surveys, Interview and Questionnaires

The strategic use of questioning can be used as a stand-alone exercise. Questions might include the following: (Morrish et al 2000; Thering and Doble 2003; Perry 2009)

LITERATURE REVIEW

Preparation

- What are the goals?
- What is the timetable for action?
- How will success be measured?
- What will the standards for evidence be?
- Will the process be representative?

Involvement

- What brought you here?
- How did you hear about this event?
- Do you think there should be more or less public input?

Knowledge

- What words or phrases come to mind when you think of this place?
- What do you most like about this place?
- What would this place look like in the future if the status quo continued?
- What would you like this place to be like in the future?
- Is there anything you would like to add that we did not discuss?

So far, the literature review has described what participatory design is, why someone might choose to use participatory design, a brief history of participation in the United States, and standards emerging today to guide practice. The following is a brief review of some projects to illustrate these theories and practices, and how they might be applied to sustainable design of public open space.

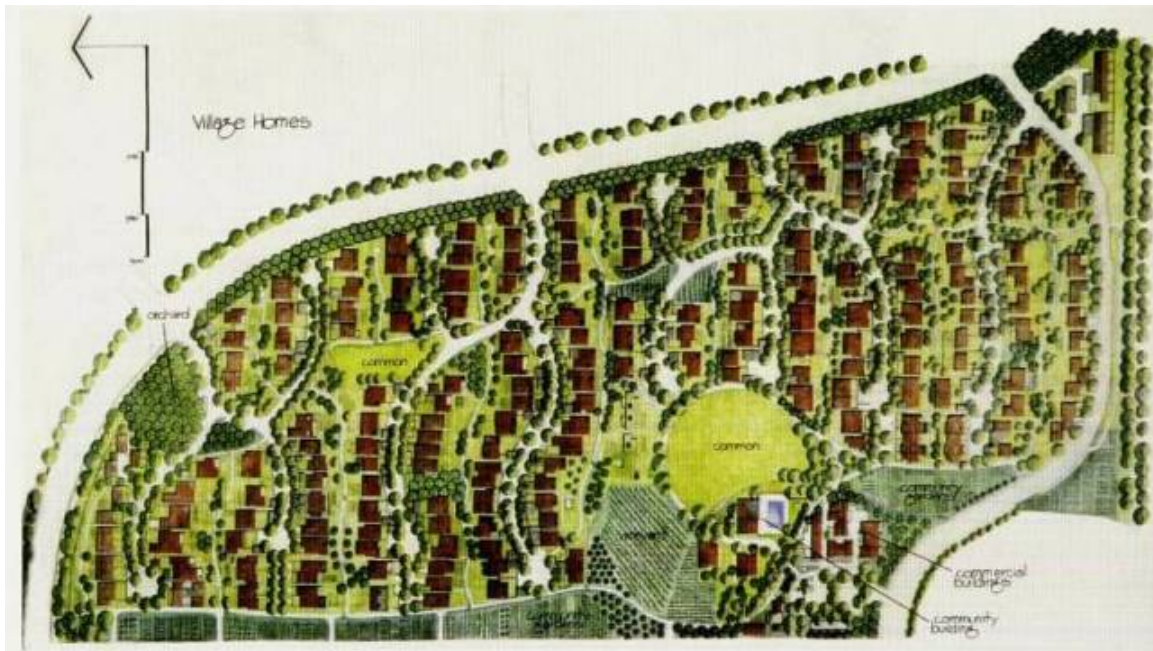
Participatory Design Projects

These following five projects were gathered from books, peer-reviewed journals, personal observation of a charrette, conference attendance, and personal interviews. Some – like the community playground in Davis, are more issue-based, while others are more place-based.

Community Playground, Davis, CA

In 1981, at the eco-development of Village Homes in Davis, California, designers were hired to create a neighborhood playground (Francis 1983). Bolstered by research indicating that children prefer to play in landscapes where they can alter their environment, the designers wished to lay out an undefined open space with objects to manipulate. Parents were concerned. They had a different vision based on needs for safety and order - a more traditional playground with fixed equipment like slides and swings.

LITERATURE REVIEW



200-unit Village Homes, Davis, California. Developer Mike Corbett, 1976-1981.



Resident children of Village Homes drawing their ideal playground

Using behavior mapping, child-led tours to favorite places, and facilitation between children and parents, a surprising new design concept emerged, incorporating, presumably, many of the needs of both children and their parents. Construction of the playground began in the summer of 1981 and by fall, the first phase was complete and evaluated to inform later phases of the design (Francis 1983).

LITERATURE REVIEW

The designer involved in the project reported this case. The reader did not know if the participants were representative of a wide range of socio-cultural identities. The reader also is not aware of whether the participants self-selected to be a part of the design process or if everyone who would be impacted by the open space was brought to the table. Were neighbors of this development allowed to visit the playground? If so, were they also consulted? Additionally, a comprehensive evaluation of the process and outcome was not shared. This weakness in research-based design means that readers cannot determine if the children and parents experienced the design process as nominal, instrumental, representative, or transformative.

International Children's Park Collaborative Re-Design, Seattle, WA – 0.2 Acres

Educational institutions and community organizations sometimes coordinate on open space projects for mutual benefit. In this project, landscape architecture design students do their studio work with non-expert participants, with the potential to offer those outside of the academic department a learning environment where they too can develop design-thinking abilities (Hou 2009).

In this project, the main sponsoring agency was Friends of International Children's Park. Participants included eighteen undergraduate students from the Department of Landscape Architecture at the University of Washington, acting as both service providers and design partners; non-English-speaking elders from the Chinatown-International District; and thirteen students from the Wilderness Inner-city Leadership Development (WILD).

The driver for the renovation was to improve inter-generational use of this public open space. An analysis of neighborhood parks showed that this park was the only one cited near both high densities of youth and elderly. Its historic focus on children's activities was still useful, considering the increasing population growth of families in nearby condominiums. Despite the community's expressed desire for more open space in the neighborhood, this park suffered from poor visibility- many elders had never been to the park or did not know about it, for example, and lack of program flexibility (Hou 2008).

A three-stage design project began in October 2007. The process goal was to involve stakeholders in creating designs and enhancing civic capacity. The first method used was the site analysis. Design students and WILD youth identified different perspectives of the park via site visits and visual surveys at a workshop with youth and elders. The goal was to elicit participants' perceptions (Hou 2008). The method used was the "sticky-dot" exercise, where people expressed what they liked about the park and their preferred features and activities.

LITERATURE REVIEW



Design visioning exercise (Hou 2009)

Next, at a design exploration with over 60 youth and elderly participants at the Chinatown Community Center, the goal was to elicit participants' visions. Bilingual facilitators were available for all design activities. To elicit design ideas, a metaphor of a buffet meal substituted for the typical design charrette. Participants pick up a "plate" (site board) and walk through the "buffet table" to select representations of design elements and activities from "serving trays." Youths and elders sat around several large tables to develop their own designs. Some worked individually and some in mixed generational teams. Design students recorded the process at the tables through the translation of the facilitators. The buffet-style set-up was a culturally familiar activity for the elders, thus potentially easing feelings of discomfort at the unfamiliar task of designing, as well as enabling the option for participants to work by themselves or in a group (Hou 2009).



"Design Buffet" process and results (Hou 2009)

Towards the end of the design students' semester, a collaborative design process followed to finalize concepts. These were presented at the University design review and at a Community Open House during the elders' weekly social hour. Voting was conducted to elicit the favorite designs from the five teams' of undergraduate landscape architect students and WILD youth.

