

**Contemporary Perspectives and Strategies for Transforming the
Industrial Landscape**

by

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Abstract

This paper deals with the reclamation of industrial land in the context of the current brownfield initiatives supported by the Environmental Protection Agency. Motivated by reforms in urban policy, these new policies begin to weigh the need for economic development against needs for environmental protection on hazardous waste sites. However, more comprehensive strategies need to be considered. The environmental justice movement has shown the power of communities to manage the course of their future with regard to wasted land. The brownfield reforms must take into account the larger context of these sites, which includes 1) the extent and nature of contamination; 2) the human community; 3) the designer or designers who propose re-use schemes; 4) notions of appropriate reuse; 5) the memory of earlier industry and productivity; and 6), the cultural conceptions of the landscape.

Recently, substantial thought has been given to the nature and context of older industrial sites by architects and urbanists. Though their writings are couched in the different terminology than that used by regulators, designers have thought broadly about the conditions of marginality, placelessness, and risk that parallel the problems with industrial site reuse. Those problems which confound policy makers and regulators have energized artists and designers; these difficult places encourage some of the most innovative redesign projects, both in terms of process and product.

This paper will present three case studies: the Parc de la Villette in Paris, Gas Works Park in Seattle, and the Massachusetts Museum of Contemporary Art (Mass MoCA) in North Adams, MA. These case studies suggest that redesigning industrial sites includes redefining the existing terms of the site's context, many of which are sadly overlooked. Brownfields projects should in the future be interpreted as a more complex nexus of elements in the ways they are conceived by both regulators and designers. Hopefully a deeper understanding of these sites will enable the brownfield initiatives to better serve the needs of the communities that utilize them, and ultimately inherit as a part of their cultural landscape.

Acknowledgments

B”H

(Rabbi Tarfon) used to say: It is not incumbent upon you to complete the work, yet you are never free to desist from it.

Pirkei Avot
(Chapters of Our Fathers) 2:16

Life, like this thesis, is a constant work in progress. I had the good fortune of having the support of my academic and thesis advisor, **Kristina Hill**. She encouraged me to tackle the issues underlying brownfields with both rigor and finesse. Her wealth and breadth of knowledge of both theory and practice, of the literary and the scientific, inspires me to continue on the task of weaving the threads that constitute the cultural landscape. My reader, **Terry Szold**, shared with me her insights into the interests of planners and community members in industrial reuse. Her professional experience shed light on the implication of an investigation such as this on the planning practice. I am also thankful to **Professor Gary Hack** for his support for this project in pursuance of the Urban Design Certification. He offered the conceptual links between in brownfield policy and semiotics by insisting that I consider a ‘physical design’ component of the discourse. Without his suggestions this project would not have taken the unexpected, exciting, and in the end, rewarding turns that it has.

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Table of Contents

B”H

| | |
|--|-----------|
| ACKNOWLEDGMENTS..... | 3 |
| TABLE OF CONTENTS | 4 |
| LIST OF FIGURES..... | 6 |
| CHAPTER 1- FRAMING THE ISSUES..... | 8 |
| INTRODUCTION..... | 8 |
| THE DIALECTICAL NATURE OF THE TERM ‘BROWNFIELD’ | 9 |
| CURRENT STRATEGIES FOR THE BROWNFIELD PROBLEM..... | 13 |
| <i>The Redemptive Model.....</i> | <i>13</i> |
| <i>Dealing with the Devil?.....</i> | <i>15</i> |
| THE MASSACHUSETTS EXAMPLE: THE CLEAN SITES INITIATIVE..... | 16 |
| CRITIQUES OF BROWNFIELD REFORM..... | 18 |
| <i>Multiple Definitions of Risk.....</i> | <i>18</i> |
| <i>No Qualitative Criteria for Selecting Sites.....</i> | <i>20</i> |
| <i>Multiple Interpretations of Industrial Sites</i> | <i>22</i> |
| CHAPTER CONCLUSIONS | 24 |
| CHAPTER 2: BROWNFIELDS AND THE BUILT LANDSCAPE | 25 |
| THE CULTURAL CONSTRUCTION OF LANDSCAPE | 25 |
| LANGUAGE SYSTEMS..... | 27 |
| NATURE AS SOCIAL CONSTRUCT..... | 28 |
| SHIFTS..... | 29 |
| <i>Shifts in the urban margins; disorder in the landscape.....</i> | <i>30</i> |
| <i>Waste Shifting.....</i> | <i>32</i> |
| <i>Shifts in Industry/Manufacturing.....</i> | <i>33</i> |
| <i>Cities/ Economies Shifting.....</i> | <i>34</i> |
| <i>Cities Disappearing.....</i> | <i>36</i> |
| CHAPTER 3: TOWARDS A BROWNFIELD TYPOLOGY..... | 38 |
| RISK | 38 |
| HUMAN INTENTION..... | 38 |
| COMMUNITY..... | 39 |
| MEMORY..... | 39 |
| REUSE..... | 40 |
| LIMINALITY..... | 40 |
| CHAPTER 4: CASE STUDIES..... | 41 |
| A. PARC DE LA VILLETTE, PARIS..... | 41 |
| <i>Redefining elements of parks.....</i> | <i>44</i> |
| <i>Tschumi’s Design</i> | <i>45</i> |
| <i>The Parisian Park</i> | <i>47</i> |
| <i>A New City.....</i> | <i>48</i> |
| <i>The ‘Architecture Within the Frames’.....</i> | <i>49</i> |
| <i>Critiques.....</i> | <i>51</i> |
| <i>Nature is not Trees</i> | <i>53</i> |
| <i>Reaction or Reformulation?.....</i> | <i>54</i> |
| B. GAS WORKS PARK, SEATTLE WASHINGTON..... | 57 |
| <i>Risk rewards.....</i> | <i>57</i> |
| <i>Process can be Style.....</i> | <i>59</i> |

| | |
|--|-----------|
| <i>Post-modern, prehistoric</i> | 62 |
| C. MASS MOCA, NORTH ADAMS MASSACHUSETTS | 65 |
| <i>A Company Town Goes Under</i> | 65 |
| <i>A Museum in the Northern Berkshires</i> | 65 |
| <i>A Cultural Center in the Regional Margins</i> | 67 |
| <i>Cultural Centers disappearing?</i> | 72 |
| CHAPTER 5: APPREHENDING THE BROWNFIELD | 74 |
| OBSERVATIONS ON PROCESS | 74 |
| ANALYSIS OF CASE STUDIES: | 77 |
| BIBLIOGRAPHY | 81 |

List of Figures and Tables

Figure 1. (Page 9) Insurance and financial services view investments in industry as an articulation of the elements of risk associated with the components of the hostile world. (*The New Yorker*, March, 4, 1996, p.9.)

Figure 2. (Page 45) Rene Magritte, *La Condition Humaine*. (National Gallery of Art [1933]).

Figure 4-1. The site showing the location of the historical canal, the new Museum of Science and Industry and the restored Grande Halle.(Dagenhart, p.88.)

Figure 4-2. (Page 47) The former abattoir at La Villette with the canal running through the center of the site. (Boles, 1985.)

Figure 4-3. (Page 51) The follies are both anchoring devices in the three palimpsested layers, and heuristic tools in apprehending the disjuncture of history, use and social meaning. (Baljon, 1992.)

Figure 4-4. (Page 55) The Parc de la Villette's system is manifest in the superimposition of three autonomous layers: points, lines, and surfaces on a neutral site. (Dagenhart, 1989.)

Figure 4-5. (Page 59) An axonometric view of La Villette. The design blurs the distinction between the city and the park. (Boles, 1989.)

Figure 4-6. (Page 60) The Parc de Butte Chaumont, a nineteenth century park in Paris is built over the remnants of a quarry and urban wasteland. The autonomous yet interconnected systems of topography, winding lanes, architectural 'ruins', and rail lines prefigure the Parc de la Villette. (Meyer, 1991.)

Figure 4-7. (Page 63) Overlooking Lake Union, Gas Works Park is a design that recalls the past and imagines the future. (Frankel and Johnson, 1991.)

Figure 4-8. (Page 66) Site plan of Gas Works Park. (Richard Haag Associates, 1973.)

Figure 4-9. (Page 68) An elaborate sundial topping the Great Mound serves as public art and participatory landscape form. (Frankel and Johnson, 1991.)

Figure 4-10. (Page 74) Sample sections through the Mass MoCA site. By Skidmore, Owings, and Merrill. (*Progressive Architecture*, November 1989.)

Figure 4-11. (Page 75) Site plan, Mass MoCA. (*Architectural Record*, November 1989.)

Figure 4-12. (Page 79) Photo of Mass MoCA buildings and catwalks, July 1995.
(Photo by author.)

Table 5-1. *Design* techniques to reconcile perception of danger.

Table 5-2. *Process* techniques to reconcile perception of danger.

Table 5-3. *Terminology* used to reconcile perception of danger.

Chapter 1- Framing the Issues

Introduction

This chapter will attempt an overview of the development of the federal brownfield agenda. It will look at the Environmental Protection Agencies' regulatory framework for hazardous waste sites, and the programs that are being developed to facilitate their cleanup and their reuse. The chapter will show the positive aspects of the Brownfield initiatives, it will also present their shortcomings.

The redesign of brownfields may be the urban planner's biggest contemporary challenge. Many decades of industrial activity has left many old factories and other sites abandoned or underused, posing potential risks to public health, eroding the tax base, and leaving communities without adjacent labor and commercial opportunities. There are a significant number of previously industrial sites and old land fills in urban areas, but there are also sites farther away from urban activity, near rail lines or water transport.

Often filled with buildings with obsolete uses, scattered with trash, frequented by homeless persons and drug dealers, shirked by developers and shunned by nearby residents, these places in the urban landscape are surely anathema to urbanists. Most importantly, they are officially "contaminated"--tested by the state or the federal regulatory agencies and found to have a hazardous waste problem. The extent of the contamination is rarely simple to quantify. Usually their problem are hidden, the diagnosis vague, and the prognosis for the future uncertain.

At first, the situation had a rather simple solution. Clean them up, erase all memory of the contamination and the industrial processes that produced them, and invent new uses. While this approach was successful in a few cases, it did not begin to deal with the most pressing problem that these sites

face, which is risk. Burdened by unknown contamination, a lack of development interest, unconsidered reuse potentials, and shifting and ephemeral market conditions, no investor, whether private or public, considered them worthy investments.

In the late 1980's, pressure mounted to change the status quo. Urban industrial sites languished while new development moved farther away from the urban centers to sites without the stigma of contamination. The suburban 'greenfield' sites were clearly more attractive to prospective business. The problem worsened for inner city residents as jobs moved farther away to areas often inaccessible by public transportation. The many already beleaguered municipalities, with little economic growth due to the diminishing tax bases, sites in tax foreclosure, lowered bond ratings, and high blue collar unemployment, began to press for economic development initiatives. States with older industrial cities, particularly in the northeast, began to feel the effect of industrial and manufacturing jobs moving away from the original economic centers.

The current brownfield agenda is a reformation of the environmental protection regulations in order to give greater consideration to equally pressing need for development in economically disadvantaged areas. The new federal and state approach to abandoned industrial sites is a balancing act of two worthy ends that are not easily married.

