Introduction

'3 Rivers - 2nd Nature' (3R2N) is the second of two ecological-arts projects within the Studio for Creative Inquiry, at Carnegie Mellon University, USA. This is a five-year project, which focuses on the three rivers and fifty-three streams of Allegheny County. '3 Rivers - 2nd Nature' consists of an interdisciplinary team of artists, scientists and a policy expert, collaborating on a study of the green and blue infrastructure which attends the region's river systems (green and blue infrastructure refers to the structural elements of a naturally functioning river ecosystem). The project addresses water quality, riverbanks and botany, public access and use, stream restoration and daylighting (the act of removing streams from underground pipes and culverts, restoring ecological form and function to a stream, which has been managed as a stormwater problem). Our project teams produce strategic knowledge and a public platform for creative discourse about places. Our work is designed with transformative social intent with creative engagement. We are artists whose role is defined within the public realm, creating open-ended dialogues with aesthetic and scientific components that are open to supplementary response. We act as neither designers nor primary authors: our material "product" is the social space for creative public-dialogue.

As we emerge from an industrial culture, we must face the water problems, which follow the use of the rivers as a sink for wastes. We must consider the form and function of the post-industrial economy, and its attendant public space. The vegetation, which has prospered, as the economy languished and the riverside industrial sites crumbled provides an important component of a new urban/nature aesthetic. As we enter the post-industrial era in pursuit of renewed sewer infrastructure and the redevelopment of waterfronts, we must ask ourselves several critical questions: is it possible to consider the benefit of restored ecosystems as we rebuild infrastructure? Cities are defined by the "grey-infrastructure" that enables dense habitation; this infrastructure is close to a century old in most American cities. Is it possible to introduce the concept of "green-infrastructure" (the water, landscapes, soils, microbes, plants and other features of a natural environment which provide benefit to human communities through biological and physical process), as an important component of an urban experience? The other question we must ask ourselves is, what form will the public space of rivers and riverfronts take, as we redevelop brownfield sites? During the last century, the bustling economies of the industrial corporations swallowed huge tracts of land. At the turn of the last century private industries ‘captured’ seventy-two public roads in Pittsburgh that once led to
the rivers. Today, public access and uses are minimal, but expanding. In most cities the redevelopment dialogue is dominated by the issues of private capital, public space - its attendant issues and values are subordinate.

These dual issues of redevelopment and public space are complicated by the politics of post-industrial culture. We endeavor to provide our targeted communities with a set of tools that reveal the "public-value" of our waterfronts. As artists we have neither the political nor the economic power to mark our waterways or riverbanks in any meaningful way. (Certainly not in way that could compete with the industrial ruins.) We have chosen a specific area of creative action; we address the perception, meaning and values of urban ecology and its emergent aesthetic value. The context for our efforts is defined by the rivers and the remnant estates of industry that dot its shores, barren of their original economic intent but providing a powerful spatial reminder of the technical dominance over land, water and air for private profit. Recently new development, industry and retail have begun to appear. The public space lost to the industrial era has the potential of being lost to another generation, as long as it remains without advocacy. The question that our projects address is "who advocates for the values of clean water, bio-diverse riverbanks, public access, free flowing rivers, streams and rainwater?" Can artists working as cultural agents affect the public policies and private economic programs, which mark and define urban ecosystems? Given the issues of scale, ecology and institutionalized planning, what is the artist’s role? How do we define the artist’s practice in relationship to the post-industrial realm?

Background
The context for our effort is the waterfronts that defined Pittsburgh for centuries. They have been a place of value for indigenous peoples who used the confluence of three rivers as a transportation hub, as well as a source of food and a provision of natural rhythms that sustained and gave meaning to life. The waterfront and its steeply hilled confluence provided the defensive position allowing Europeans to control vast tracks of land without roads, and defend that land against attack from other Europeans. The waterfront provided the transportation staging areas and the natural infrastructure that aided the westward expansion of the United States and its transfer of goods and people. Later, Pittsburgh was on the eve of a century of industrial dominance. The rivers provided the transportation link between iron-ore fields to the north and coal-mines to the east. In each era, the rivers and their banks were transformed, their spaces marked by the material production of the era. The ecological nature of the rivers and riverbanks have been subsumed three times in the past, to their value as gateway, transport system, and as a sink for the wastes of urban industrial production. Today the space remains marked by material artifacts of industry. Over the last 30 years the soil and the water have begun to recover, a range of ecological functions is emerging. The space of our rivers are being notably marked by nature and colonized by wildlife for the first time in 200 years. In these post-industrial waterfronts, nature emerges out of benign neglect. In 1996, a bear
ran through the streets and slag-filled river valleys of the City of Pittsburgh (Silver, 1996). The bear makes it clear that the industrial downturn has created an ecological space of opportunity: vegetation and wildlife is returning, hills once barren from smoke and pollution are vegetated with broadleaf plants for the first time this century. The related economic downturn has also created a social-space of opportunity. Henri Lefebvre has said, "social space is what permits fresh actions to occur, while suggesting others and prohibiting yet others" (Lefebvre, 1996:73). The social space emerging in the wake of the industrial revolution is incredible, providing each city in the industrialized world with a spatial impetus for change. It's relevance to democracy, to aesthetics, and to the dynamic tension between the public and private realms is enormous.