LITERATURE REVIEW



Voting on the five designs (Hou 2009)

Community Feedbacks

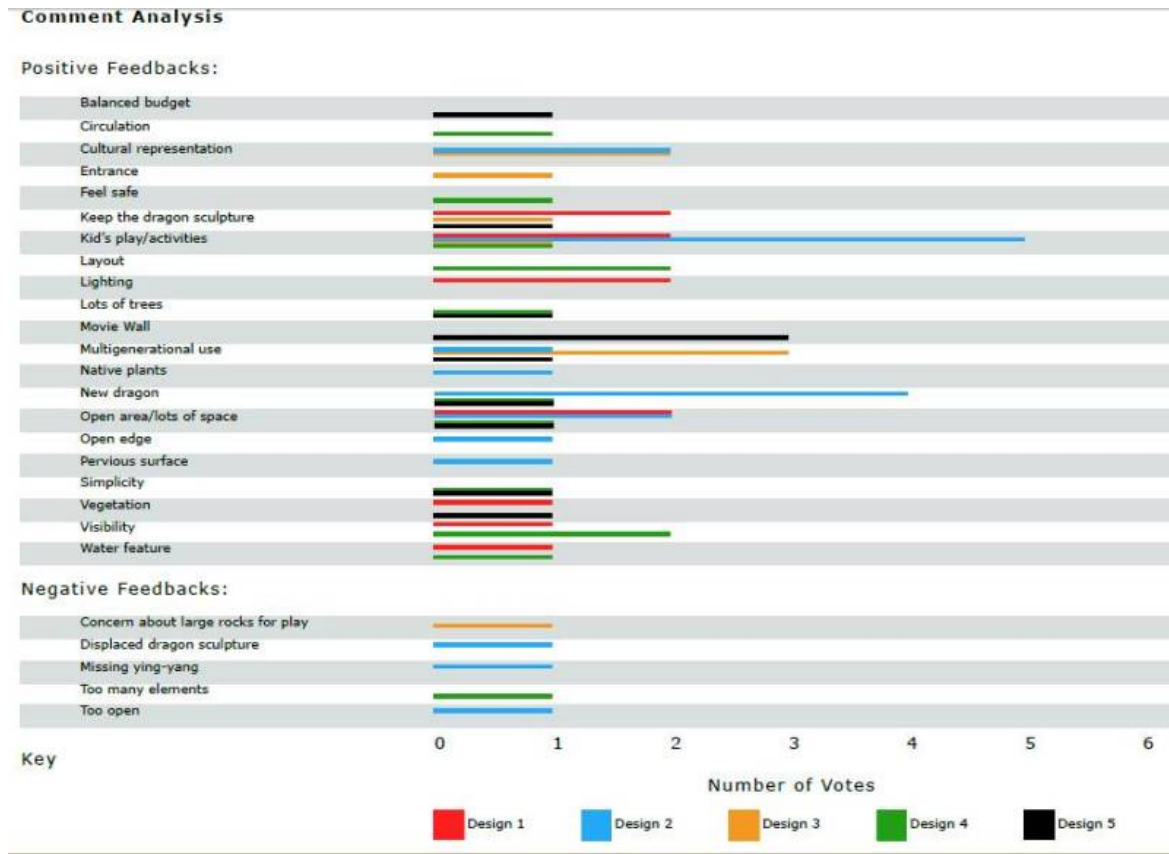


Voter Comments

Design 1	Design 2	Design 3	Design 4	Design 5
Like the idea of water but maybe park is too small, and open grass areas.	Like the dragon and how it squirts water although sad the ying and yang is gone.	Most favorite, but concerned about the large rocks as potential play equipment	Dragon path is a good addition. A variety of levels. Focused mostly on kids.	Like how they kept the original dragon in grassy and accessible area open space.
Open space- very visible, not many hidden corners, good siting of trees/ vegetation in this light.	The sculptural dragon pieces throughout was a fun traditional play item and want to see the bronze sculpture incorporated.	Has variety and open to everyone. Many areas for games, the entrance gave a sophisticated feel	Water feature was enjoyable to see	Didn't like.
Water feature is great! Move the dragon so kids can continue to climb on it.	A good representation/ symbolism of ID and has an enchanting feelings. Like the placement of the dragon and nice covered area.	Most favorite	Like a lot of trees and benches, and a big space for children to play	Like the amount of trees
The concept of layers and the dead tree look?	Have some Chinese aspect, can relate to the Great Wall of China	Nice design	Clear view, beautiful look, and good feeling because of fresh air	Like it because it's simple
Like the diversity of vegetation	Love the activity of this style	Dragon and the glass trailers	A lot of space for activities	The movie idea and telephone
Lots of lighting, barricade from escaping	Like the dragon that connected many parts fit for all seasons.	Good for adult when they're tired to see their grandchild place	Something cover for exercise, and a lot of trees, fresh air	Love the design of dragon and the movie idea is awesome
Still maintains central place of play/ fun for children	Good nice Chinese cultural structure	Because it still have like Chinese/ Asian stuff in the park	Provide a direct view into and out of the park	Budget is balance
Increased lighting with reference to other art installation in the neighborhood.	Design was interesting, pervious surfaces absorbing rainwater and less run-off. Simple use of mostly native plants	Like the trails and it's very creative, looks like the great wall of China	Everything is in the appropriate place	Made me think about the importance about elder!
Not memorable.	I like the fence open and the tree	Very nice and cute	Good use of open space and structure (playground) positioning	Movie wall is great idea (although concerned about graffiti)
Love this style because it's simple.	Integrated multi-functional dragon	Kids can have fun	Made the design feel more safer for the people around the community	It kept some existing vegetation
Nice siting of George Tsutakawa sculpture as a feature of the park.	Three cheers for the multi-functional dragon plus the open design & accessibility.	Place for adult and children to be at. Adult can sit, children can play	It looks pretty, but I think all of them cannot be in the real one	
	Chain of fun activities is great! A little bit too open though.	It looks nice and made people feel comfortable	I like the flow through the park (dragon path)	
	I like the slide and the whole park	Love the Mobius		
	Most interactive for youth and more comforting for elders, it is also simple.			

Results from community and professional designers' voting (Hou 2009)

LITERATURE REVIEW



Results from community critique (Hou 2009)

This was a well-documented participatory process and so it is easy to see how much citizen control and transformative potential was characteristic of the project. The five design concepts then given to a professional firm to be further developed into construction drawings. It is not clear how much of the non-expert stakeholder input remained to shape the final design. However, due to such a protracted relationship with the users of the park, it seems likely that the participants will indeed see the results of their creative input in the actual redesign of this park.

Downtown Plan, Westfield, MA

Community Design Centers are examples of designers and planners who aspire to Arnstein's "citizen control," White's "transformative levels," Chamber's "empowering levels" of participation, or Francis and Lorenzo's "pro-active approach." Sometimes connected to universities, usually non-profit, and often fueled by volunteer labor, there are currently around 50 community design centers nationally (DesignCorp 2010). Many centers tend to focus on deteriorating urban cores (Pitera 2006), while others focus on broader regional projects, including open space (Pankiewicz and Laws 2009). Clients can choose from initial design development to more detailed, long-term planning and design services (Miami CDC 2010; the Association for Community Design 2010). "We essentially are political activists working as designers," says Dan Pitera, the director of the Detroit Collaborative Design Center.

LITERATURE REVIEW

Typical projects are small-scale open space projects, highways, downtowns, streetscapes, greenways or large parks (Association for Community Design 1/6/11). Many are associated with a university, usually the department of architecture; less common are ties to landscape architecture or regional planning. Open spaces have traditionally been under the responsibility of governmental agencies or private land trusts.

A visioning charrette was conducted in the spring of 2008 in Westfield, Massachusetts, hosted by the Pioneer Valley Planning Commission and by the Center for Design Engagement, University of Massachusetts, Amherst's Department of Art, Architecture, and Art History. The CDE is "dedicated to bringing progressive architectural design, ideas and services to communities and community-based organizations in Massachusetts underserved by the architectural community. The Center cultivates and supports community-based design projects, links academic research with community needs, and advocates for innovative architectural solutions to contemporary design problems in Massachusetts cities and towns....pro-bono design work (is) coordinated through architecture courses taught by CDE members at UMass Amherst. These courses provide educational opportunities for students, offer expertise to local communities in need of design assistance, and can lead to the development of new concepts and design solutions." (Center for Design Engagement, www. 2011)

This charrette indeed engaged multiple residents of this small New England city in many ways both in person and online. The professional's role was one of observation, idea facilitation, and production of visual representations of the participants' ideas. Two graduate students in the architecture department at the University of Massachusetts ran the process with the project director, volunteers, and the Pioneer Valley Planning Commission. The process resulted in a phased design to be implemented over 10 years.



Elm St. existing conditions (WestfieldDowntownPlan.com)

LITERATURE REVIEW



Proposed design for Elm Street (WestfieldDowntownPlan.com)

The facilitators used multiple methods to understand and engage the public. These methods included, in rough order of timing:

Before the Charrette

- surveying over 2000 people prior to the charrette
- coordinating committees
- interactive web site
- 124 stakeholder interviews and focus groups with 55 people

During the Charrette

- a public educational lecture on community design
- provocative questions hung on large posters downtown to invite people to the upcoming visioning and design workshops
- walking tours during the visioning event with 40 people
- a design workshop as the main charrette event

Ideas from residents were captured, channeled and returned by the listening, drawing and computer graphic skills of the student designers. The goal was not to synthesize the enormous amount of elicited information too early, for either the public or the design team. Instead, the unique method to let the individual pieces remain separate until a design idea emerged (McKee and Nobre 2009) allowed for an almost surgically precise site intervention. Typically, in downtown revitalization workshops, grand plans arise but implementation is held up by funding. In this instance, only modest changes to just one key area, an empty lot on the main street of the city was targeted for open space design improvements.