The dialectical nature of the term 'brownfield'

The term brownfield has become a popular term for abandoned, vacant, and contaminated sites. These contaminated urban areas are one facet of

the hazardous waste dilemma confronting the nation.¹ The term embraces all types of sites in all locations, from old mill buildings, to undocumented landfills, to Superfund sites.² The term brownfield succeeds in redefining the site by comparing it to what it is distinctly not; a suburban, clean, 'greenfield' site. The EPA has developed a 'Brownfield Pilot Project' in which they will grant \$200,000 for the remediation and redevelopment of feasible projects.³

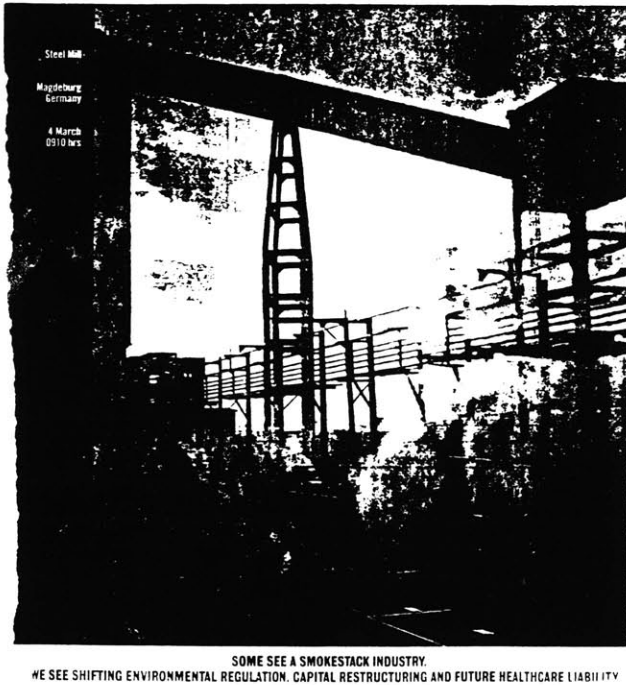


Figure 2. "Some see a Smokestack industry. We see shifting environmental regulation, capital restructuring and future healthcare liability." Insurance and financial services view investments in industry as an articulation of the elements of risk associated with the components of the hostile world. (*The New Yorker*, March, 4, 1996, p.9)

The term brownfield signifies the site's agrarian past; its present stigmata of 'brown-ness'; and its potential return to its clean, blank state. The

¹ Mark Dennison, "EPA and States Intiate Cleanup of Brownfield Sites," *Environment and Development*. American Planning Association, Aug. 1995, p.1.

² Superfund policy will be discussed further in the chapter.

³ Jeremy Gibson, "Remedial Reinforcements to the Rescue: The Brownfields Bridades are on the March." *Journal of Environmental Regulation*, Summer 1995, p.30.

color itself sends emotional signals of decay, dereliction, and disrepute. The extent and nature of brownness does not need to be known in order for it to fit this definition. The location, either in an economically depressed community, or as the staging ground for heavy industry, is enough circumstantial evidence to incriminate it.

The term is successful in convening disparate parties without forcing a particularly uncomfortable tone to the discussion. Its ambiguity is actually an appropriate point to start to build consensus.⁴ However, many professional policy and physical planners refuse to deeply engage the discourse. "If planning terms are ambiguous, it is because they are the melting pot of tremendous pressures coming from rival word users, each of whom would like to appropriate the word for his own purposes."⁵

One encounters public frustration and anger originating from a deep felt fear of a loss of order with hazardous waste contamination near their homes.

The use of the brownfield term abstracts the site from the original use, setting the stage for a new incarnation. Planning terms direct the imagination along

⁴ Jurgen Habermas' theories of 'communicative action' are some of the formative ideas from which several prominent planners have tried to reconcile the postmodern condition in the planning practice. They believe that there has to be a means out of the multiplicity of meanings to at least a first take at what the 'public interest' is. As Harper and Stein write: "The problem of ambiguity disappears if we view meaning as a pragmatic tool for interpreting linguistic behavior as a whole-- for getting at what someone is saying, what one believes, and what one means. Furthermore, the line between belief and meaning is not a fixed one (another absolute dichotomy which should be rejected). Instead, we should look holistically at the entire web of interconnected beliefs and meanings."

⁵ Albert Guttenberg emphasises the role of language in determining the directives of certain designs and policies. "In the literature of planning one notes a bewildering change, from one context to another, in the meaning of key terms. 'City' and 'planning' are themselves the supreme examples, but there are many other of a lower order: open space, neighborhoods, slum, and blight, such disagreements...should not be dismissed as signs of confusion...of the parties to the dispute...Planning terms direct the imagination along lines favorable to those who produce and define them, and in this way they function as instruments of class [and political] policy." *The Language of Planning: Essays on the origins and ends of American Planning Thought*, Chicago: University of Illinois Press, 1993.

lines favorable to those who produce and define them, and in this way they function as instruments of class [and political] policy.⁶ There is a reasoned fear that a “brownfield” designation will function similarly to “blight” in the urban renewal years in divesting entire neighborhoods with the power to control their own destiny. While residents might identify with the original use, they fear the abstraction that a purported ‘solution’ might create. To one official, brownfield incentives might mean an opportunity to regenerate a sluggish tax base. To a community advocate, the program means greater investment in contaminated sites in traditionally underprivileged areas. To a developer, the incentives mean access to sites formerly untouchable by liability concerns. A resident whose family and social history resides in the productivity of the previous industry may not relate to the brownfield term at all, opting call the site by its earlier name.

In the 1950s and 1960s, zoning tended to classify the city into autonomous residential, manufacturing and commercial zones, barring residential development in either of the other districts, ostensibly for the protection of the health, welfare and well being of the residents. The move of the middle class to the suburbs was underwritten by the Interstate Highway Act and other federal programs, which viewed the expansion of the city as beneficial to the public health and welfare.

Critics such as Jane Jacobs and others dismissed these notions, pronouncing them antithetical to good societies and vibrant communities. During the sixties and seventies, grassroots movements were formed to combat the social injustices imposed on inner cities, often citing racial and ethnic discrimination. In many deindustrializing cities, many working class communities lost their jobs and were left holding the bag of abandoned waste

⁶ Albert Guttenberg, *The Language of Planning: Essays on the origins and ends of American Planning Thought*, Chicago: University of Illinois Press, 1993.

dumps and poisoned rivers, lakes, groundwater, and air.⁷ In the aftermath of a methyl isocyanate leak in the African-American town of Institute, West Virginia, Congress passed the 1986 Superfund Amendments and Reauthorization Act (SARA). SARA included the Emergency Planning and Community Right-to-Know Act that granted for the first time in federal legislation, the public's right to know what chemicals are being stored or produced at all manufacturing sites and what their potential health impact might be. It is a tool that has significantly empowered environmental activists ever since.⁸

Current Strategies for the Brownfield problem

There have been two basic strategies that policy planners have taken with regard to contaminated urban land: redemptive and managed.

The Redemptive Model

The first approach to hazardous waste could be described as redemptive. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), enacted in 1980, created the federal Superfund program in the wake of Love Canal that addressed latent hazards caused by historic chemical disposal practices. Those involved in CERCLA sites long criticized it as too big, cumbersome, and draconian. CERCLA granted very broad powers to governmental authorities to respond to emergencies and hazards and then seek

⁷ Jim Schwab, *Deeper Shades of Green; the Rise of Blue-Collar and Minority Environmentalism in America*, San Francisco: Sierra Club Books, 1994, p.xviii.

⁸ Schwab, p.xxi.

recovery for response costs and natural resource damages from certain persons. The state statutes were modeled after the CERCLA prototype.

The probability of liability was almost always triggered; virtually any 'release or threat of release' of a 'hazardous substance' at a 'facility' into the environment" was subject to legal action. Because so many common chemicals are classified as hazardous substances and past management practices were more relaxed than they are now, countless properties crossed these minimal thresholds. Everything from residential backyard spills of common automobile oil to large factories were lumped into the same designation. The stakes were high for anybody who was or became involved in a site.

The intention was to purify of land, and receive 'penitence'--- full compensation for the cleanup from the contaminators. Since the primary objective was in recapturing the remedial costs, the contamination itself became contagious; the responsibility for cleanup extended to all property owners, lenders and operators and was joint and several. Further, there were no established endpoints for the purgatorial punishment of the responsible parties; cleanup was determined by technical standards that are subject to the current technology available. While the general public was comforted that government was taken steps to solve an increasingly noticeable public health problem, it soon became evident that the Superfund programs were not working. Aside from the allegation of fraud and mismanagement of federal funds, the policies themselves were criticized. The regulation activity was stymieing normal market activity and was actually hurting disadvantaged areas rather than protecting them.

The presence of contamination created significant barriers to the development and reuse of property. Private parties were reluctant to make the necessary investments because of liability concerns and cleanup cost uncertainties. Financing became difficult because lenders feared that

environmental and legal obstacles will make it difficult for borrowers to repay their loans. (Until recently, third party lenders were not safeguarded from the liability associated with ownership.) Related to liability was uncertainty of the nature of the hazardous waste. It is still quite expensive, both in terms of time and resources to determine the nature, extent, duration, and level of cleanup.⁹

Dealing with the Devil?

The second approach to current brownfield initiatives is a critique of the redemptive model.¹⁰ As a second-generation phenomenon,¹¹ the goals are to address the administrative problems created by the laws that were enacted to solve environmental problems in the first place. Business and environmental managers have sought reforms and revisions ever since the passage of the major environmental cleanup laws.

For over two decades, government entities provided incentives to developers to reinvest in inner cities, while environmental regulations kept potential developers at bay. As a result of these opposing state directives, the objectives of both sides were thwarted. For example, the regulatory agencies, zealous in their mission of property clean up and cost recovery, made ad hoc development deals too risky.

Policy makers have been reassessing the public goods inherent in environmental regulation and economic development. "For years, a dirt-eating child single-handedly has been holding off armies of developers, entrepreneurs, industrialists, bankers, brokers, builders, consultants, and lawyers. Now, to

⁹ Thomas Black, "Brownfields Cleanup", *Urban Land*, June 1995. p. 47-51.

¹⁰ For additional literature on the current Brownfield initiatives in the country, see Thomas Black's "Brownfield Cleanup", pp.47-50.

¹¹ Gibson, p.30.

stave off a retreat and make it a fair fight, elected officials and governmental regulators are mobilizing scores of "brownfields initiatives."¹² Comprehensive policies are now being developed in the states for brownfields and their communities that acknowledge the interrelatedness of these two agendas such as private-public partnerships and incentive based development.¹³ Voluntary cleanup programs were developed to allow responsible parties a way out of the system for low-grade contamination.

The first model focused on redemption of the contaminated land; the second concentrates on the redemption of the people associated with the contamination. The sin of contamination could be dissolved and liability 'end points' created if the site could be covered under brownfield legislation. In some cases, the responsibility of cleanup could even be bought by others. A climate was created in which brokered partnerships between regulators and developers could result.

The Massachusetts Example: The Clean Sites Initiative

One examples of the reform measures being undertaken around the country is Massachusetts' example. Chapter 21E of the Massachusetts General Law outlines the state's statute on hazardous waste regulations. The Massachusetts Contingency Plan (MCP) was nearly identical with the EPA's CERCLA designations, and had the same consequences. In response, in 1992, 21E was amended, and the Department of Environmental Protection (DEP) redesigned its Waste Site Cleanup Program. Under the new amendments, the private sector was given both more responsibility for cleanups and greater

¹² Gibson, p.29

¹³ Northeast Midwest Institute, "Coping with Contamination: Projects in Selected Cities" *Journal of Environmental Regulation*, Summer 1995.

flexibility in the manner in which they are done. New rules for reporting, assessing, and cleaning up releases of oil and hazardous waste were enacted. For example, DEP no longer directly oversees assessment and cleanup of most sites. Instead, property owners with low grade, low impact, and contained contamination can hire private environmental professionals licensed by an independent state board (known as 'Licensed Site Professionals' or 'LSPs') to evaluate site conditions and oversee response actions. One major criticism of the original program was its insufficient evaluation techniques. In response, it is DEP's mission to audit twenty percent of all the sites each year to ensure adherence to state cleanup standards. There is also more clarification of the liability to secured lenders and municipalities.

In order to remedy the burdens of the potential buyer, the Executive Offices of Economic and Environmental Affairs, the Attorney General and Department of Environmental Protection is developing a 'Clean Sites Initiative' program in order to attract investment to redevelop these sites. The first component of this program was a 'Covenant Not To Sue', which began as a pilot program in 1994. In exchange for a written commitment to clean up an eligible site, a participant receives assurances from the state that once the cleanup is completed, they will be relieved of further liability for past contamination, and responsibility from any damage to the natural resources on and around the site. The covenant is written to 'run with the land'-- that is, it is fully transferable to subsequent buyers. Other economic development incentives exist for expanding, relocating or building new facilities within certain designated areas, including a five percent State Investment Tax Credit; Ten Percent Abandoned Building Tax Deduction; Priority for state capital funding; and special Municipal Tax Benefits. The State is also looking to develop the 'Industrial Sites Recycling Fund', a public financial assistance mechanism to assist municipalities and private parties

for brownfield assessment and cleanup costs. As of October 1995, the Clean Sites Initiatives has been successful in signing almost two dozen Covenants Not to Sue, and has raised the awareness of the development community that it is possible to broker a deal in the Commonwealth.