**A working definition of the public realm**

Let me take a moment to consider the definition of the public realm. The public realm is a complicated and contested concept, which is most often defined in relationship to the equally contested meaning of the private realm. This dichotomy minimizes the complex manifestations of the public in modern society. Jeff Weintraub describes the public realm within various conflicting philosophical frameworks and concedes that "the public realm is commonly defined in opposition to the private realm of the market and civil society" (Weintraub, 1997:36). Complementing Weintraub's theoretical approach, David Brain, a sociologist focused on architecture and material artifacts, analyzes patterns of social relationships and the way they are inscribed in the material artefacts of our cities. He explores the public/private dichotomy as a physical space where activities are visible rather than hidden. The social characteristics of urban life are defined as "common interests and decisions compared to the region of intense personal concerns and selfish interests" (Brain, 1997:242).

Brain's attention to the material world provides a simple clarity, which balances Weintraub's thoughts on the theoretical complexity of the term. His definition makes it easy to imagine places in our cities where architecture enables or constrains visible versus hidden, social versus personal. He provides us with a good understanding of the spatial forms of public space, while alluding to the social form. This definition falters in what it doesn't address: the conflicts which arise when we consider the complex issues of social life, and the challenge to define common interests and to make collective decisions. This is the true challenge of public space. The material approach of Brain, and the theoretical approach of Weintraub taken together provide us with some insight, but it does not adequately represent the dynamic conflict which occurs when common (public) interests are placed in opposition to market (private) interest. I will now consider two theorists who address these issues of the discursive form of the public realm.

Nancy Fraser commenting on Habermas (Habermas, 1991) identifies the inequities of a single-public in stratified and egalitarian societies. She also argues...
against the exclusion of issues deemed private. Fraser presents a four-point program by which she proposes to address these inequities through critical theory. "First, this theory should render visible the ways in which social inequality taints the liberation within publics in late capital societies. Second, it should show how inequality affects relations among publics, how publics are differentially empowered or segmented, and how some are involuntarily enclaved and subordinated to others" (Fraser, 1992:137).

Bent Flyvbjerg, (an urban planner) provides an approach to the public realm, which addresses the conflict. He provides an interesting theoretical analysis, which places the idealized discursive approach of Jurgen Habermas in critical tension with Michael Foucault's approach to power and his opposition to idealism (Foucault, 1995,2000). Flyvbjerg finds common ground between the thinkers in terms of their agreement on reason as the only approach to political process. He cites the tension between Habermas' interest in the procedures of discourse (without interest in the outcome) and Foucault's focus on conflict and power in the fight against domination. Flyvbjerg concludes "that while conflict has been viewed as dangerous, corrosive and potentially destructive of social order....social conflicts produce the valuable ties that hold modern democratic societies together and provide them with the strength and cohesion they need. Indeed the more democratic a society, the more it allows groups to define their own specific ways of life and legitimates the inevitable conflicts of interest that arise between them" (Flyvbjerg, 1998:209).

The lack of conflict or tension in the previous definitions of Brain and Weintraub is problematic in that it masks the true nature of the public realm. Flyvbjerg and Fraser provide us with a description of the content and issues typical of the social form of public space. It's a messy place of conflicted agendas, dominant and subordinate actors with a range of power and ability to have their voices heard. It is not a static physical space in the city, but a dynamic space, which is defined and bounded by the discursive participation of interested parties. It is an ephemeral space, which forms and dissolves with the interests of its participants. Interested parties often deem its content private, beyond the realm of public attention. This discursive public realm suffers from a weakness, typical of issues, which have no primary advocacy or invested interest. This weakness is also defined by the way the space of the city subsumes the affects of the discursive public realm. There is a lack of markings, which might illustrate the historic role of the public, its conflicts, its struggles and its accomplishments in the design and planning of the city.