The acknowledgement of past public planning processes, and keeping responses from all the other participants on view for the entire community to reflect upon helped to create

LITERATURE REVIEW

high levels of Arnstein's citizen power and sets the stage for White's transformative level of citizen participation. The organizers were "top-down," but displayed many examples of desire of citizen empowerment, by virtue of the educational opportunities such as the public lecture and website, and the non-threatening, relaxed atmosphere during the workshop events.

Outcomes beyond the design included policy, organizational and investment recommendations. Multiple boards and committees worked at different scales from the regional to the cultural sub-groups in the city. The length of the project and the multiple entry points into the process allowed for participants to guide the plan. It will be necessary to follow the implementation of the plan over the next decade to see which and how many participants stay involved, and indeed if new participants are brought in outside the civic leaders.



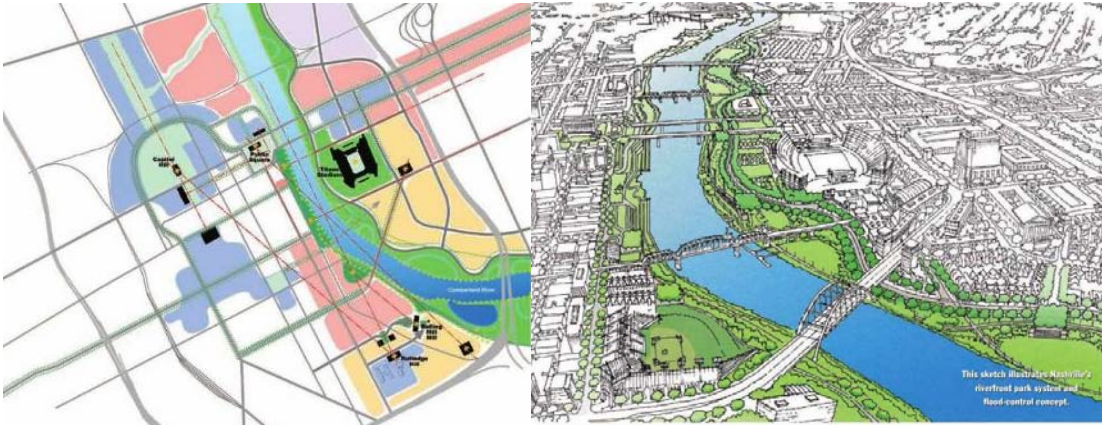
Entrance to Westfield charrette (McKee and Noble 2009)



Westfield design workshop (westfielddowntownplan.com; McKee and Noble 2009)

LITERATURE REVIEW

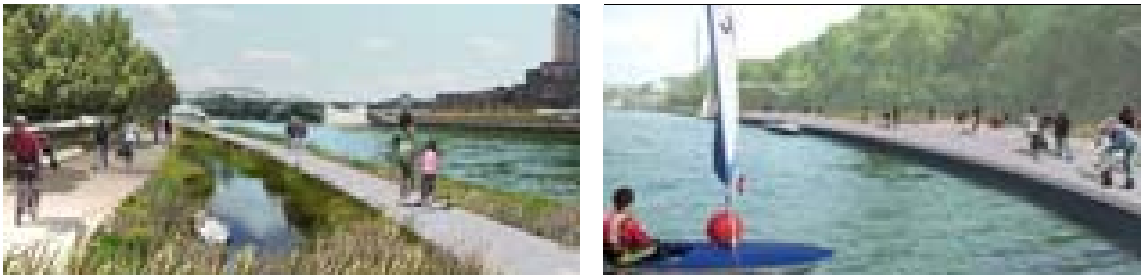
Nashville Riverfront Park, Nashville, TN



Proposed designs for Nashville Riverfront Park (Nashville Civic Design Center and Hargreaves Associates 2011)

Another Community Design Center sponsored open space plan, this one from Nashville, Tennessee, worked on a riverfront park that offered ecological flood-control for the city. The Nashville Civic Design Center, which started in 2000 by a few landscape architects and architects, hosted an 8-month process of meetings with users and other stakeholders to produce a vision plan of the city's growth over the next 20 years (Pankiewicz and Laws 2009). The Community Design Center hired Hargreaves Associates Inc. as the lead consultant. Together, with a New Riverfront Plan Steering Committee, they came up with a 150-acre design, 10 times bigger than the existing Riverfront Park. The project goals included a place that was:

- o More child-friendly
- o Lively year round
- o Easier to find
- o Better circulation
- o Healthier
- o Supportive of the local economy



Nashville Riverfront Park multi-level river walk (Hargreaves 2011)

LITERATURE REVIEW



Nashville Riverfront Park multi-level river walk (Hargreaves 2011)

Design features:

- A new recreational waterway between the existing stadium and interstate
- An urban forest sculpture park and stadium parking connected to other public open space, including a multi-level river walk.
- Commercial, marina, and residential development along a major new north/south boulevard, that serves to link to East Nashville.

(Hargreaves website, undated)

Looking through the lens of Arnstein, it is probable that the Design Center engaged the public via consultation and placation, but not much higher. There is no sign on the Nashville Community Design Center that anyone other than the steering committee influenced the shaping of the plan. Indeed, by the absence of information on the Design Center's website about who participated, and how, participation may have been at the level of tokenism. Here, a committee is mentioned but there is no reference to the individual members and what values or needs they represent. In this way, they do little more than to rubber-stamp the design (Arnstein's tokenism). Indeed, it can be argued that the professional designers in this process state that *they* are the synthesizers of the existing situation and the authors of the design:

“Standing firmly on previous community planning processes and over a hundred different city master plans, the Nashville Riverfront Master Plan unifies previous efforts while proposing a visionary intervention into Nashville's Downtown.”

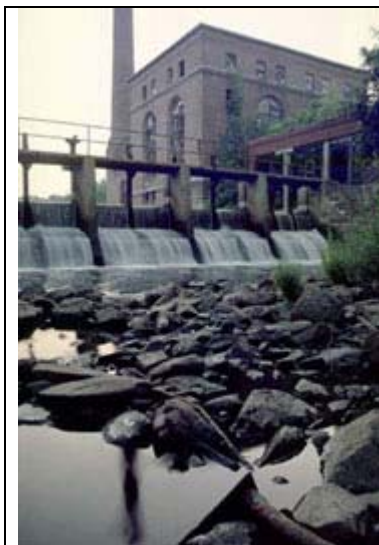
(Hargreaves 2011)

Lower Neponset River Restoration, Neponset, MA



The Baker Dam project base map (Neponset River Watershed Association)

Participants in a Massachusetts planning effort are using a survey of residents' perceptions to create a neighborhood revitalization and river restoration design along the Neponset River Watershed. The project, as of January, 2011, states the following goals:



- o continue neighborhood revitalization
- o restore historic herring and shad runs by modifying or removing obsolete dams
- o create unimpeded canoeing route from Walpole to Boston Harbor
- o clean up polychlorinated biphenyls (PCBs) from river-bottom sediments
- o reduce flooding risks by restoring the original stream channel and flow quantity
- o enhance recreation, wildlife, and aesthetics by restoring the stream channel and flow

Baker Dam

LITERATURE REVIEW

The design and planning is still in the stages of site and cultural analysis. Via informal participatory methods such as storytelling and informal gatherings, it increases awareness of the state of the river communities by all potential shapers of the river's future. Participants of a 2009 ethnographic survey conducted by Simona Perry saw the lower Neponset River landscape variously as an ecological restoration site, a watershed management project with political implications, or a site of economic opportunity. Other participants in this study saw the river as an aesthetic concern or as a spiritual refuge. Some saw it as a place of history and nostalgia, while others saw it as a place of physical danger (Perry 2009).

It is unclear from the published literature on this project how much public participation is shaping the process or outcome of the project. Supporters of the project are invited to help monitor water quality, remove purple loosestrife, or join in a river cleanup. These methods might be used for manipulation or citizen control, to use Arnstein's typology. Alternatively, the surveying of users' perceptions could be folded into the project in Chambers' elicitive manner to an empowering end. Perry's active research attempted to position the data elicited to be used for the latter.