Critiques of Brownfield Reform

The excitement of future brownfield policy development is tempered by two camps of critics. There are those that fear that providing a set of incentives for the redevelopment of brownfields, without a coherent goal in mind, will waste important state resources and stigmatize government involvement even further. There are others, often 'environmental justice' advocates, who work on behalf of economically disadvantaged neighborhoods, worry that the new market based approach will not address the economic needs of the inner city. Contaminated sites have compounded social and demographic issues associated with them.

Multiple Definitions of Risk

Affected communities are skeptical of the views of risk experts who tell them that many sites pose insignificant risks; the programs have been both inefficient and inequitable; political and public relations difficulties have limited its effectiveness; and the magnitude of the waste cleanup problem remains unknown.¹⁴ The movement to decentralize and 'manage' regulation has the potential to force communities into the prisoner's dilemma of luring new development with attractive packages of tax incentives and liability endpoints that might eventually undermine the environmental quality of the whole

¹⁴ John Hird, *Superfund; The Political Economy of Environmental Risk*, Baltimore and London: Johns Hopkins Press, 1993, p.218.

region.¹⁵ Couched in economically based criteria, community activists additionally fear that they will lose the equity that national environmental laws engendered. The retributive atmosphere of Superfund and similar programs was at very least comforting to communities that when possible, contaminators were getting their comeuppance.

A central predicament is that the risk experts and the public disagree over the severity of hazardous waste site risks as a principle. In many older manufacturing areas in large cities, industry grew up right next to housing for factory workers. Today, those residential areas tend to be economically disadvantaged. As the original industry moved away from the urban core to less expensive locations, jobs and services followed, leaving many older residential areas isolated and underserved. While experts believe that the environmental and health risks are generally small, a skeptical public tends to view environmental risks more expansively to include the degree of public control over the risk, its catastrophic potential, or whether the risk is concentrated or widespread.

The managed approach is insufficient because it cannot resolve the interests of the two through new risk assessments or scientific evidence, since the two perspectives focus on different priorities. It failed to reframe the problem to deal with the community's fear of health hazards. As one expert relayed, "Technical information, however well taught, is unlikely to change these [risk] priorities because they are not grounded in technical judgments in the first place."¹⁶ The fundamental problem people have with risk assessment and management is not that the concept of opportunity costs is foreign, but that it is believed to represent power opposed to their interests in protecting their

¹⁵ John Hird, p.221.

¹⁶ Hird, p.219.

children's and community's health. The key to reforming hazardous waste cleanup programs such as Superfund and the state-based programs is to more actively engage the public while simultaneously building opportunity costs into the decision making process.¹⁷

Both economic development and public health are pressing issues in these communities. The expertise and wisdom of the local community are rarely included in the discussion of a site's health risks or the proposed reuses. The people that have the greatest interest in the sites often have the least amount of input into a site's future. Equally, residents' fears of contamination and unknown health risks are real. Many are distrustful of local government as they have been slighted in the past. Researchers have found that hazardous waste sites are disproportionately found in minority and disadvantaged communities. Landfills and heavy industry, were, and continue to be sited in areas with little political clout and few economic options. Hazardous waste facilities tend to look for places where land is cheap and lawsuits are unlikely.¹⁸

No Qualitative Criteria for Selecting Sites

The selection of appropriate sites remains the most difficult part of the conceptual development of brownfield reform measures, because it is there where a real determination of the definition of brownfield is needed.¹⁹ While there are common classifications of CERCLA and state hazardous waste sites

¹⁷ Hird, p.253.

¹⁸ Frank Cross, "A Different Perspective on Environmental Racism" *Planning Forum*. p.71.

¹⁹ Hird argues that Superfund reform is an attempt to bypass the "public versus experts" problem, and in so doing, force communities to face the opportunity costs of expenditures to remediate Superfund sites and force risk experts to look beyond the superficial data of health risk.

based on risk assessment, the application of cleanup is nearly unrelated.²⁰ There are many other variables that may be even more important to the hindrance of a site's cleanup and reuse than the contamination itself, such as the existence of multiple or financially strapped owners, the existence of obsolete buildings, excavation costs, or unforgivable back taxes.

The list of sites whose cleanup are being managed by the regulatory authorities is still very long, and they do not have the resources to either clean them up or even target the most important sites. Superfund funds have been cut by Congress, and the allocation of state funding is constantly in jeopardy. As of spring 1995, only 300 sites have seen remedial action taken either by their owners or by the EPA²¹, and the numbers are similar for state programs. Cleanup programs are not tied to area improvement efforts. Owners and prospective investors are naturally more motivated to clean up highly valued property where cleanup costs can be recouped. The one-two punch of incentives for cleanup and redevelopment has to be allocated efficiently in order to have any real effect considering the tight fiscal environment and the large number of sites that remain in confirmed hazardous waste sites.

The suitability of the cleanup standards and reuse options are often secondary in the brownfield initiatives. While most cleanup standards are still based on a residential property methodology, such cleanup objectives are unnecessary and unjustified in situations where brownfields will be redeveloped

²⁰ An interesting example of the unrelatedness of the level of contamination and the cleanup designation is a site in Brockton, Massachusetts. The site was well located on a commercial corridor and was assessed (before cleanup) for over \$460,000. When researching the status of the cleanup, the site was found to be listed as "Tier IB", which meant that DEP oversaw the cleanup. While this designation is only meant for the most noxious sites, this particular site needs only \$15,000 worth of cleanup. The obstacle for reuse was mostly bureaucratic in this case; the multiple responsible parties, none of which willing to pay for the cleanup, maintained the site within the system until it was finally upgraded to the Tier I status.

²¹ Black,, p.48.

for further industrial uses, as is typically the case.²² Often heavy industrial uses or landfills are proposed for these types of sites. The economically depressed condition of the surrounding areas often put the host community in the position between a rock and a hard place.

The local communities are often in the best position of not only risk management, but of site selection. A citizen-based committee process would allow communities to participate meaningfully in the process and recognize opportunity costs of spending cleanup funds, since they are the ones that will suffer or gain from the decisions. Some questions that remain to be answered include: is in the selection of sites that the interests of particular 'public interests' are served?; who should select possible sites for redevelopment?; should the impetus come from the communities or the developers?; should the selection be tied to some other criteria for economic incentives, (such as, in Massachusetts, Economic Target and Opportunity areas) or should each town decide on its own?; what makes one site more appropriate for development incentives than another?

Multiple Interpretations of Industrial Sites

Due to the newness of these policies, few cities have had the opportunity to incorporate their brownfield initiatives into a comprehensive land use strategy. There are, however, other approaches to evaluating the future reuse of the sites. Some cities, such as Philadelphia and Chicago, have begun inventorying their sites to direct future development and planning.²³ brownfield

²² E. Lynn Grayson, "The Brownfields Phenomenon: An Analysis of Environmental, Economic, and Community Concerns." *Environmental Law Reporter*, 25, 7, Washington D.C.: The Institute, 1995. p.104.

policy will be important for the heritage area and the evolving greenways movement.²⁴ Old industrial areas will be able to be reclaimed for giant circulation systems, utilizing riverways and other natural networks, facilitating access while addressing environmental problems created by industrial use, misuse, and neglect.²⁵ Open space advocates see opportunities for large scale park initiatives on the abandoned land. Smaller vacant sites are and have been reused as community gardens, as a way of either holding the site for future development or occupying it so that use it will not be viewed as abandoned. Community gardens and heritage planning springs from local political and environmental justice movements emphasize self-help, the dignity of the participants, and a sense of home rule over development.²⁶

The process of remediation is rarely considered as part of a redevelopment strategy. Some contaminants have short-term solutions while others have to be monitored for decades. Certain uses are more appropriate than others depending on the remediation process used. Yet the process must be articulated in a way that the public can appreciate. Novel landscape designs that improve the ecological quality may not be appreciated or maintained if recognizable landscape language that communicates human intention is not part of the landscape.²⁷

²³ Casey Bukro, "City Out to Clear Uncertainty from Vacant Industrial Sites Rubble, Liability Questions Combine to Foul Properties and Obstruct Development," *Chicago Tribune*. 5/24/1994, B1 and report by Pennsylvania Horticultural Society, *Urban Vacant Land; Issues and Recommendations*. Sept. 1995.

²⁴ From session at 1996 APA Conference, Orlando FLA. April 15: "Heritage Areas and Planning".

²⁵ Julius Fabos, "Introduction and Overview; the Greenway Movement, Uses and Potentials of Greenways." *Land scape and Urban Planning* 33 (1995) p.1-13.

²⁶ Sam Bass Warner Jr. *To Dwell is to Garden*. Boston: Northeastern University Press, 1987. p.5.

²⁷ Nassauer, p.161.

Chapter conclusions

First and foremost, the 'brownfield' is not a problem in need of a solution. It should not be eradicated from our collective memory as the Superfund program intended. Our society needs to reflect on our history of progress, the successes as well as the failures. "Forgive but don't forget" is the motto of the Holocaust survivor. Without memories of 'mistakes' we are bound to revisit them in different forms. We should also accept the ephemerality of today's solutions and constantly search for new ones, building upon the wisdom of the past. In order to do so we need access to the information left from our interventions. We should allow access to multiple layers of information to settle on the landscape.

Chapter 2: Brownfields and the Built Landscape

In developing a design-based approach to industrial site reclamation, it is important to understand how they have developed a significant place in the urban landscape. The downtowns of cities are known by urban planners to be rich in history and associations. Today, the industrial spaces that have been marginalized are just as informative about the contemporary human condition as the spaces in the center. An old, abandoned industrial site is emblematic of the post-modern condition of loss of meaning and identity. The plight of the inner city and the sprawl of the suburbs that helps define these sites as brownfields reflects the cultural fragmentation of the American society, family, and values. The common denominator of these sites in their contemporary landscape is their constantly shifting meanings.

The cultural construction of landscape

By our cultural norms and use of language, various cultures determine what is clean and unclean, what is urban and what is rural, what is old and what is new. Our own perceptions may define the difference between a nature preserve and a dumping ground, or the difference between a wetland and a mud pit. Designing ecosystems so that people will recognize their beauty and maintain them appropriately may depend upon including design cues of human intention.²⁸

The landscape plays a very important part in the social construction of Western culture and symbolism. The right to humankind's dominion over the

²⁸ Nassauer, p.162.

earth is stated in the first chapters of Genesis (1:28): 'Replenish the earth and subdue it.' The desire for a kingdom of G-d to be established on earth resonates with at least three of the world's major religions. For many, coming to the New World was exactly that-- the completion of the injunction-- mastery over nature and building a New Jerusalem. Dominion meant the imposition of order, the creation of just societies, and imposing a normative map over topographical terrain. Just as the survey grid imposes a map on irregular terrain, our culture imposes a simplified model over unruly social realities.²⁹ Kevin Lynch described our condition as one where "people, things, and places must be one or the other, there to remain-- not shifting, not in-between, not partly so and partly not."³⁰ Our perception of the world is based on mental representations of it, derived from cultural and cognitive conventions that make what we see into an experience of relative beauty or ugliness. "We see it as being outside ourselves even though it is only a mental representation of what we see on the inside", as Rene Magritte argued in 1938 when describing his version of *La Condition humaine*.³¹

The result of the separation of humanity from the rest of the world has resulted in at least two myths. Firstly, there is the myth of the inherent evil of the man's materiality and mortality. This myth drives us to feel disdain towards human obsolescence and waste. That which is tainted by human waste is to be castigated. 'Nature' becomes that which does not appear tainted. In situations in which human intervention has obsolesced and non-human elements

²⁹ In the late seventeenth century, modern cartography was developed based on triangulation, a method which involved the laying out of a chain of surveying triangles across terrain. See G.R. Crone, *Maps and their Makers; an introduction to the history of cartography*, 1978, p.85.