The '3 Rivers - 2nd Nature' project would identify the public realm as an assembly of citizens discussing matters of public concern or issues of common interest (in keeping with Habermas). It is our belief that the post-industrial public realm must be manifest in its discursive/social forms and the role of the artist on '3 Rivers - 2nd Nature' can be defined by a five-point agenda:

- To create opportunities to experience public space
To expand the intellectual understanding and discourse about public space
To examine the issues which are identified as public versus those that are private
To enable a forum that provides access and a context in which everyone can speak
To examine the ways that the forum can be charged and enabled as a force for change

Ideas for strategic action

My intention in this section is to consider the concept of systems intervention and the discipline of planning as a source of knowledge for artists interested in social-aesthetic practice. Given our own practice I am particularly interested in how these ideas relate to our programs of strategic knowledge, and the creation of a public platform for transformative discourse. Systems and planning have a certain amount of overlap, as one of the rational forms of planning is based on systems analysis and its application.

There are two primary approaches to creating a public platform for transformative discourse from the bottom up through individuals and communities or from the top down through policies and decision-makers. Given the power which defines these realms, how does the artist engage either realm in a meaningful way? One can assume that most artists are without political or economic power. We can "borrow" power through strategic alliances with organizations to begin this work but once "in" we need to be equipped to act strategically if we are to achieve an effective transformative discourse. Donnella Meadows, a systems analyst, provides a concept tool to help us address this question and its relationship to the top-down/bottom-up framework. Meadows outlines the most effective places to intervene in a system, providing us with a chart of leverage points, which can bring about significant change. The following illustrates the places to intervene in a system from the least effective to the most effective (Meadows, 1997:78):

9. Numbers [the knowledge of what does what, how fast or how slow]
8. Materials [the materials and their paths through the system]
7. Regulating negative feedback loops [information switches regulating the system]
6. Driving positive feedback loops [driving growth, explosion, erosion and collapse]
5. Information flows [the knowledge which informs the systems management]
4. The rules of the system [defining its scope, boundaries, degrees of freedom]
3. The power of self-organization [adapting to change, by reorganizing/changing]
2. The goals of the system [what the system is designed to accomplish]
1. The paradigm out of which the goals, rules or feedback structure arise.

Meadows's leverage points provide us with guidelines for action. She shares our commitment to social transformation and would no doubt be intrigued at the idea of artists using this leverage chart as a toolkit to inform the development of strategic
knowledge and the creation of an effective public platform. At the same time she would caution us to understand that systems are not intuitive, they are dangerous to generalize about but at the same time they provide an important new way to think about complex issues.

The relevance of this model for the arts emerges when we consider the range of an artist's effort which can be described as cultural work that expands what we know or have experienced rearranges the frames of perception or creates new images, texts or metaphorical relationships. As artists plan a systems intervention it is important to set goals - are you interested in poignant commentary or looking to cause social change? It is important to understand that the artist's power is minor in relationship to those that control most social, political or economic systems. The artists seeking change will need to be more strategic than those that choose to comment or critique, they will need to understand the value of partnerships and collective authorship. When targeting change, artists will need to address the issue of power and advocacy, who will support this new systemic vision and who has the power to enact change?

Planning is the discipline, which focuses on the history, management and forecasting of change. Planning began in the eighteenth century as a rational scientific approach to the changes instigated by the industrial revolution. Its history, theories and applications provide important background and framework for artists working in the public realm. I am most interested in the work of John Friedmann, author of 'Planning in the Public Domain: From Knowledge to Action' and Leonie Sandercock, author of 'Towards Cosmopolis: Planning for Multicultural Cities.' These authors outline the history of planning in a series of steps, which describe a continuum of planning activity. They begin with rational planning in service to the state, move through the idea of policy and systems analysis - calculated best solutions for both the state and capital, then into various definitions of the radical forms which address first social learning then radical mobilization.