“Does the “Smart” Development storyline represent a single interpretive environmental community collectively united around one way of interpreting the river's restoration, or an interpretive economic community of individuals united around a strategy for using a “new” public amenity (i.e., the restored and remediated Lower Neponset River) for purely economic gain?... Underlying all of these conclusions and recommendations is my vision of a local citizenry that is engaged and empowered to fully participate in the Lower Neponset River's restoration....My hope (is) that natural resource agencies and experts will incorporate an increased awareness of the complex historical, psychological, economic, political, and socio-cultural context surrounding all urban river restoration projects into their design of public participation and decision-making processes.” (Perry 2009, 201-202)

To what extent did the research results influence the project outcome? How did planners, designers, and other organizers act after being introduced the research? The website does not mention much public involvement beyond the traditional entry points into watershed stewardship such as river cleanups mentioned above.

The Environmental Protection Agency (EPA) received a copy of the project by someone in a MA state agency who forwarded it to the EPA officials involved in the Housatonic River clean-up project. They then contacted the author to request advising on the participation processes they are considering. Is public participation helping to shape the restoration of this watershed? The author stayed available to the participants in her study who contact her to help them research, craft public testimony, plan for a community meeting, or just to talk through a problem (Perry *pers. comm.* February 15, 2011).

LITERATURE REVIEW

Limitations, Issues, and Barriers to Participatory Design

Looking through the lenses of Arnstein, White and Chambers' typologies, participation is on the "extractive" end of the Chambers' continuum, on the "nominal" or "instrumental" end of White's model, or on the lower rungs of Arnstein's ladder (Juarez and Brown 2008). The following will explore reasons why, at the political, economic, social, and personal levels, practitioners and the public do not always fully participate.

Willingness and Capacity to Participate Varies with Access to Resources

Some argue that contemporary societies are structured to set the economic, the ecological, and the human against one another (James 2007 in Aldred 2009). Aldred makes the point that since corporations are legally bound to maximize shareholders' profits, the public sector is affected, because they both rely on foundation funding that is in turn affected the stock market and because the public sector is structured currently to maximize developers' and investors' profits in private-partner partnerships that fuel many urban open space plans. Within this pressure, how can participatory design projects respond, and how are they shaped or even co-opted by these very pressures (Aldred 2009)? Participatory design carries a risk of creating social pressure to consider structural inequalities as 'misperceptions' and to co-opt participants' knowledge and other data that arguably belong to them (Chambers 1994; Aldred 2009).

Land use problems vary by the types of site issues, and the perceptions and needs of the public. The influence of cross-jurisdictional boundaries can work against or for participatory planning (Michaels 2001), especially when the wrong size or level of government involvement has been chosen (Hester 2011). Turf wars, suspicion, inherited resentments, distrust and posturing of the various players can make the work impossible without an open approach to conflict and learning from experience (Forester 1999). Other political issues: participants may not be seen as representative of the community by the larger public (IAP2 2010).

Another barrier to participation is the pressure of capitalism and market forces. Property owners may feel that participation threatens their ability to benefit financially from a project. While sometimes in agreement with the value of land use planning, property owners often oppose the government regulation of private land, a common tool for preserving public open space. Property owners' concerns include increased crime, parking, and potential injuries near landowners' properties, as well as loss of privacy. These concerns have been successfully resolved in instances where the opportunities of a design outweigh the drawbacks. In some instances, the landowners donate or sell their land or land rights (Markeson 2007).

"Companies, charities, government and local authorities, public sector organizations, and funding councils increasingly do fund participatory research and policy-making, which has become mainstream. However, some funders may be unwilling to support what they may perceive as a political or adversarial approach counter to their interests as service providers. In this context the 'participation industry' could be seen as developing its own organizational ideology...." (Aldred 2009, 6).

LITERATURE REVIEW

Professionals Make Good Plans without Participation

Desirable outcomes often result from low levels of participation. In a study involving the conversion of Boston's Charlestown Navy Yard to peacetime use, politicians and planners produced an acceptable outcome, despite hardly any involvement of the public in planning or designing (Fainstein 2000). In 1984, a national, open-ended questionnaire was sent to a hundred self-identified "community planners and designers" to better understand what they thought about participatory design (Hester 1990). Only a third asserted that the best designs come from participants. Surprisingly, less than two-thirds said that those who were affected by the design decisions should be involved in the process of making these decisions.

This may be in part because technical challenges (where practicing a skill is performed to achieve mastery, such as constructing wattles to slow riverbank erosion, or drawing in perspective), are different than adaptive challenges (where a change in mindset is needed, such as learning how to listen to someone before composing a thought in response, or applying design principles) (Kegan 2009). Without technical training, participants' are limited in their ability to analyze and make effective decisions on complex environmental issues (Cooper 2008). Though everyone has the capacity to be creative (Sawyer, 2007), many designers are practiced in applying creative skills and thinking to landscapes, and creativity tends to follow technical expertise (Reilly 2008). In addition, unfamiliarity with the scientific method, and lack of confidence in science as a way of knowing, limits the non-professional.

Yet the sustainability of open spaces is not just a technical challenge. Despite the numbers of bright and savvy planners, skilled draftspeople, genius hydrologists, and experienced designers, professionals need to find ways to adapt to the need for social and economic resilience aspects of sustainability goals. While the complexity of large-scale projects has been one reason to leave out "the public" the traditional method of a team of experts needs the public.

Sustainability literature has a common refrain –a need to adapt to a new world beset by problems never before faced by humanity. Experts in a field, because of their very specialized knowledge, may find they cannot adapt to novel situations or see creatively, despite intentions (Dane 2010). To offset this tendency, planners or designers might examine their level of entrenchment in their respective fields and manage it to the extent possible (Dane 2010). Engaging in a dynamic environment such as public planning process could conceivably make an expert more cognitively flexible (Dane 2010). The expert must work with others outside their worldview and stay open to the integration of social and environmental complexity.

Conflict

Participation in planning may not live up to its ideals of claims due to the obstacles presented by interpersonal conflict. For example, in at least one instance, high levels of participation in suburban development have resulted in exclusionary zoning, despite good intentions of creating social equity (Fainstein 2000). In this example, conflicts over open

LITERATURE REVIEW

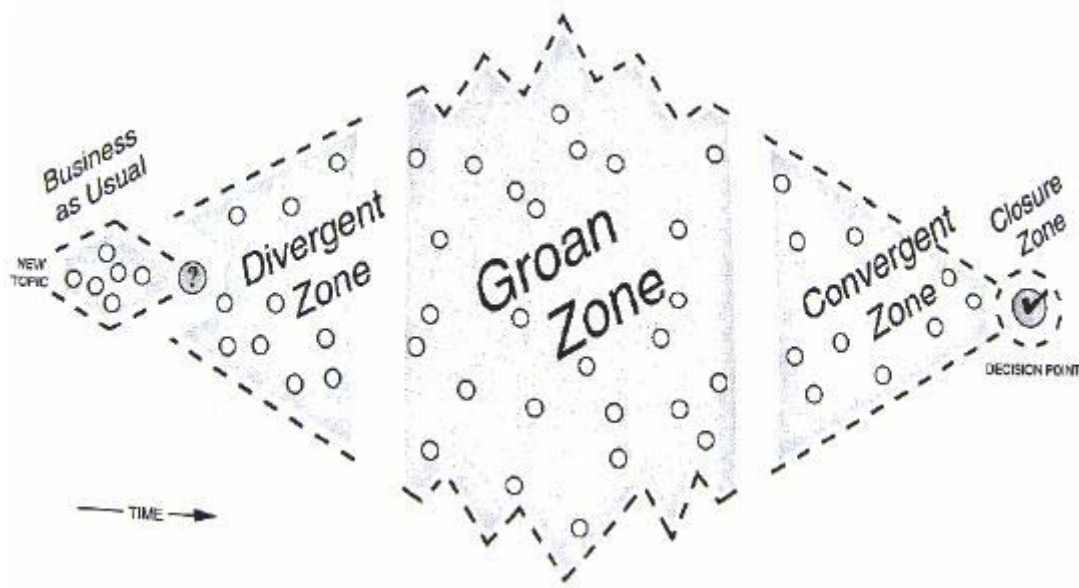
space between user groups, users, managers, designers, and managers, of open space (Francis and Lorenzo 2003) focused on conflicting program needs. In the instance of the International Children's Park, young skateboarders competed with elderly people seeking a place to relax (Francis and Lorenzo 2003).