³⁰ Kevin Lynch, *Wasting Away*. San Francisco: Sierra Club Books, 1990. p.17.

³¹ Schama, p.12.

have returned, such as an abandoned building or cemetery, we feel apprehensive and unsafe, unsure how to categorize the space.

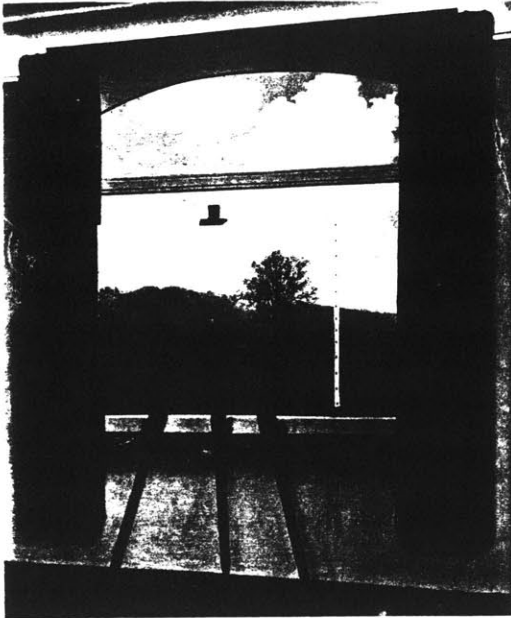


Figure 2. Rene Magritte, *La Condition Humaine*. National Gallery of Art (1933).

When the hands that worked the land are no longer valued for their work, the land and the people dependent upon it take on images of dereliction and decay as well. Geographic placelessness was only the half of it; derelict land shattered the image of nationhood. As Aldo Leopold wrote in 1939, watching the plight of the Oakies and others during the Depression, "the landscape of any farmer is the owner's portrait of himself."³² Planners and policy makers need to understand what landscape designers already knew-- that the landscapes of people's communities are public portraits of themselves.

Language systems

³² cited in Nassauer, p.152.

Yet these portraits are not easily comprehended. Kevin Lynch understood the urban landscape is not only a set of functional and ecological systems, but also is a communications systems in which people seek information about other people.³³ While the ordered part of the landscape; residential areas, commercial space, and green parks are able to communicate to the wider public, industrial land might be said to speak a more arcane language that only a narrower segment of the public, such as environmental impact assessors, and development experts, understand. In order for the sites to be valued and valuable, their parts must be translatable.

Nature as Social Construct

While human activities have not always respected the fragile ecosystem, they do serve as a reminder of our past, and heighten our awareness of our responsibility. "There is nothing shameful about the occupation of the wilderness," Simon Schama writes. "Even the landscapes that we suppose to be most free of our culture may turn out, on closer inspection, to be its product. . . . So while we acknowledge (as we must) that the impact of humanity of the earth's ecology has not been an unmixed blessing, neither has the long relationship between nature and culture been an unrelieved and predetermined calamity. At the very least, it seems right to acknowledge that it is our shaping perception that makes the difference between raw matter and landscape."³⁴

Landscape designers have traditionally maintained the polarity of culture and nature, sharing in the delusion that nature will speak for itself, if only human beings will quit interrupting. The picturesque landscapes in paint,

³³ Kevin Lynch, *The Image of the City*. Cambridge, MIT Press, 1982.

³⁴ Simon Schama, *Landscape and Memory*, New York: Alfred A. Knopf Press, 1995. p.10.

such as Casper Freidrich, or in urban parks such as those by Capability Brown or Frederick Law Olmsted, did not enhance the ecological function of the landscape. Instead, they often worked against ecological patterns and systems. However, we only know how to see ecological quality only through our cultural lenses, and through those lenses, it may or may not look like nature.³⁵

Nature, as it is contrived in aesthetic principles, does not necessarily coincide with ecological principles. Thus to equate design with deceit leaves no room to acknowledge how design is necessary to represent and maintain ecological functions to the public. Joan Nassauer discusses the role of the landscape designer in mediating between culture and nature.

Nature became identified with the pictorial conventions of the picturesque; a cultural, not ecological concept. The difference between the scientific concept of ecology and the cultural concept of nature, the difference between function and appearance demonstrates that applied landscape ecology is essentially a design problem. It is not a straightforward problem of attending to scientific knowledge of ecosystem relationships or an artistic problem of expressing ecological function, but a public landscape problem of addressing cultural expectations that only tangentially relate to ecological function of high art. It requires the translation of ecological patterns into cultural language; it requires placing unfamiliar and frequently undesirable forms inside familiar, attractive packages. It requires designing orderly frames for messy ecosystems.³⁶

Shifts

Rather than attempting to reconcile the chaotic elements of the current brownfield sites, an alternative approach is to respect the individual conditions that produced the elements, acknowledging the disorder, and provoke the observers to contemplate the dissimulated subject. Rem Koolhaas states well:

³⁵ Nassauer, p.161.

³⁶ Nassauer, p.162.

If there is to be a "new urbanism" it will not be based on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential; it will no longer aim for stable configurations, but for the creation of enabling fields that accommodate processes that refuse to be crystallized into definitive form; it will no longer be about meticulous definition, the imposition of limits, but about expanding notions, denying boundaries, not about separating and identifying entities, but about discovering unnamable hybrids; it will no longer be obsessed with the CITY but with the manipulation of infrastructure for endless intensifications and diversifications, shortcuts and redistributions-- the reinvention of psychological space.."³⁷

Shifts in the urban margins; disorder in the landscape

It is common in Western society to ignore the interrelationship of 'center' and the 'margins' in cities. Historically, wealth tended to be concentrated and centralized and walled conurbations for protection, with proximity to religious, cultural and financial nodes. Aggregates of peasants and agriculture settled outside the walls. Yet the 'nodal marketplace' was necessary for all people.³⁸ The market was where activities of the center and the edges converged and the development that surrounded both took on a character we now describe as urban, communal, or civic.³⁹

At different points in history, different elements of the landscape symbolize disorder. Western civilization has been in a constant battle to impose order on the physical landscape and to mold it into a likenesses of the contemporary culture. Only in the places in which order had been attained were

³⁷ Rem Koolhaas, *Urbanism vs. Architecture; the Bigness of Rem Koolhaas*. New York: Monacelli Press, 1994. p.11.

³⁸ Spiro Kostof, *The City Shaped*, Boston: Bulfinch Press, 1991. p.31 See Jane Jacobs, *The Economy of Cities*, 1969.

³⁹ There are several theories of the origins of cities, the marketplace being only one. See Kostof, *The City Shaped*. Boston: MA, Bulfinch Press, 1991.

worthy of social interaction. In the late medieval period, the place of Purgatory in folk traditions was located at the sparsely populated western-most edge of Europe; i.e. western Ireland.⁴⁰ In the pre-industrial era, the 'wilderness' was not for the gentry, especially ladies; it was considered immoral, dark, and laviscious place. By association, those who lived in these wild places took on these characteristics and by extension the poor, the insane, and convicts belonged in these places.

As one travels from the city into the wilderness, the fabric of society loosens. In the past, abandoned places such as caves, grottos, and cemeteries were the domain of the hermit or the thief, the places of illegally obtained treasure and precious goods. The inherent danger of the wilderness came to refer to the Sublime, be it G-d's mercy or wrath, where man encountered Nature's beauty and awesome power, or the edge of Man's consciousness. A concept growing out of the Enlightenment, the Romantic English version of the Sublime had its origins in the shadows and darkness of caves and caverns, dread and trembling at the edge of precipices, and in the fissures of the earth.⁴¹

The urban margins still exist. One current manifestation is in the archaic industrial building. Robert Harbison writes, "to find Piranesi-like sensations in the real world. . . or at least near to us in time, we need to go to abandoned industrial buildings. "⁴² Today, we search out the margins,

⁴⁰ Openings in the earth, particularly cave entrances, resonate with references to Purgatory in Last Judgment iconography. In traditional Last Judgment scenes, the mouth of Hell is usually depicted as the open mouth of a demonic creature through which the souls of the damned are forced to enter. The demonic mouth seems to derive, according to Hughes in *Heaven and Hell in Western Art* (New York: Stein and Day, 1968, p.175) from primitive eastern sea dragon myths, the Old Testament myth of the Leviathan, the whale-like animal that swallowed Jonah and is to be eaten at the feast of the Messiah, and the horned beast of the Apocalypse of St. John. The iconographic tradition in southern European art lasted until the beginning of the Renaissance. In the northern European tradition, demonic hell mouths continued into the sixteenth century. See Brueghel's painting Dulle Griet, 1562. (Antwerp: Musee Mayer van der Bergh.)

⁴¹ Schama, p.449-450.

⁴² Harbison, p. 170.

self-consciously searching for the new and values chance, spontaneity, assemblage, and fragments.⁴³

Factories are savored for whole ranges of breakage which would not be tolerated in an operating or presentable structure, because such events are real too, seem in fact realer than everything else because unwilled, pushing puny man aside. . . The ugliness does not become beautiful until one realizes that all these signs tell is it will be swept away. . . One catches oneself admiring a grim old plant one would, not long ago, have hurried past, which is now a toothless killer some of whose limbs have been struck off, leaving dangling girders, bits of wall framing nothing, . . . Perhaps one's residual incomprehension of such places fuels one's present interest.⁴⁴

Waste Shifting

Just like the corners in one's house accumulate dirt, the physical margins become the junkyards of the city. Landfills were once beyond the pale of residences; today development pressures the two are located side by side. But just as social margins change, so does physical waste. Waste can often be used for the creation of new residential areas, such as in Boston's Back Bay, San Francisco, Jerusalem, and much of the Netherlands. Recycling has changed the public perception of human consumption from a linear path to at least a potentially closed cycle.

Decay and dirt signify metamorphosis and new life. Dirt reminds us of the lifecycle, of the fact that from death emerges life, from a fallen tree moss will soon appear. Lynch writes of dirt as having *mana*, spiritual power.

It horrifies and yet attracts us. Because we repress it, we fear it, and thence its power. It spoils the pattern and yet is the material for a new pattern. It has potential. . . Some sacred rituals will celebrate dirt, perhaps to express the unity of opposites, or to atone for culturally imposed separation. Such

⁴³ Elizabeth Meyer, "The Public Park as Avant Garde (Landscape) Architecture: A Comparative Interpretation of Two Parisian Parks, Parc de la Villette and Parc de Butte Chaumont," *Landscape Journal*, 10,9 (Spring 1991) p.17.

⁴⁴ Harbison, p.122.

rites externalize our ambiguities and make available the dangerous powers of the unclean. . .⁴⁵

Shifts in Industry/Manufacturing

Industry, once located at the center of the American city, both physically and economically, is now found at the margins. Once the smokestacks and factories of a city represented the wealth and the employment of its residents. In property law, industry was given reign over certain regions. They 'naturally' located in low lying areas of the city; warehouses were built near transportation hubs, i.e. water, rail, or surface. The convergence of infrastructure attracted industries in a manner similar to ants at a Sunday picnic. Manufacturing constituted nearly fifty percent of all jobs in the United States in the 1960's.⁴⁶ Industry and manufacturing tended to be located near the urban core of the retail and financial services and its white collar jobs. During the nineteenth century, company towns relied on the production of one industry. Certain natural landscapes in the industrial era were sacrificed for their economic value, such as mining towns in the Alleghenies in Pennsylvania.⁴⁷

Today, traditional manufacturing has become increasingly decentralized and footloose. Not only are there comparatively fewer jobs in the country than there were thirty years ago, but many of these jobs have relocated to areas with lower overhead costs of labor, taxes, and utilities, or exurban regions of the country. Others have relocated out of the country, where paid labor costs are a fraction of what it would be in the states, and the environmental regulations are less stringent. Still other jobs have disappeared--

⁴⁵ Lynch, p.15.

⁴⁶ Michael Porter, *The Competitive Advantage of the Inner City*. off Lexus/Nexis, June 1995.

⁴⁷ Brian Black, "Petrolia; A Sacrificial Landscape of American Industrialization," *Landscape*, 32,2 (1994).

computerization or downsizing has eliminated a substantial number of secure, well-paying jobs that the previous generation had depended upon.