Friedmann and Sandercock provide important background for the reconsideration of the artist's role in society. They describe a discipline, which emerges from the rational ideals of the objective application of scientific knowledge and quantitative analysis and which serves two masters: capital and the capitalist-state. The latter is charged with managing the "public good" in relation to the former yet the interests of the former take precedent in most decisions. This is the dynamic which has brought us to the post-industrial condition where the citizens of former industrial regions are as idle as the abandoned estates of industry. Where the earth is stained, local air and water quality is improving, but the global affects on climate after a century of carbon-based energy production is becoming painfully obvious. We are at a transition point – and the question that must be raised is who will advocate for the public interest and the public good the form and function of the post-industrial public realm? Who can take on the role of passionate advocacy for those values which are not and cannot be represented by the interests of capital? Friedmann points
out the import of radical planning, but questions the value of traditional planning-training for this emergent area of practice.

The radical forms differ from the rational forms in a range of ways. The radical forms put the planner into a dialogue with communities, rather than an 'expert' relationship to the state or capital. Sandercock defines radical planning in terms of direct intervention to empower those who have been systematically disempowered "The idea of planning for a heterogeneous public rather than for the modernist public interest" (Meadows, 1997:182). Friedmann identifies the radical as in the service of people, organized for political action on their own behalf. Both authors define the radical planner on the basis of their oppositional relationship to the state or corporate economy. This is a new dialectical process between the researcher/planner and the subject/actor. Friedmann states the need for "the transformation of industrial capitalism, the recovery of a political community, and the achievement of collective self-reliance in the context of common global concerns" (Meadows, 1997:412). The challenge is to wrest power from the state and capital, to expand the traditional forms and paths of knowledge which have been the foundation of rational planning. If artists are to use the ideas of modern planning to their ultimate benefit, we have to understand that the pedagogy of planning is steeped in rational utilitarian practices. Therefore the value of their radical theories emerges in terms of opposition to standard planning practices.

Artists have to be more pragmatic and have significant models for oppositional practice from John Heartfield and Leon Golub to Hans Haacke. Planners traditionally work in relationship to the state and capital, they understand and own power. By comparison artists traditionally work in relationship to their own areas of inquiry, or the discipline of art itself. It is only recently that the ideals and theories of art have included a shift back to the social arena. Lucy Lippard has been a lone advocate for socially relevant art for 20 years or more. Suzi Gablik, in 'Has Modernism Failed' and 'The Reenchantment of Art' follows with theoretical texts, which outline a reconstructive, post-modernist approach. In the shift from objects to relationships, Suzanne Lacy and, more recently, Tom Finkelpearl raise important questions in reaction to the infusion of state-sponsored public art. If artists are going to make a commitment to liberate the creative voices of communities of place and knowledge we have to be strategic about what we are going to do, be pragmatic about how we are going to do it, and take responsibility for the communities we work with. We need to provide communities with the appropriate conceptualising tools so that there is hope of achieving their goals.

'Three Rivers - 2nd Nature' is a research project within a university. Artists envision the project, develop partnerships and raise the funds to hire the project teams. We oversee the project work at the theory and application of our ideas; we develop and apply strategic knowledge and work with scientists to conduct field studies on post-industrial land and water to understand remnant and emergent ecological functions. We work with policy researchers to understand the relationships between ecosystems and infrastructure (rivers and sewers) and with
anthropologists, historians and urban planners to understand the changes in the use of waterfronts over time. We develop ongoing strategic partnerships with other universities, non-profit organisations, municipalities and regulatory agencies. We are seeking to create a meaningful platform for transformative discourse and recognize the need to empower alternative and diverse visions. Whether through sheer luck or strategy (or both) we have been successful in the past. The 'Nine Mile Run’ Project resulted in a six million dollar investment by the federal government to restore an urban stream system in the midst of a post-industrial landscape. The long-term interests of that project are being shepherded by a new citizen-based, non-profit organization formed this year. The work on '3 Rivers – 2nd Nature’ began a series of "river-dialogues" to discuss the results of our fieldwork and to discover its value to citizens who see the potential for accessible public space in the post-industrial waterfront. Their interest and advocacy will shape the future of the project.

"The emphasis is less on what planners know, and more on how they use and distribute their knowledge; less on their ability to solve problems and more on opening up debate about them. In this model planning is about talk, argument and shaping attention" (Meadows, 1997:175)

This model of planning is useful to us because it follows Meadows’s ideas on the intervention of knowledge and because it explicitly mitigates the primary authorship of the artist. This results in a collective ownership that I believe empowers these ideas to move forward in important ways. Change is not an accident that artists or anyone else is likely to trip over. It isn’t a concept that can be mined from within community. It has to be strategically identified, relentlessly pursued and rationally enabled.

References


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