The charrette process can be so overly designed for safety and inclusion that conflict over differences is suppressed; as a result, the spirit for transformative change is diminished (Kelly in Hickey and Mohan 2005; Bond and Thompson-Fawcett 2007). Sometimes too, posturing by, or over-reliance on the designer-facilitator as the active expert in contrast to the participants' contributory potential can contribute to hidden conflict. Straw-dog disputes can hide veiled challenges to the designers' authority (Prins 2005).

Conflict emerges when someone tries to get something to change, and others perceive that proposed change as a threat to their values or ability to get their own needs met (Boston 2001). The greater the diversity of a group, the greater the potential differences in needs, goals, cultures, values, perceptions, and preferences (Bolman and Deal 1991; Hou 2009). The increasing fragmentation of contemporary social identities; the continuing reality of racism, sexism, and classism; and conflict related to power, rights, and identities will benefit from designer-planners that practice humility, acceptance, and diplomacy.

The planner and designer can proactively surface differences to defuse conflict, and use its energy to ignite ideas that reflect the complexity of the community. Conflict can thus be the starting point of new designs (Ziarek 2001; Botterill and Fisher 2002; Prins 2005; Miessen 2007). It can be approached with an attitude of curiosity, as a way to find out what others value, expect, and perceive (Prins 2005). Conflict handled with a relaxed sense of acceptance can build trust (Boston 2001). If conflict is pushed under the surface, on the other hand, it can limit people's ability to participate thoughtfully. To deal with conflict – whatever the approach, takes time, commitment, stamina, and an understanding of the benefits of conflict.

An over-focus on process can result in weak proposals for action (Fainstein 2000; Francis 2007). A threat in all participatory process is the challenge reaching an implementation decision (IAP2 2011). Facilitation skills can move people through the phases of gathering diverse points of view, building a shared framework of understanding and frames of reference (the "groan zone,") finding inclusive solutions, and reaching closure (Kaner 1991).



What makes an agreement sustainable? (Kaner et al. 1991, 2006)

Willingness to Participate

Another barrier to participation is an individual's fear of reprisals or co-optation (Cooke, in Hickey and Mohem 2005; Palerm 2000). Being involved in participation could also be perceived as coercion to fit into a dominant value or cultural worldview (Crewe 1997). Finally, some forms of expression, such as stories, protests, or rhetoric, for example, are not tolerated in many public meetings (Young 2002).

Capacity to Participate

Differences in class, language, mobility, social ease, and other factors support and limit people's ability to engage in the complex tasks of modern life. Cross-cultural communication may require translation of multiple languages and worldviews (Hou 2009). Even the reliance on visual representations can be problematic when images are interpreted by dominant voices (Low 2010). In the International Children's Park study, photos of a Chinese-style kiosk were shown to non-English-speaking participants to help choose preferences in park design. Later inquiry, however, showed that some participants chose it because they wanted a strong cultural representation in the park, and some simply because they wanted a shelter (Hou 2009).

Mental development or developmental maturity is another factor that can limit participation (Kegan 1994, 2009). Even after adolescence, the adult mind continues to evolve in cognitive complexity. It is unrealistic to expect ideal levels of participation from people unless their limits are taken into account. For instance, participants in a design process may not be able to move from individual positions and reflectively listen to each other (IAP2). Yet, participatory theory commonly assumes that it is possible, not just desirable, to ask people to do things that they are not prepared or developmentally able to do (Kegan 2009). Without a sensitivity, and delicate handling, hidden

LITERATURE REVIEW

expectations within the ideals of participation may unwittingly drive the outcome and lead it to disappointing ends.

Barriers to insights and new ideas, not to mention communication, can be ameliorated by supporting individuals and work groups to learn and practice the technical and adaptive skills necessary for participating in participatory design (Kagen 2009; IAP2). This is a life-long process of uncovering the assumptions that drive participatory design as well as building capacity to create sustainable designs. With an awareness of capacity, and the compassion to help people develop this capacity, increase the chances of successful processes and outcomes for participatory design.

While some research topics or methods may be better suited to the involvement of nonprofessionals than others, engaging the public in the thinking of the planning and design of landscapes is still a largely unmet need. Some universities such as the University of Massachusetts, Amherst, are initiating and institutionalizing community engagement in their design programs. Methods can be developed to support learning, and to solve problems collaboratively, such as in on-line interactive websites (Cooper 2008). Technical expertise can be dovetailed with cultural knowledge and perspectives. Non-experts have the capacity to assist in the gathering of data and solving of technical problems (Brabham 2009). Issues surrounding liability, accuracy, and efficiency still need to be worked out (Cooper 2008).

Finally, the high costs to host professionals, reserve space in a facility, the long time commitment needed, the carbon footprint of transportation and paper, and the support needed to include people, childcare, transportation, food, accessibility, etc., can be barriers to effective participation.

Experts' and Professionals' Perceptions of their Role Varies

Some designers are not inclined to do participation because of lack of skills or interest. Only some, like the self-described “community-designers and planners” of Hester’s survey, perceive themselves as social reformers or educators, thus placing a higher value on participation. Other designers work as pragmatic, applied scientists with other professionals for paying clients to create technical or manicured environments (Crewe and Forsyth 2003; Brown 2002).

Designers who are reluctant to use participation because of a reluctance to share control might be drawn to sharing if cost efficiency and control over the quality of the design decision could be worked out; a direction for practitioners to explore. Since some designers prefer to work in solitude on creative work (Crewe 2003; Mumford 2003), these practitioners could toggle between solo work and public forums where they invite expression and feedback (Pitera 2006; Shneiderman 2007).

LITERATURE REVIEW

Summary and Synthesis of Participatory Design Literature Review

The literature review helps to qualify the following assumptions:

- o Top-down planning is always a terrible approach to design of open space. Actually, when a display of power and technical prowess is the goal, top-down approaches do wonders. They fail only at developing community relationships and creative capacity.
- o The public, arguably, has a better knowledge and wisdom of any given problem as well as better solutions. Actually, the public has different kinds of knowledge and expertise than do experts in scientific, planning and design. Each brings an important kind of knowledge to the table, in an additive manner. The challenge is to invite participants based on the kinds of knowledge that will benefit project goals.
- o Participation builds the problem-solving capacity of the public to tackle future problems, but usually only if the participants are there voluntarily, and are supported in their efforts to contribute (through learning new skills, and improving their competence, or from social support- no fear of retribution by their involvement). It takes time and commitment to cultivate a collaborative mindset (Kaner 1996, 2007).
- o Better decision-making results from maximizing local participation – Actually, better decisions are not guaranteed by participatory involvement, just a more democratic process. A social sustainability ethic can make designs better by adequately preparing and supporting the process from beginning to end. Participation, like collaboration and creativity, may not be relevant in all situations or in all phases of a single project (Grossen 2008).

In summary, public participation does not by definition lead to sustainable open space. On the other hand, failure to do participation can lead to no project at all, such as was the case in Santa Cruz County, California where no process resulted in a small property rights group killing a greenway plan developed internally by public officials (Markeson 2007). Thus, the following summary of the published best practices from critically reflective practitioners can serve as a beginning method on preparing for a participatory design:

- o Understand what the project information needs are. Decide if participatory design should be one of or the only method (Helling 1998).
- o Be pro-active in inviting participants and devote considerable resources to getting people to the table (childcare, transportation, food, etc.), or, get the process conveniently into the lives of the participants.
- o Decide how to manage power dynamics and conflict. Decide early on the approach whether and how to use the tools of facilitation, negotiation and consensus (Miessen 2007).

LITERATURE REVIEW

- o Expose participants to examples of communities aspiring towards sustainability, as well as places that are unjust both spatially and socially. Facilitate a discussion about values, interests, opportunities, limitations and conflicts. Understand that there are diverse, conflicting cultural interpretations of public open space.
- o Promote forums to articulate issues and differing socio-cultural interpretations of a place, such as a storytelling or “public conversation” project. Storytelling describes, records, and archives participants’ memories and relationships to a landscape, constructs character and reputation (of self and other). It identifies friends and foes, interests and needs, means and ends, values and options, relevance, possibilities and meaning.
- o Teach mapping skills to residents to support their expressions of spatial knowledge and meaning of a landscape. Integrate citizen-based maps with professional maps.
- o In public meetings, include designers with good drawing and graphic skills who can quickly translate ideas into visuals.
- o Evaluate what did participants learn about the issue, each other, and what is possible for a landscape.