While the industrial economies no longer define urban economies in the United States, industriousness remains the cornerstone of American identity and self-worth. Industrialism is essentially an optimistic vision of the future in which the human race can better itself. This vision is by no means dead; manufacturing of a different sort continues in the realms technological advancement, information and communication systems. The difference today is the disconnection of most manufacturing and industrial economies from specific geographical locations.

Cities/ Economies Shifting

Many might argue that in the postmodern city, the activities on the margins determine the structure more than the activities of the center; that the construction of what one is not determines the character of what one is. Yet the margins are constantly changing and what appears marginal may actually be a cornerstone to a mainstream cultural program. There is a reciprocity of exchange of activities and imagery from the margins and the center. The avant-garde of ten years ago is mainstream today. Today the fads in the inner city end up on the backs of teens at Choate and Exeter; the Soho loft is now quintessential backdrop for primetime sitcoms about yuppie twentysomethings, not starving artists. Donald Olsen suggests that the city may revert to its pre-industrial role as a work of art, "designed for ostentation rather than for use, a symbol of prestige, a center of specialized consumption. . ."48 If that is the case, the urban margins

⁴⁸ Excerpted in Nan Ellin, *Postmodern Urbanism*, p.166, from Donald Olsen, "The City as a Work of Art", in Frasier and Sutcliffe (eds.), *The Pursuit of Urban History*. 1993.

play an important role in mediating between the service and production oriented sectors of the economy.

In economic terms, the center and the margins are only beginning to be appreciated for their potential symbiosis. The inner cities have been disproportionately affected by the abandonment of industrial areas and the health risks associated with hazardous waste. A goal for many urban economists involves a recognition of the global interrelatedness of capital. Following the cry of Michael Porter and others, they urge the positioning of the inner-city to compete on a regional, national, and even an international scale.⁴⁹ Porter's scheme can be helpful in framing the intentions of brownfield reform. Porter suggests that inducing development in economically disadvantaged areas needs more than a leveling of the playing field. What is necessary is a completely new look at the inner city, to see its economic advantages, rather than viewing it as a charity case. Porter criticizes the liberal policies of inner cities as doing nothing more than redistributing wealth among a relatively poor population. Programs aimed at economic development often treat the inner city as an island isolated from the surrounding economy and subject to its own unique laws of competition.

He argues that cities need an aggressive business logic that exploits the unique local conditions that underpin the ability of companies based there to compete in a particular field. Springboarding off agglomeration economies has been touted as the reason why originally marginal areas on the edge of cities-- often in industrial areas-- have exploded. Examples include Kendall Square in Cambridge, Massachusetts, Silicon Valley in California, and Williamsburg in Brooklyn, New York. Clusters represent critical masses of skill, information, relationships, and infrastructure in a given field. A coherent economic strategy

⁴⁹ Porter, p.6.

has to develop through "for-profit initiatives and investment based on economic self-interest and genuine competitive advantage-- not through artificial inducements, charity, or government mandates."⁵⁰

Cities Disappearing

Cities themselves, particularly since World War II, have increasingly been described as incoherent and chaotic. Since the 1960's, numerous observers in the fields of literature, city planning, cinematography, and other disciplines have revealed that the artifacts of the city can no longer be comprehended in relation to the structure of the city. The city that was once understood as a complexly contextual phenomenon where the lives of its residents corresponded to a material reality, can only be understood as decontextualized.⁵¹

No longer is capital constrained by geographical location. Conceptually, the world is shrinking. It no longer matters to the consumer where a good or service comes from; technology has altered our perceptions of distance and time to where they often do not matter. Yet there is a paradoxical relationship between place and meaning. While time and space shrink, the importance of specific locations are heightened. David Harvey attests that "[i]t is possible for the peoples and powers that command those spaces to alter them in such a way as to be more attractive to highly mobile capital./ . . . The active production of places with special qualities becomes an important stake in spatial competition between locations, cities, regions, and nations."⁵² The role of community

⁵⁰ Porter, p.7.

⁵¹ Richard Dagenhart, "Urban Architectural Theory and the Contemporary City: Tschumi and Koolhaas at the Parc de la Villette." *Ekistics*, 334 (Jan/Feb 1989) p.85.

⁵² Harvey, p.295.

organizations, ad hoc governing bodies, and local decision-making actually plays an integral role in the new global village.

By observing these conditions, one is struck by the vulnerability of what appears to be solid. Italo Calvino reports the effect of ephemerality on the crafting of the novel in relation to the fragmentation of time and place.

Long novels written today are perhaps a contradiction: the dimension of time had been shattered, we cannot live or think except in fragments of time each of which goes off along its own trajectory and immediately disappears.

...⁵³

⁵³ Excerpted in David Harvey, *The Condition of Post-Modernity*, p.291, from Calvino, 1981, p.8.

Chapter 3: Towards a Brownfield Typology

In order to better redevelop these sites under the new brownfield initiatives, the conditions of these places needs to be deconstructed into their component parts. There are six positive values that this paper will examine in an attempt to develop a brownfield typology. They are: 1) risk; 2) human intention; 3) community; 4) memory; 5) reuse; and 6) liminality.

Risk

Risk, contamination, and the economics of redevelopment are interrelated. Contaminated sites in economically disadvantaged areas can affect its community's perception of value and identity, as well as how it is perceived by investors. Currently, there is no incentive to clean up the sites that post the greatest health hazards. New site redesigns must delimit the nature of the contamination, creating endpoints that the public and public health experts can agree upon.

Human intention.

It is important to acknowledge the unique human intentions in designing the landscape. The avant-garde architect plays a critical role in shaping the image of place in the public mind. As conditions of society change, the designer helps the public consider the prevalent norms. They either support or redefine the cultural associations of a landscape to society. While landscape architects have been criticized for aesthetic elitism in the past , there is a

movement towards public participation and conservation styles.⁵⁴ These alternative styles are particularly important on contaminated sites, because the redesign can help redefine the meaning of the space from something negative to something positive.

Community.

The community that cares to interact with a site is integral to its success. The determination of who that community is, however, is not always obvious. While there is often a residential community near an industrial site that cares about its future reuse and design, there are other communities as well that may be invested in its reincarnation. Sometimes there may be multiple communities based on geography-- regional, national, or even international in scope. The communities might have distinct producer and consumer oriented communities.

Memory.

Industry was integral to the identity of many brownfield sites, and communities tend to identify with the labor and products that came out of the factory. New uses and designs should be sensitive to those memories, both positive and negative. Often a site may have both connotations, having offered the residents jobs as well as pollution. A new design can be nostalgic and sentimental of the past, or it can memorialize degenerative nightmares. New projects that disregard the memory inherent in the site will eradicate its earlier use and history.

⁵⁴ Randolph Hester, "Process CAN be Style; Participation and Conservation in Landscape Architecture." *Landscape Architecture*. May 1993, p.50.

There is an excitement about the prospects of infill development on formerly industrial sites. Often, these projects are combined with economic development efforts. However, the success of these projects is oftentimes tempered by critics. Designs that create proximate activities and heterogeneity battle the blandness imposed by earlier urban renewal projects and consequent disinvestment, they often impose a normative design over a seemingly empty canvas, devoid of forms and interested parties.

Reuse.

Many brownfield sites, such as steel plants and electrical generator facilities, although now archaic, were at one point the embodiment of cutting edge technology and innovation. Progress amid optimism for the future was associated with the industrial forms and the products of the industry. How is that optimism and ethos of industriousness integrated into the redesign?

Liminality.

Many times the industrial site marks the edge or juncture of the city and the greenbelt. The city and nature have strong oppositional semiotic associations. In Western cultural iconography, the industrial site belongs in both urban and natural landscapes, as an aspect of the Sublime and chaotic forces, as well as a product of human civilization, culture, and urbanization. How does the redesign mediate its liminal position?

Chapter 4: Case Studies

This chapter will investigate three high-profile redevelopment projects on previously industrial land. The designs span the past three decades. While each design is unique, there are some similarities in the sense that they are considered by scholars to be innovative responses to the redesign of industrial land. They are all on what could be defined by the terms of current brownfield policy as brownfields, yet the character of the sites are remarkably different.

A. Parc de la Villette, Paris

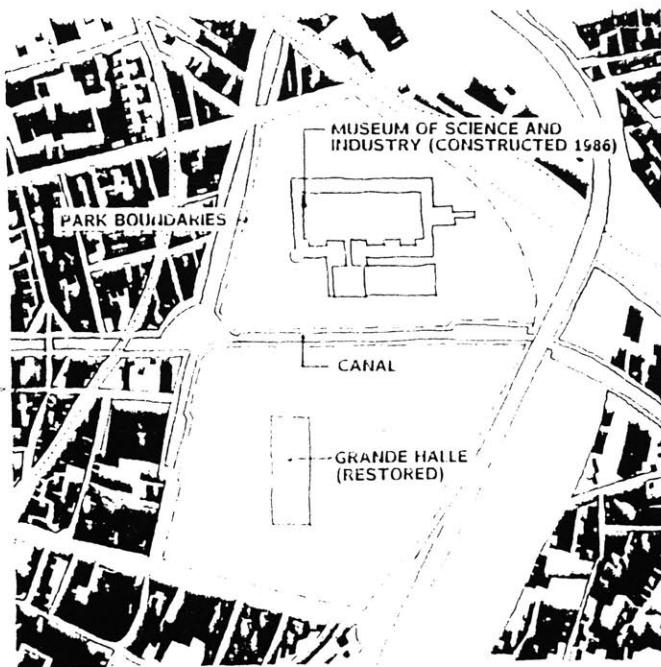


Figure 4-1. The site showing the location of the historical canal, the new Museum of Science and Industry and the restored Grande Halle. (Dagenhart, p.88.)

With the Parc de la Villette, a Parisian urban park project of the 1980s, the highly theoretical, insular postmodern debate entered the public realm. The Parc and retains the capability of developing new paradigms, or at least new points of departure for future urban projects. Its scale prompted many in the urban design profession and in academia to consider the implication of postmodern design not only on buildings, but upon neighborhoods and even entire cities.

In 1974, the French Government decided to close the abattoir and cattle market of La Villette area of Paris. The site is located in the north eastern quarter of the city in the nineteenth arrondissement. Covering over fifty hectares of vacant land laid vacant in the center of an area that houses millions of residents, La Villette lies wedged between a convergent infrastructure of roads, canals, railway, and metro lines. It is also situated in a transitional zone between the old city districts with their distinctly dense, ordered six-story shops and apartments and the neighboring suburban municipalities.⁵⁵ In the eighteenth century, two arterial roads, the Rue de Flandres and the Rue d'Allemande, converged at one of the toll-houses in the walls (the Rotonde de Ledoux). The suburb, La Villette, developed along these roads with cafes, cottages and country inns. In the nineteenth century, extensive public works programs changed the character of the area. In order to provide Paris with good drinking water, a 25-kilometer canal from the Canal de l'Ourcq and a large rectangular reservoir were dug in the La Villette depression in 1812. Shortly thereafter, the canal system was improved and extended to the south and north, creating a short-circuit in the loop of the Seine. Shipping on the canals were brisk. In 1859, La Villette was annexed with the construction of the new Thiers ramparts.

⁵⁵ Lodewijk Baljon, *Designing Parks; An Examination of Contemporary Approaches to Design in Landscape Architecture*. Amsterdam: Architectura and Natura Press, 1992. p.30.

Outside the ramparts, suburban development ensued. Entrepots, shipping companies and workshops were set up along the canals. Under the directives of Baron von Haussmann, in 1867, a large, centralized cattle market and slaughter house was constructed and linked to the rail network. It ran through the Parc des Butte Chaumont, another public work project of the same period. After being used only once in the Franco-Prussian War of 1870-1, the ramparts were dismantled in 1919. They were not replaced by green space, as was the case elsewhere in the city, but by a ring road, the Boulevard Peripherique. It also marks Paris's municipal boundary.



Figure 4-2. The former abattoir at La Villette with the canal running through the center of the site. (Boles, 1985.)

The site of La Villette had been completely built on or paved over the years. After the demolition of various buildings, a surface layer of asphalt, concrete, sand, rubble and fragments of foundations remained. The surface consisted of a number of elevations with a mixture of clay and marl from the surrounding area and from the deposits of a number of construction projects on the site. The “real” Paris, the animated city, seemed a long way off.

In 1979, the Etablissement Public de Parc de la Villette (EPPV) was appointed by Mitterrand to oversee the development of the site. Several major projects were proposed: the Museum of Science, Technology and Industry, a park, the Grande Halle, and a Music Center.

Redefining elements of parks.

The program for La Villette set out the intentions quite comprehensively. While some parts were programmatic, the tone was distinctly theoretical, underscoring the value the French government places in its own cultural hegemony.

La Villette is a large project that has to combine urban planning and cultural innovation. . . By creating a complex of large-scale facilities, the park searches for a new quality of design innovation: La Villette is to be the park of the twenty-first century. It is part of an urban planning policy that completes the city and, at the same time, opens it up to the suburbs.

In order to make a large urban park, the following questions must be answered. Which symbols and functions should be given to the park? Which aesthetic requirements should the park satisfy? And which policy should be pursued? First and foremost, the cultural and symbolic reference is pluralism. The park is a meeting point of cultures, which have the right to express themselves individuals: it is a park of reconciliation. The status will be achieved by applying three unifying concepts:

Urbanism : man and the city. It is man's nature to be social; man's culture is the culture is the city. La Villette will reveal the riches of urbanism and be a forerunner of a true urban ecology. Traces of the past present on the site make identification with the park possible. . .

Pleasure: body and mind. The park is arranged for relaxation and well-being; the body is not exercised physically without also developing the mind. Sometimes Descartes must be forgotten in order to discover Rabelais..

Experimentation: knowledge and action. The park is a garden of cultural superabundance. A living, active culture is sought in which theory and practice are not separated. By means of exhibitions and workshops, familiarity with technology will be achieved. The cultural extremes, music and technology are united by means of the

park's facilities. In this rapidly changing world, experimentation demands an extremely flexible plan that can evolve without affecting the underlying idea.

We aim for a park in the true sense of the word, but at the same time, one that is a 'bridge' between the Museum and the Music Center. A poetic answer that has neither the dictatorship of a too obvious structure nor a chaotic mosaic of unstructured eclecticism is therefore anticipated.

Unity, synthesis and coherence are also necessary to achieve a meaningful whole. It must definitely not be a post-modern garden, eclectic and nostalgic, a jumble and collage of countless incoherent elements from a dislocated world. Unity has various aspects. Firstly, the unity of the landscape. Of the elements, water plays a prominent role, as it does in the architecture of the Museum too. The rhythm of the growth of the plant world must be in harmony with the use of the park. . Secondly, the architectonic unity. La Villette will play an important role in the renaissance of the art of urban development and garden design. .⁵⁶

Tschumi's Design

Bernard Tschumi, a Swiss architect, urban designer, and theorist was awarded the commission for much of the design of the Parc. His design works within the parameters of the Parisian government's program, but creates an organizational system that decontextualizes the park from its environs. His system of grids, referencing an abstracted city, only coincidentally relates to indigenous elements of the site and its surrounding neighborhood. Nature is understood (as is the 'urban') as an interplay of forces between man and nature, of communion.

Tschumi's design ostensibly departs from earlier forms of parkspace: the Olmstedian picturesque and the modernist Corbusian lawn in the city. While it is a new space that blurs the differences between the city and the park, it also questions its own reasoned logic, stating that its organizational structure is only

⁵⁶ Quoted from Baljon, p.32.

heuristic device, and a tool that elides the “madness” of the contemporary disjunction between use, form, and social values.⁵⁷

The design is composed of three overlapping systems of points (follies), lines (canals, galleries, and allees) and surfaces (landscaping). The follies are ‘anchoring devices’, ‘meeting points’, and ‘common denominators’ for the design, freed from their historical connotations and places in a more abstract plane to receive new meanings. Thirty-four follies ranging from 3000 to 23,000 square feet are organized along a rigid 120-meter grid, and will serve as restaurants, cinemas, video arcades, daycare center, bars, and greenhouses. (Figure 3) The industrial buildings on the site have been reused as Musee de Sciences et l’Industrie, and as the Grande Halle. Also built on the site are a multi-plex Geode, the Zenith rock hall, and the future Cite de la Musique.

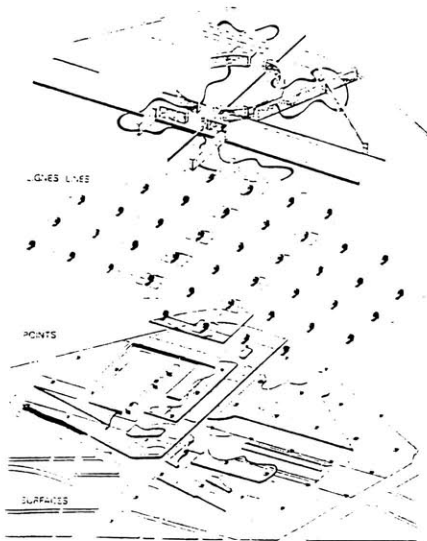


Figure 4-3. The follies are both anchoring devices in the three palimpsested layers, and a heuristics tool to apprehend disjuncture of history, use and social meaning. (Baljon, 1992.)

⁵⁷ Bernard Tschumi, *Architecture and Disjunction*. Boston: MIT Press, 1986. p.174.

The Parisian Park

Parc de la Villette is consistent with the centuries-old approach to a uniquely urban Parisian landscape design. The Parisian park has traditionally related to residual space in the city. Paris, as a city that is unperturbed by its historical sedimentation, it is celebrated as a city of superimposed cultural strata.

The government's competition for the site is latent with postmodern phraseology and intent, yet it is positively a French architectural program. Layering different formal elements is both an aesthetic device, and as a model for discussing cultural theories of postmodernism and deconstruction, many of which originated in Paris. New architecture celebrates the juxtaposition of old and new, such as I.M. Pei's famous pyramids in the forecourt of the Louvre Museum.

While it is argued that an interest in redeveloping sites, particularly sites on the margins of cities, is a post-modern sensibility, there is evidence to suggest that in certain historically significant locales, Paris *consciously* left areas unbuilt that were resistant to the geometry of realignment and obfuscation of earlier forms, such as older industrial areas.⁵⁸ The French Government viewed the redevelopment of La Villette as a cultural project, a "unique place of creation and invention".⁵⁹ Where building did occur, the intent was to rationalize space within a specifically French cultural program with prescribed meanings.

The process of recycling older industrial or military areas for recreational space is a component 'civilizing' the city, integrating dirty functions into the clean, imageable bourgeois capital. When the ramparts that delineated the boundaries of the city and the countryside in the pre-industrial era lost their practical function, they were redeveloped as high profile governmental projects.

⁵⁸ Meyer, p.19.

⁵⁹ Baljon, p.124.

One of the earlier examples, the Place de la Concorde, built in the mid-eighteenth century, (formerly the Place Louis XV), was one of the first urban squares to take advantage of dismantling of the ramparts.⁶⁰ Earlier examples of urban landscape design that superimposes elements park include a strikingly similar park project of the nineteenth century. The Parc de Butte Chaumont is a nineteenth century park built on the residue of a limestone and gypsum quarry, an abandoned gallows, a sewage dump, and a mass grave.

A New City

Tschumi's architectural theory resides in the intersections of modern architecture with twentieth century art, cinematic, philosophical, and linguistic theory.⁶¹ While Tschumi contends that architectural strategies must accept disjunctions, his design seems to create, rather than mediate between, existing disjunctions. "Not thirty-four buildings, but one building exploded on the site" is Tschumi's oft repeated definition of the design.⁶² The sheer density of the design reminds one of the building of a new city than the construction of a park.

Tschumi's design sets up its own framework, rather than following the existing urban pattern. He contrived of a grid system that freed him, "refusing all hierarchies and 'compositions'", to construct a park that was both a template and a structuring device for site-specific amenities, "rejecting the ideological *a priori* of the master plans of the past"⁶³. He stated that "such a structure inherently suggests the bars of the asylum or prison, introducing a

⁶⁰ Some of the entries for the competition were compiled and superimposed in Pierre Patte's 1765 map of Paris. His map was influential in popularizing large scale intervention in Paris, such as were to occur under Haussmann in the following century.

⁶¹ Dagenhart, p.87.

⁶² Daralice Boles, "The Point of No Return." *Progressive Architecture* 7:87, p.94.

⁶³ Tschumi, p.179.

diagram of order in the disorder of reality.”⁶⁴ Tschumi used this technique before: the intersections of the London Ordinance Survey Grid became mediators between the program and the architectural form of his “Joyce’s Garden” project of 1980. He discussed this system in his manifesto, *The Manhattan Transcripts*, written in 1982. Dagenhart writes that the *Transcripts* go beyond reading the city, and beyond the boundaries of architectural theory to establish a structure within which a project can emerge. The structure has two separate but interdependent and conflicting parts: a formal structure of the frames; and the architecture within the frames.⁶⁵

The ‘Architecture Within the Frames’

The basic framework of the grids for many architects to engage space with buildings. “[P]erhaps the most important legacy of structuralism has to do with heuristics, demonstrating that meaning is always a function of both position and surface, produced by the movement of an empty slot in the series of a structure.”⁶⁶ Early in the development of Tschumi’s scheme --but long after its basic grid of follies was established-- other architects, including Jean Nouvel, Henri Gaudin, Cedric Price, and Gaetano Pesce, were invited to design buildings for the park. Still other architects handled the earlier restoration of existing buildings as a science museum and an exposition center, construction of a rock concert hall, and design of a future music city. Additionally, many of the gardens have been divided up among architects such as Peter Eisenman and Alexander Chemetov and philosopher Jacques Derrida.

⁶⁴ Ibid 179.

⁶⁵ Richard Dagenhart, “Urban Architectural Theory and the contemporary city: Tschumi and Koolhaus at the Parc de la Villette.” *Ekistics*, 334, 1989, p.87.

⁶⁶ Tschumi, p.183.

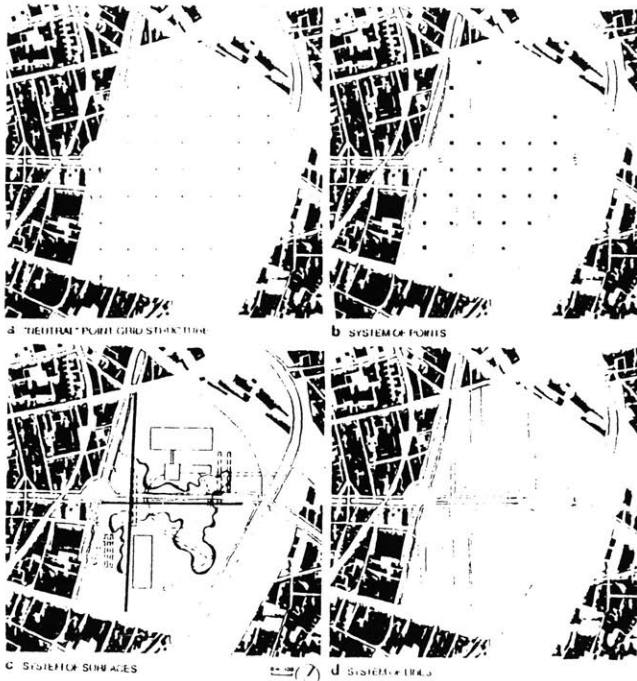


Figure 4-4. The Parc de la Villette's system is manifest in the superimposition of three autonomous layers: points, lines, and surfaces on a neutral site. (Dagenhart, 1989.)

Just as La Villette abstracts the morphology of the city into a structural system of grids, industry is abstracted into a series of recreational activities. Baljon writes: "The link with the industrial past was being broken; a cultural park was requested whose animation was to replace the industriousness of past times."⁶⁷ The memory of the area's industrial past is discernible both in the remaining buildings, and in the heavy bridges over the canal and the extensive hard packed surfaces. (The history of the activities on the site as a slaughterhouse was an important metaphor for many of the design entries.) The new 'industry' for the site, would only resemble the messiness of its former incarnation in the creative minds of its visitors. As implied by the program, technology and innovation are recreational activities. An urban park of the next

⁶⁷ Baljon, p.45.

century thus blurs the distinction between work and play, productivity and consumption, creation and destruction. The apparent irony of developing a cultural center on margins of Paris, *the* global cultural center (as Mitterand and his predecessors professed) dovetails with the spatial conditions of center/margin symbiosis.