So far, most of the published work on participation is anecdotal or editorial. It is difficult to find examples where research ideas informed the practice, or where assumptions were rationally tested (Francis and Lorenzo 2004). Published journal articles on participation tend to focus on the results of a design, and hopeful claims about the participation of the public in that plan. Typically, case studies report that many “participants” “participated” in a project. (example: Cities of the Future conference 2009), but rarely mention the challenges that were likely present. More research is needed of how participatory design applies to sustainability.

Including a research component will strengthen both the project itself through documentation of its own history, as well as guide projects in the future. Like Juarez and Brown, conducting an actual participation exercise using a pre-selected method and objectively analyzing the results would give the field of planning and design more confidence that the “tried and true” methods were not just a haphazard collection. The literature on creativity that follows in the next section is more research based.

The understanding and skillful application of participatory techniques in planning and design is still developing. When the goal is social and political empowerment, civic leaders are open to sharing control, the technical challenges can be addressed, and the participants are adequately informed and prepared to participate, this approach to design is a promising avenue for communities.

Chapter 3

CONCLUSION



Franklin, MA Town Common
Child with asthma



Hunt's Point Landing, Proposed South Bronx Greenway
"Eucalyptus Soliloquy" windbreaks divide fields and vineyards



Franklin, MA town website
unknown
NYC Economic Development Corp.
Hood Design, California



*"Relegating conservation to government is like relegating virtue to the Sabbath.
Turns over to professionals what should be the daily work of amateurs."
Aldo Leopold, 1935*

Introduction

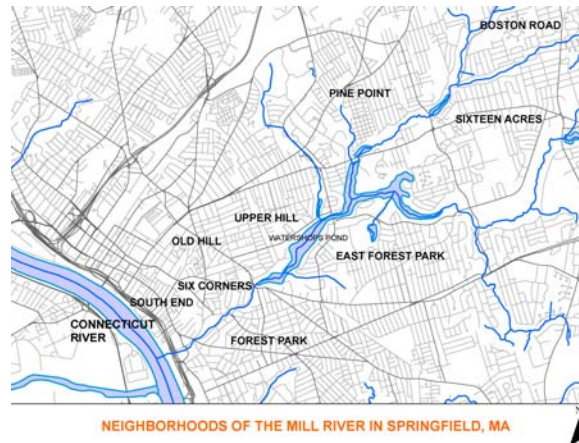
The literature review examined how participation relates to the planning and design of public open space. It examined the various definitions, goals and claims, and then looked at common practices and sample projects. The literature review concluded with a summary of how, despite qualifications, participation is reported to enhance efforts towards sustainability. Based on the literature, this conclusion proposes a method for the participatory design of public open space, applicable at a range of scales, from neighborhood pocket parks to urban river restoration. These are the steps:

1. Define the Goal
2. Choose the Level of Participation
3. Manage Expectations
4. Invite Participation
5. Train and Orient Participants
6. Create the Design
7. Evaluate and Document Results

CONCLUSION

1. Define the Vision and Goal

Ideally, the vision statement should excite both the author and the reader, and be stated in present tense terms. For example, .Precisely articulate the goal for *design process* (encourage communication across ethnic groups), (this is distinct from the design product, i.e., a new playground). In order to give concrete examples of the steps needed for participatory design of a public open space, a hypothetical scenario has been created for the open space around the Mill River in Springfield, Massachusetts.



Hypothetical site of a public open space – Mill River, Springfield, Massachusetts

Residents of the Six Corners and Forest Park neighborhoods in Springfield, along with other citizens that live in the city, form a group called U-SPARC (Urban Sustainability People around River Communities). They meet to define their goals for both process and product.

A –product goal – improved water quality in the Lower Mill River below Watershops Pond with public recreational access to the water’s edge in the South End, Six Corners, and Forest Park neighborhoods.

B – Process goal – Create a design with informed public input from these neighborhoods

Sample Goal for Participatory Design Process

2. Choose the Level of Participation

It is crucial to assess one’s motivations, ideologies and assumptions, resources, and goals and choose the right level of participation. This is not the time to be deceived by inflated claims to do or be “good”. It is also useful to remember that the level of participation will change throughout the project (White 1996), but that you need to be honest about where you are starting.

Below is the Bolman and Deal Four-Frame model. It works as an evaluation instrument focusing on six questions (Bolman and Deal 2003). It takes about five minutes to fill out. It is derived from the leadership research from Lee Bolman and Terrance Deal, who introduced the model in 1991 and has since been applied to numerous situations outside organizational management. These frames come from fields with differing theoretical emphases- sociology, social psychology, political science, and anthropology.

CONCLUSION

Respectively, they highlight roles people play, individuals' needs, power dynamics, and the world of the symbolic.

The structural frame sees the participatory design group SPARC and its partners as interdependent workers on a common task. The challenges are to develop clear goals and strategies and build a workable structure of roles and relationships. When there is consensus of perception of a landscape and or it is unstable or dangerous, such as in an eroding riverbank with PCB contamination, the technical quality of the plan is crucial. A planning and design team with minimal public participation might be best suited to stabilize the safety of the space. The need to define formalized roles and responsibilities via tight coordination and control, using specialized knowledge, is best suited for unambiguous goals (Bolman and Deal 2003).

The human resource frame sees the group as diverse individuals trying to build satisfying relationships. The challenges are about responding to individual needs and building ownership and commitment. When there is a lot of funding for a design process, say for a state-initiated environmental impact statement for a new urban plaza or a federally mandated public review of a mining reclamation site, Halprin and Hester's community building and design training exercises are well suited.

The political frame sees individuals as more significant and real than "a group" or community. Independent actors are playing against and sometimes with each other to gain power and scarce resources. The challenges are to manage conflict skillfully and to distribute power and resources as fairly as possible. Stable landscapes with lots of turf conflict, such as with the Children's Park in Washington, or any grass-roots initiated site projects with contentious groups, are examples of such a circumstance. In the table below, the charrette process is recommended as a good "antidote" to this type of charged environment.

The symbolic frame sees the group as pilgrims on a shared journey. The challenges are to create and sustain a compelling vision, to co-create a shared culture (values, symbols, rituals), and to cultivate the soul, spirit, or magic of the group. An emerging Flint, Michigan project found online invites a conceptual response to the dramatic economic changes in the region. Its goal is to invite a wide range of people to produce images, programs, installations, and projects to communicate the multiple identities of the city to the residents, visitors, and planners in the city government.

Landscapes are the stage upon which the drama of communal life unfolds (Briffett 2001). Places can be life-giving or renewing, foreboding, or excluding. Choosing a symbolic frame in which to organize a process for planning and design is useful when the technical quality of decisions are not likely to have detrimental impacts if there are mistakes. If there is a lot of ambiguity around even defining the design problem, then supporting the emergence of unplanned and unexpected solutions, the symbolic frame, seen in many public festivals, could be a great way to kick-start a convergence of meaning.

CONCLUSION

These four frames can be lined up with the typologies of participation from the literature review. For experimental purposes, they are aligned in the table with the four models of participatory design: traditional method, formal and informal participatory design, and the arts, in order to consider the degree of fit.

	Structural Frame	Human Resource Frame	Political Frame	Symbolic Frame
Models of Participation Most Closely Aligned with Frame	Consultant / Lead Design Firm / Interdisciplinary Design Firm	World Café model	Charrette model	Festivals/ Public Art/ Performance
Arnstein's Ladder	Low rungs- Tend towards "helping" or educating citizens	Low or medium rungs- Tend towards informing and consultation - citizens get opportunity to hear and be heard but are not guaranteed influence	Medium or high rungs- Tend towards placation or partnership or delegated power and citizen control	
Chamber's Continuum	Elicitive-Extractive	Empowering	Empowering	Empowering
White's Forms	Nominal or Instrumental	Nominal, Instrumental, Representational, or Transformative	Nominal, Instrumental, Representational, or Transformative	Transformative
Francis's Realms or Approaches	Institutionalization	Romantic, Needs, and Learning	Advocacy and Rights	Proactive

Bolman and Deal's Four Frames Compared to Literature on Participation

Perceived in light of the typologies, the frames can be seen as way to discuss the range of participation most well suited to the challenges at hand. Some frames suggest Arnstein's high rungs or White's representative or transformational forms. Other frames suggest participation at the lower rungs of Arnstein's ladder, or White's nominal or instrumental forms.

Think of an open space project that is either in process or proposed. Next, answer each of the six questions in the first column to the far left. Then, pick the frame best suited to answer that question and fill it in the box in the last column. Once the user has filled out the final column to the right, count the number of times each frame was chosen to answer the question in that row. Which frame or frames prevailed?

Here we assume that, using the table below, SPARC chooses the Symbolic Frame, which leads them to propose a June River Festival to build awareness and support. In addition, they invite schools and Arts Councils to sponsor exhibitions and installations relating to the river. They invite the larger local community to contribute to the local culture by re-imagining the Mill River through participation in the temporary installations and performance events.

CONCLUSION

Using Bolman and Deal's four-frame model, they saw that the Political Frame would also be useful to their efforts. They make additional plans for a charrette in October.

In retrospect, this experiment joining one framework with another might be too limiting, constraining, and or conflating. Still, it may offer some examples of the increased range of perception of participatory design and its constraints and possibilities.

CONCLUSION

Question	Structural	Human Resource	Political	Symbolic
1. How important is public commitment and motivation to this project?	Unimportant	Important X	n/a	Important X
2. How important is having technical expertise to this project?	Important X	n/a	Unimportant	Unimportant
3. How much is the landscape contested by different interest groups?	Low to moderate	Moderate	Moderate to high	High X
4. How scarce are resources- funding and otherwise, to this project?	Somewhat scarce	Abundant	Scarce X	n/a
5. How much conflict exists around this issue?	Low to moderate	Moderate	Moderate to high X	Moderate to high X
6. Is this project initiated as top-down or bottom-up?	Top down	Top down	Bottom up	Top down or bottom up X
Total	1	1	2	4

Applying Bolman and Deal's 4 frames to the Mill River Example

An integration of frames may more useful than one frame, typology, or model, alone. For instance, in circumstances where the challenge is to set goals under conditions of ambiguity, the structural and symbolic frames might be combined. When the need is to motivate and coordinate a large group of stakeholders with many language differences, the structural frame combined with the human resource frame could work well. This might look like a community design center working with a lead design firm sponsoring many small café gatherings or visioning sessions.

3. Manage Expectations

Being part of a participatory design requires ownership and accountability, from all sides. Civic leaders might contract to share liability with participants that might otherwise be conferred upon the expert professional or the city, region or state. This might leave citizen-designers more responsible (administratively, legally, financially, or symbolically) as well as more invested, but if they are part of a group, this responsibility can be shared.

An ideal environment for participatory design processes is one where people care about each other enough to respond to circumstances that affect their neighbors, their next generation, and themselves, such as is the case of economic, social, and environmental non-sustainability. The idea of “differentiated solidarity,” as articulated by political scientist Iris Marion Young, contains within it the vision for open spaces formed by political and social inclusion that does not presume mutual identification and affinity as a condition for respect.

CONCLUSION

Participatory design can be framed in a way that it provides opportunities for people to be involved in collective actions to promote justice (Young, 2002). The differentiation aspect focuses on the distinction between segregation and the value of social group distinctiveness. Spatial and social clustering is exclusionary, not by design but because the people who are affected by the planning and design decisions are not present to notice and shape the outcome differently. With participatory design, the quality of openness towards others is one of respectful distance at the same time of affirming relationship, or potential relationship, with others. Fostering this intention in a participatory process can change the outcomes of the design towards sustainability.

In the imaginary Mill River example, SPARC forms an alliance with the UMass Amherst Design Center, and the UMass Center for Design Engagement to explore contracting with the city and state for sponsorship of participatory design events such as the charrette planned for fall. They host events to build community involvement as the informal relationships gel into some formal relationships that can carry the administrative, legal, and financial commitments of the participatory design projects. Students connected with both the UMass community design centers build relationships with residents of Springfield's Mill River neighborhoods and city cultural groups. In a year, a public-private partnership or association is formed with the UMass Springfield local educational institutions, local non-profits, city and neighborhood councils, private utilities and business owners to guide and be responsible for the design outcome.

4. Invite Participation



Posters inviting participation (Westfield Downtown Plan)

CONCLUSION

Above are a couple posters that were hung in the City of Westfield before and during their charrette workshops. Here are some other examples of warm-up questions that draw in participants and encourage them to consider making connections with neighbors based on a common bond of caring about where they live.

- What could a sustainable “Your Town” look like?
- What are you doing to make a difference for future generations here?

Open space planning and design does best with the partnership of local leaders with a social justice ethic (Francis, 1999). With any kind of public outreach, striking a balance with the right messages is challenging between giving enough information to make a substantial point and scaring off potential participants, many of whom might be participating for the first time in what can be a steep learning curve (Ames, 2010). Another kind of balance must be struck between sending a consistent message, or branding, and customizing communication to the diversity of recipients.

A personal invitation is best. The organizing group could make small presentations to various groups in the city or town to build awareness. Make sure that all people know they are invited and clear as to what they are invited to. They must know that they are able to get to the participation event(s), if they occur at a physical site (versus a mail survey or web-based questionnaire). Universal access and childcare at events is important. If participation is sought through a website, or other interface, multiple languages to choose from helps new immigrants feel invited. They need to know they can communicate, and find people like themselves, whatever their race, class, culture, age, and occupation. This is the stage to build trust with invitees that they will be safe and supported enough to afford to contribute their time and ideas.

Include a low-risk mechanism that allows people to communicate their acceptance of the invitation. The City of Westfield Downtown Plan project offered curious passerby and possible charrette-goers an opportunity to place a pin on a map indicating where they live, thus participating in a small way.

CONCLUSION



Where do you live map (City of Westfield Downtown Plan)

In the hypothetical Springfield process, the public relations campaign starts with outreach invitations and small meetings with Springfield artists and performers, designers, planners, landscapers, small businesses, classroom teachers, municipal agencies, and allied cultural organizations. SPARC creates a social media presence on their new website and on Facebook.

In summary, this step involves the following sub-steps:

- a. partner with local leaders
- b. give enough information
- c. be consistent
- d. be customized
- e. be personal
- f. make sure everyone can access the process

5. Orient and Train Participants

"I know no safe depository of the ultimate powers of society but the people themselves; and if we think them not enlightened enough to exercise their control with wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education." Thomas Jefferson, letter to W.C. Jarvis, 1820.

After the potential participant has indicated minimum acknowledgement and buy-in, provide an orientation to prepare participants. Engaging the heart as well as the mind increases the power of any educational activity (Kegan, 2009). Training in environmental design can be fun, relational, meaningful and develops both technical proficiency and personal growth. These rewards continue in a participant's life beyond the actual project.

Like the University of Massachusetts Extension-based Citizen Planner Training Collaborative, skills taught in a higher educational setting, can be customized for different students and groups outside. Drawing from landscape architecture training, certain aspects can be transferred into community outreach education (Thering and Doble

CONCLUSION

2003). Consider teaching from one or more of the following examples of technical and personal development skills before the start of the chosen model of participative planning and design, based on the main skill you wish to build. It is important budget the time spent preparing participants and to keep the momentum going.

Skill	Activity
Cooperation	Lost-on-the-Moon Game (See appendix)
Building a sense of community	Circle game
Improving visual communication	Drawing on your feet game
Goal-setting	Make up goals
Finding an organizing concept	Analyze designed spaces
Surveying	Make up a survey
Spatial thinking	Make a list of activities, Where to do it, what physical elements might support it
Mapping	Citizen-based GIS (Perry, 2009)
Design thinking	Construct a working model of a park

Hester 1990

Alternatively, you could come up with your own customized activity to build skills. For example, here is an exercise to build affinity with neighbors. See appendix for activities.

In the example of Springfield's SPARC group, the main goal they identified as being central to their process was to get as much informed public input as possible. Thus, they lead weekly explorations of the Mill River neighborhoods, touring the river ecology and getting more people to experience the river's edge as well as engage with the installations and artwork posted around the river.

“

...

included seven stops, each illustrating a key issue: preserving wildlife habitat and corridors, protecting archaeological and historical resources, transportation planning, neighborhood traffic problems and park facility planning. We developed a script for tour leaders that both informed and educated participants and built their excitement. We prepared a score for participants to fill out at each stop, posing questions that ranged from “What is your most memorable wildlife experience in LA?” to “Did you ever short cut in this neighborhood?”

”

Participatory design for public open space in Los Angeles (McNally 1995, 43)

CONCLUSION

6. Create the Design

This is the place where organizers can develop new methods to introduce co-design into the process in areas usually reserved for the expert.

Understanding and Goal-making - Getting clear on initial issues, dilemmas and goals. How will those most affected be able to contribute here?

Discovery and assessment – Mapping, surveying, assessing the strengths, weaknesses, opportunities, and risks present on a site, socially, economically, and environmentally. Can people be brought into the process, delegating easy and concrete tasks, and shadowing professionals?