As a park within Paris, it is unique in that the trajectory from the heart of the city is not clearly articulated. Daralice Boles comments that while there are plans to clean up the canal basin that extend out from the center of the city to La Villette, the park remains a “curious satellite on the periphery” with weak visual and physical links to central Paris.⁶⁸

Critiques

The results of the Parc de la Villette competition received a great deal of attention in architectural and landscape design journals, particularly the widely published plans by Tschumi and Rem Koolhaas (of the firm OMA). The wealth of writing about the work, perhaps even more than the design itself, speaks about the implication of postmodern design on major urban projects. The Parc de la Villette received the Architectural Design Award for 1985 as the urban park for the twenty-first century. Frampton and Walker appreciated the design from the perspective of a language of Constructivism, in which the components of the design generate the conceptual order to the entire composition. They found refreshing a park form of coincidence derived from a compositional strategy of superimposition that does not predict the relationships of parts to the whole. The systems of organization: the points, lines, and surfaces are meant to be independent of one another, the coincidence of juncture and encounter

⁶⁸ Daralice Boles, “Paris Report: Progress at La Villette.” *Progressive Architecture* 11, 1985. p.49.

representing “the disjuncture and disassociation of our time.”⁶⁹ Moss valued the ecological methodology of the design for its acknowledgment of the *process* of making urban objects, and dealing with the juxtapositions as they come, accommodating architectural set pieces by many architects over a long period of time.⁷⁰

The negative criticism of La Villette appear to be predominantly related Tschumi’s lack of reference to the context of the site. The critiques in essence allude more to the question of the role of architecture in the city than with the validity of Tschumi’s theoretical base. It also says a great deal about the critics and their predispositions to postmodern design.

A major critique of La Villette is that it doesn’t reference the Paris, but references an abstraction of the city-- the point grid, which determined the location of the follies.⁷¹ Meyer further questions the so-called avant-garde nature of the design. It does not excavate meaning, as one would expect from a self-purported avant-garde landscape design, but instead layers external elements on terrain that is deemed void.⁷² Tschumi’s design purports to disassembling the myth of the urban park, while La Villette’s systems say nothing about the site’s specifics. “[T]hey are a neutral diagram looking for a site. . . The scheme is in no way contingent on the site’s inherent characteristics locations, or surroundings, past or present.”⁷³ Another, more practical criticism of La Villette, while well serviced by the metro, does not deal sufficiently with the networks that made the site so economically important to the rest of the

⁶⁹ Bernard Tschumi, *Cinegram Folie Le Parc de la Villette*. Princeton, NJ: Princeton University Press, 1987, p.17.

⁷⁰ “Urban Park for the 21st Century”, *Progressive Architecture*, 1:85, pp.8-10.

⁷¹ Dagenhart, p.89.

⁷² One could argue, like Frampton, that Tschumi’s design is structuralist, not post-structuralist. If so, then ignoring the natural terrain does not constitute a misstatement of his own intentions.

⁷³ Meyer, p.24.

city.⁷⁴ During the jury comments, Plater-Zyberk critiques the design's "illegibility", specifically its lack of spatial definition, which he believed is inherently necessary for the public's acceptance of the work. For him, the design is too narrowly articulated for a theoretical audience, and would only add to the vertigo of post-war cities.

Nature is not Trees

During the 20th century we have witnessed a shift in the concept of the park, which can no longer be separated from the city. The park forms part of the vision of the city. (Tschumi, 1987 p.1)

The Parc de la Villette can be viewed as the staging ground for a new paradigm where the 'natural' and the 'technological' can intersect. Tschumi writes that La Villette "can be seen to oppose the 19th century concept of Nature, based on biological or physical laws, with the technologically formed concept of the environment." Rather than nature, culture and technology form the basis for the park design.⁷⁵

While La Villette is innovative, it is not without historical precedent. In Tschumi's description of his design, the industrial elements take on 'natural' characteristics, such as coincidence, juncture, and surprise, yet this is not a new metaphor. The layering of different systems had been utilized in La Villette's predecessor by over a century, the Parc de Butte Chaumont. Industry had always been incorporated into urban park schemes, and did not always represent a foil to nature, as Tschumi attests.

⁷⁴ Daralice Boles, " ---". p.45.

⁷⁵ Elizabeth Meyer, "The Public Park as Avant-Garde (Landscape) Architecture: A comparative Interpretation of Two Parisian Parks, Parc de la Villette and Parc des Buttes Chaumont" *Landscape Journal*, 10,9 p.16.

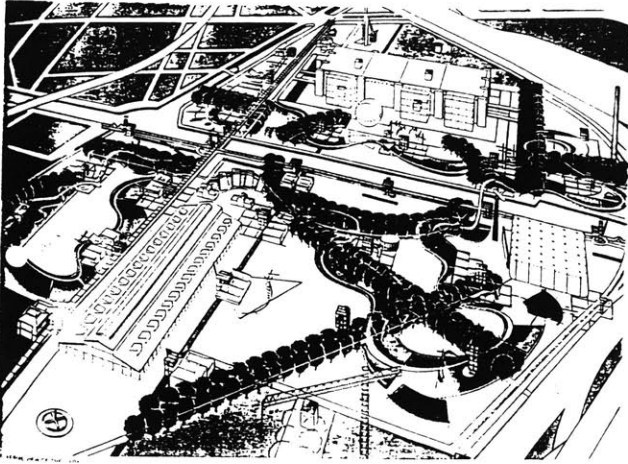


Figure 4-5. An axonometric view of La Villette. The design blurs the distinction between the city and the park. (Boles, 1989.)

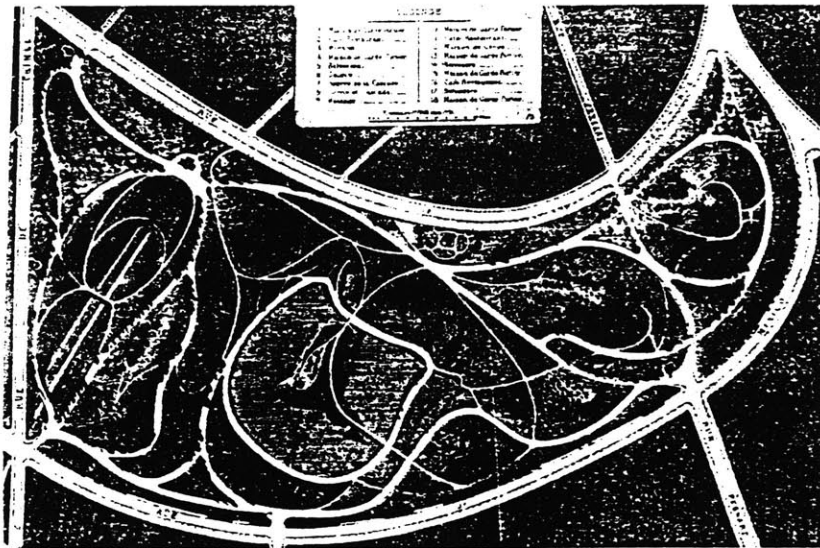


Figure 4-6. The Parc de Butte Chaumont, a nineteenth century park in Paris is built over the remnants of a quarry and urban wasteland. The autonomous yet interconnected systems of topography, winding lanes, architectural 'ruins', and rail lines prefigure the Parc de la Villette. (Meyer, 1991.)

Reaction or Reformulation?

In the past thirty years we have seen a shifting of the notion of the park or the garden to the 'green' [espace vert] ; a development characterized by an impoverishment of the social function and of the creative considerations themselves. Simplified to an extent-- and, therefore, debatable-- it can be argued that the 'green' in the city has been transformed into a mere accompaniment to the buildings: a planted decor, often without imaginative power, which evokes not the slightest emotion not stimulates any activities-- in short, provides not the slightest pleasure.⁷⁶

If the EPPV was criticizing the Modernist creation of the green lawn, why then did Tschumi set out to dethrone the picturesque park of the nineteenth century? If the judges had different objectives than Tschumi, how could he have won? The answer lies in the multiple solutions that postmodern designers are attempting to resolve. Beyond the semantics of term 'postmodern' there are distinctly different and sometimes contradictory agendas. Tschumi's postmodern approach does more than oppose the twentieth century approach to modernism. The intention of his design could be construed as "deconstructivist" in that it attempts to disassemble the reasoned historicity of postmodern designers (as in the aesthetic). "Much of the practice of architecture -- composition, the ordering of objects as a reflection of the order of the world, the perfection of objects, the vision of a future made of progress and continuity-- is conceptually unacceptable."⁷⁷ His methodological context was derived from psychoanalysis, as a means of bringing to bear the questions of normative, "good" architecture. He succeeded vis-à-vis a constructivist methodology to create a template of a new city in which there is no distinction between nature and the culture. Nature falls between the grid of human intention, and sometimes human intention follows prescribed morphological lines or surfaces. Visitors are allowed to apprehend the site for all its layers of uses, materials,

⁷⁶ Baljon, p.15.

popular and theoretical meanings. They are also invited to watch the construction in progress as a temporal layer of design. The architect is present in that it was a very high profile project, but he also is has stepped back to allow the presence of other designers to work within his template.

⁷⁷ Tschumi, p.176.

B. Gas Works Park, Seattle Washington.

Fifty years of the indiscriminate piling of industrial 'afterbirth' presented Richard Haag and environmental scientist Richard Brooks with an enormous problem: to superimpose a public park on the twenty-acre site of a derelict gas works plant. The site was used from 1906 to 1956 by the Seattle Lighting Company to manufacture gas, first from coal, and later from crude oil. The city made the first of ten yearly payments to acquire the site in 1963, and in 1968 Forward Thrust Bond Issue approved \$1.6 million for the development of an urban park. At the time, Seattle had no public park on Lake Union, which was ringed by a mix of industry and residential enclaves.⁷⁸



Figure 4-7. Overlooking Lake Union, Gas Works Park is a design that recalls the past and imagines the future. (Frankel and Johnson, 1991.)

Risk rewards

⁷⁸ "Gas Works Park, Seattle Washington," p.199

Even fourteen years after manufacturing had ceased, the parcel was still largely devoid of vegetation. The initial site study revealed a composition of rubble capped by a fifty-foot high mound of subsoil fills saturated with industrial waste: oil, tar, and other toxicants. Erratic groundwater tables caused layers of oil-filmed water to float within two feet of the ground surface. Despite this evidence, the prevailing sentiment among park boosters was for the traditional Olmstedian park.

Opposing them was a countercultural movement that grooved on the romance of antique industrial forms and archaic technology. Supporters viewed the gas generator towers on the Seattle skyline sacred to the site.⁷⁹ The local Ashcan School of sculptors was on Haag's side. Three generations of local architectural students had done their sketch problems around the plant. Film makers and photographers also valued the "finest collection of multicolored flaky rust in town." Haag estimated that there was three million dollars worth of modern sculpture, if only the local fixation could be altered. "Gradually, we began to convince people that this was the last and only surviving example of this particular industrial building type in the United States."⁸⁰ The extent of the contamination and the extensive cost of remediation soon obliterated the visions of the Victorian park.⁸¹

As suspected, most of the pollution on the site was the by-product of the hundreds of thousands of tons of coal and the tens of thousands of tanker loads of bunker oil that were consumed in the process of manufacturing gas; in short, light hydrocarbons: benzene, naphthalene, toluene, xylene, otherwise known as PNA's: polynuclear aromatics. Brooks knew that certain

⁷⁹ "The 1981 ASLA Professional Awards: 'Gas Works Park-- President's Award for Excellence.'" *Landscape Architecture*, Sept. 1981, p.544.

⁸⁰ "Profile: Richard Haag", *Landscape Architecture*, Sept. 1981, p.594.