Concepts - Coming up with the big idea, the feeling of the place, establishing patterns, zones, and purposes. How might this be participatory?

Designs- How will the landscape change look? Creating both schematic and detailed designs of earth moving, planting, and construction changes. Can lots of people help to visualize this change? Forgetting about pre-conceived ideas on how groups decide, what might a new way be?

Phasing – How will the plan and design be implemented? Can this be elicited from the public?

Evaluation – How will the outcome be monitored over time? Who else might decide this?

7. Evaluate and Document Results and Publish this Research

“It is difficult to test theory with words, but theory can be evaluated in carefully documented process and built work.” (Hester 2011, 149)

Conclusions drawn from the hypothetical Mill River research will be informed by the uniqueness of their project goals and participant needs (Juarez and Brown 2008; Olin 2007; Fainstein 2000). Theoretical discussions of the contextualized nature of creative participation is necessary to move understanding of participatory design forward, including analyses of previous research conclusions (Thering 2009). The future of participatory design of public open space will utilize cross-project research (Thering 2009; Hester 2011). A database following and systematically evaluating projects and communities doing participatory design across an agreed-upon framework would be a strong contribution.

Returning to the case study in the literature review of the Village Homes playground, one designer stated the value of the research phase was as valuable as the design phases to the users of the site. They understood their own needs more explicitly and this in turn fostered greater satisfaction and support for the playground and for later redesigns. (Francis 1988).

What will participatory design look like in the future? New Urbanism, the just city and sustainable cities movements, and community design centers have demonstrated

CONCLUSION

participatory ideals in small-scale settings. The practice of larger-scale transformative, integrated, plural, participatory design is still largely untested.

This future is suggested by a project started in 1994 and lasting until the mid 2000s, the AMD&ART initiative, redeveloped landscapes contaminated by acid mine drainage in southwestern Pennsylvania. Through a transdisciplinary model linking government, non-profits, academia and communities, the arts, history, and community activism contributed to a sustainable plan of public open space (Thering 2009).

Recent understandings of what makes sustainable landscapes crucial make it timely for landscape architects in particular to develop co-creative relationships with communities. Integrating environmental, economic, and social variables into the design outcome while opening the design process to larger numbers of people is being tested on larger open space projects with technical complexity. Because projects are unique, complex, and ethically challenging, an attitude of safe-to-fail experimentation allows organizers to try out new approaches (Brabham 2009), such as the experiment above.

The idea of establishing formal benchmarks or standards to evaluate participation are still being developed (Laurian and Shaw 2008). In the planning field, there is perhaps more to be found; landscape architects are beginning to discuss the need as well. Critiques of once fully embraced standards mentioned in the introduction that profess to evaluate sustainability will lead to a more full metric when social aspects, including participation, are able to be articulated and measured. In the meanwhile, establishing project evaluation benchmarks and then actually evaluating the project from within contextual goals is still something to strive for; perhaps over time enough projects will have recorded data on project outcomes to create field-tested metrics to be used by others.

In summary, this conclusion reveals how the range of participation and the roles of the organizer, planner, or designer, varies with each project and can be proactively chosen based on resources and project goals. Landscape architecture needs to commit to training and funding designer-facilitators able to choose the right framework for participation. The method, then, has one final step, re-definition of project goals and of participation itself, inviting people participating to continue to shape their future.

By setting up projects as research or experiments, and evaluating the project formally, by intending to develop public open spaces towards a more inclusive experience, public participation plans and designs can transform both place and people. Designs imagined by groups of people can then in turn be preconditions for influencing land use policy, as well as return to make the physicality and spatial qualities of places themselves more conducive to future participation (Hester 2006, 2011).

APPENDIX 1- Resources

The table below is a framework organizers can use to assess resources and readiness of a participatory design of public open space. An understanding of the needed information and skills are best agreed-upon before the project begins.

	1.	2.	3.	4.	5.	6.	7.
	Define the Goal	Choose the Level of Participation	Manage Expectations	Invite Participation	Train and Orient Participants	Create the Design	Evaluate and Document Results
Participants							
Facilitators							

GLOSSARY

Capitalism	An economic system characterized by private or corporate ownership of goods, by investments determined by private decision, and by prices, production, and distribution determined by competition in a free market (Merriam-Webster).
Charrette	A collaborative session with a diverse group organized to quickly generate design solutions to a spatial problem, typically dividing the larger group into smaller work teams to develop ideas presented to the whole to generate further consideration.
Collaboration	A blending of skills, temperaments, or effort that develops shared, new outcomes.
Community	A process and a physical place (Palmer 1977).
Conflict	A struggle resulting from apparently incompatible or opposing needs (Boston 2001).
Creativity	The production of novel and useful products or ideas. Mumford, 2003; Steiner 2009).
Decision-making	A rational sequence of process of discussion, consideration, and then determination to produce right decisions. Or, an open process to produce commitment. Alternatively, an opportunity to gain and exercise power or a ritual to provide comfort and support until decisions happen anyway. (Bolman and Deal 1991).
Democracy	Government by the people or the majority (Merriam-Webster).
Design	To create according to a plan (Merriam-Webster). A social process conducted by a range of stakeholders (Lawson 2010).
Design Methods	Scientific, logical, rational, aesthetic or intuitive approaches to a plan.
Imagination	Deriving concepts, sensations, or images held as memories or plans in the mind and not confused with reality, or, the creative ability to confront and deal with a problem (Singer 1999; Merriam-Webster).
Insight	The power of, act of, or result of understanding a situation freshly or intuitively (Merriam-Webster).

GLOSSARY

Nature	The external world in its entirety (Merriam-Webster).
Place	The public realm, both a physical place and a social ideal (Places Journal).
Public space	Natural, cultural interests that many people use, access, and or enjoy, and or a shared relational construct that is produced and evolves over time. (Lefebvre 1997)
Participatory design	A process that involves the public in problem-solving and decision-making and that uses that input (IAP2 2010).
Spatial democracy	The democratic and fair distribution of infrastructure, sanitation, water, and other facilities (Francis and Lorenzo 2003).
Typology	The study, analysis, or classifications of things (Crewe 2003; Merriam-Webster Dictionary).

APPENDIX 2 – Sample Exercises

There are many published examples of training activities available in the literature that focuses on participation, facilitation, and team-building, and it is beyond the scope of this project to create or recreate a list here. It would, however, be a useful contribution to the field to compile a customized list for direct application to open space planning and design; that collection has not been established yet. Here are two sample exercises that can teach or train participants in some crucial adaptive learning skills related to the participatory design of open space.

1. NASA Moon Exercise

The Scenario-

Your spaceship has just crashed on the moon. You were scheduled to rendezvous with a mother ship 200 miles away on the lighted surface of the moon, but the rough landing has ruined your ship and destroyed all the equipment on board except for the 15 items listed below. Your crew's survival depends on reaching the mother ship, so you must choose the most critical items available for the 200-mile trip. Your task is to rank the 15 items in terms of their importance for survival. Place a number 1 by the most important item, number 2 by the second most important, and so on, through number 15, the least important.

- _____ Box of matches
- _____ Food concentrate
- _____ 50 feet of nylon rope
- _____ Parachute silk
- _____ Solar-powered portable heating unit
- _____ Two .45caliber pistols
- _____ One case of dehydrated milk
- _____ Two 100-pound tanks of oxygen
- _____ Stellar map (of the moon's constellations)
- _____ Self-inflating life raft
- _____ Magnetic compass
- _____ 5 gallons of water
- _____ Signal flares
- _____ First-aid kit containing injection needles
- _____ Solar-powered FM receiver-transmitter

2. Design Team Exercise

I based this upon Dr. John Holland's The Party Game, traditionally used with people to figure out what kind of occupation suits their temperament. In this case, ask participants to imagine they are at a party. There are six groups standing around talking, as indicated in the illustration below. Ask them: Which group or groups are you drawn to? Use these answers to break up into small groups to ponder the following questions:

- **Realistic and Conventional** - create a list of volunteer tasks that participants could do to make a difference in this landscape.
- **Social** – anticipate potential conflicts. Decide how the project would manage and transform these issues.
- **Investigative** - define the question or problem to be solved, and come up with alternative ways to frame the project goals.
- **Artistic** - answer the question or address the problem defined by the investigators above, but in 100 different ways. Draw or otherwise creatively interpret the landscape issues and designs.
- **Enterprising** - figure out some ways to create green jobs out of this landscape or open space planning and design.

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