⁸¹ Sally Woodbridge, "It was a Real Gas." *Progressive Architecture*. November 1978, p.96-9.

microorganisms can digest hydrocarbon molecules and suspected that the bacteria best fitted to convert the waste into beneficial carbon dioxide, had already evolved on the site. They tested this theory in control plots of grasses and legumes on the site. Plot preparation consisted in rototilling mixtures of humus, sewage sludge, waste fly ash from a nearby cement plant, and seeding. As the poison rises in the soil it is digested by the bacteria lying in the bioactive root zone of the grass. The experiment was successful, and was continued as the reuse design began. In 1972, the Seattle City Council unanimously approved the Gas Works Park Master Plan and in 1975, the park was opened to the public, with construction completed in 1978.⁸²

Today, this technique is recognized by the EPA as the "land-farming" method and is gaining favor as the preferred method to neutralize hydrocarbon concentrations. This process has been used to bio-remediate landfills and industrial sites of hazardous waste at a fraction of the costs of high-tech, engineered methods.

Process can be Style⁸³

The contamination has given the site notoriety as well as popularity by ecologically-sensitive landscape architects. Bioremediation as a reclamation technique was first used here. The process of remediation is expected to take time, and Haag has had to battle the EPA in proving that the organic method is sufficiently removing health risk even though the entire process might take over fifty years.

⁸² "1981 ASLA..." p.544.

⁸³ Randolph Hester, "Process Can be Style; Participation and Conservation in Landscape Architecture." *Landscape Architecture*, May 1993, p.49-55.

Defining the nature of the park was not easy, particularly because the reuse of the buildings and the landscaping had no physical precedent of such a large and civic space. The plan excluded landscaping in the traditional sense. A municipal park without some ground cover was too unorthodox for the Park's Department, so a compromise was made. Biotics techniques were used and the soil was infused with sewage sludge which produced a twenty-acre crop of tomatoes. The issues of groundwater runoff make watering the grass and irrigation contentious, so the park now seasonally turns green and brown.⁸⁴

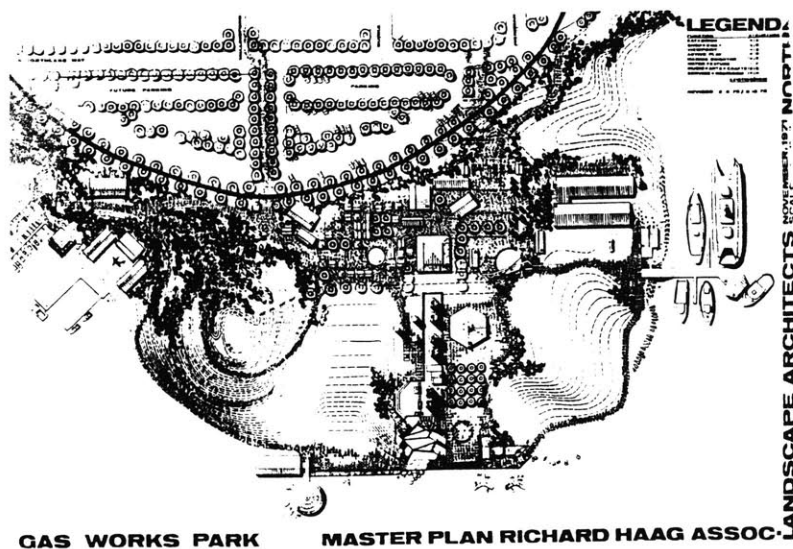


Figure 4-8. Site plan of Gas Works Park. (Richard Haag Associates, 1973.)

However, everyone does not agree that the remediation has been successful. The city no longer waters the grass, for fear that pollutants will wash into Lake Union. Even now, according to various environmental agencies, data from test wells show that subsurface contamination has infiltrated groundwater and is flowing in a massive underground plume into the lake. The state's Department of Ecology and the U.S. EPA regard Gas Works Park as a 'first

⁸⁴ Woodbridge, p.97.

priority' problem, and want to pump out and treat the groundwater. The project is estimated to cost \$2 million and take ten years to complete.⁸⁵ In 1984, the EPA stepped in, claiming that there was a violation of safety standards with toxic levels of contamination on the site, and urged the city to close the park.

Haag argues that the official assessment exaggerates the problem and the difficulty of the solution. He claims that the remaining contaminants are already being cleaned by pollution eating microbes, and that it is actually the Lake that is contaminating the park, and not the other way around. Haag demanded a second opinion and after a city commission found little health danger, the park was reopened. The EPA came back in 1988 when a consultants test well revealed high benzene concentrations. Haag countered with his own consultant, who determined that that benzene-laced groundwater was moving so slowly that it wouldn't reach the lake until 2150-- by which time microbes would have eaten most of the pollution. Haag vows to challenge the government's technical data point for point; he will also fight alternative remediation proposals on procedural grounds arguing that the agency officials haven't followed standard project guidelines. However, public cleanup funds are in short supply, and though the state has asked the property's original owners to help with the cleanup costs, it will only come, if at all, only after judicial review.

Gas Works Park's surface, however, gets rave reviews. Summertime concerts draw huge crowds, the windy months bring kite flyers. Stage one of the development involved the clearing of the site of the non-convertible structures and utilities, reroofing the boiler house and exhauster building to convert them into a picnic area and a play barn. Two other site features are the Great Mound and the "Prow". The Great Mound, topped by an analemmatic sundial, is perfect

⁸⁵ Paul Roberts, "Seattle Parks Under Fire: Landmarks Revisited." *Landscape Architecture*, March 1993, p.49-51.

for kite flying, sunset viewing, and downtown Seattle-watching. The "Prow", a lakeside platform flanked by cascading steps, provides a stage to enjoy outdoor musical events, and both formal and informal ceremonies.

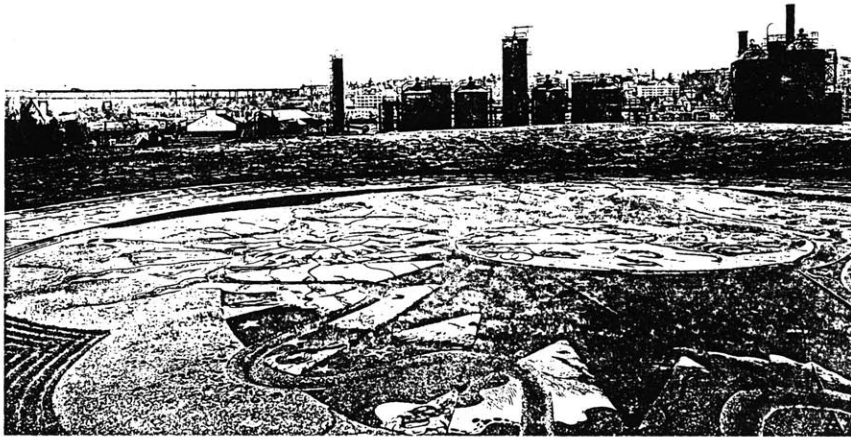


Figure 4-9. An elaborate sundial topping the Great Mound serves as public art and participatory landscape form. (Frankel and Johnson, 1991.)

As for the dirt, even the Seattle Parks Department considers it safe to eat. However, "if you want to eat dirt, we have a lot better parks around here for that," says Haag. Gasworks Park is an example of a site in which the design was able to radically change the public's perception of the contamination. Nature and ecology are redefined and the terminology of contamination was changed to the organic term of industrial 'afterbirth', in which industrial waste becomes part of a natural, and even psychological healing process.

Post-modern, prehistoric

Gas Works Park is a radically empirical design that employs visually powerful earth forms to order a public landscape. Because so much effort was expended by Haag and others to retain the plant structures, it is easy to overlook

the fact that they were not preserved in any curatorial sense of the word. Gas Works park is variously described as “postmodern”, “prehistoric”, “crude” and as a “poetry” of archaic forms.⁸⁶ Haag took a site that was filled with specific history and abstracted its formal qualities. In essence, children’s play became the site’s industry. It is touted as one of the first attempts at adaptive use, a strategy that would become popular at the end of the 1970s, with Baltimore’s Inner Harbor and Boston’s Faneuil Hall.⁸⁷

This innovative design project informs us about the realities and possibilities of existence better than any conceivable piece of avant-garde or environmental art. It is rich with a sense of time, the need to awaken our senses and minds to the wonders of our urban-industrial ruins, and the need to see, feel, and understand the nature of our past activities within the context of our present, everyday activities.⁸⁸

The design is particularly innovative in that it mediates between the artistic and environmentalist community and the larger public. Not until the environmental crisis of the early 1970’s did the knowledge of ecological systems become determinant of design for landscape architects. Even Haag said that in the regulatory environment of the 1980’s, the project would have been impossible. During the conceptual stages of the design, Haag investigated the site first-hand, climbing the old towers and even camping out on the site. He moved his offices into one of the plant’s shops, and encouraged visitors to explore the works. He organized a citizen’s group to promote the idea of saving the industrial relics. He spoke with community groups, emphasizing its visual similarity and power to modern steel sculpture. He described the forms as “unconscious assemblages” denying, in fact, the very conscious assemblage of

⁸⁶ George Hargreaves, “Post Modernism Looks Beyond Itself,” *Landscape Architecture*, July 1983, p. 64.

⁸⁷ “Gas Works Park,” ? p.199

⁸⁸ Doug D. Paterson, “Fostering the Avant-Garde Within” *Landscape Journal*, 10,9 1991 p.27.

engineering and economic function.⁸⁹ However Haag, although participatory in ethos, never let go of his vision of the site nor dismissed his own design skill. In the press and by colleagues his design is praised as an example of community participatory designing and a public visioning campaign. During the time he was devising the design he invited children to invent new uses in order to become accustomed to it. He knew he had to garner a broad base of support for the project when the municipal father intended on a more traditional picturesque style park space.

⁸⁹ *ibid*, p.201.

C. Mass MoCA, North Adams Massachusetts

If the Parc de la Villette was the park of the twenty-first century, and Gasworks park perhaps the playground of the twenty-first century, the Mass MoCA is the museum of the twenty-first century. The Massachusetts Museum Of Contemporary Art is a project to convert a twenty-seven building historic mill complex in the Berkshire Mountains of western Massachusetts into a multi-disciplinary center for visual, performing and media arts.

A Company Town Goes Under

Sited at the confluence of the region's main river system, the complex was built in 1872 by an international cloth manufacturer. The buildings, listed on the National Historic Register, form an elaborate system of interlocking courtyards and passageways. The site was purchased in 1940 by the Sprague Electric Company, which for the next thirty years was one of the world's most successful producers of high-quality electronic components, employing 4,000 workers at its peak. By the late 1970's foreign competition and changes in manufacturing affected company operations, and by 1985 the company's presence in North Adams was determined to have no viable purpose, and was closed, leaving thousands of people out of work.

A Museum in the Northern Berkshires

In the late 1980's, a state task force was organized to explore how the region might revitalize its economic base and capitalize on its cultural and educational offerings. The site is located within an hour of Williams College, Bennington College, North Adams State College, Rensselaer Polytechnic Institute (RPI), and SUNY-Albany. Neighboring Williamstown is an important national

center for art historical research including the art history program at Williams College, the Sterling and Francine Clark Art Institute Library, the Williamstown Art Conservation Center, and two branches of the J. Paul Getty Art History Information Program. Additionally, Berkshire County is touted by the state of Massachusetts as an important tourist destination point.

At the same time the director of the Williams College Museum of Art was investigating possible mill location in North Adams to meet the spatial requirements of contemporary art installations. The idea crystallized to convert the old Sprague Mill into a mixed-use cultural and commercial complex that would not only create a dramatic platform for contemporary art but fulfill the needs of a community seeking to develop economic links to its regional cultural strengths.

Based on a study by a team of architects led by Skidmore, Owings and Merrill, which included Frank Gehry, Robert Venturi, and Bruner/Cott and Associates, the Massachusetts legislature passed a bill authorizing an unprecedented \$35 million matching grant to the City of North Adams for a museum of contemporary art. Changes in the political and economic environment of the late 1980's brought the grant money down, but the project received broad support from its community, which pledged more than \$8 million to the museum.

The Mass MoCA project hinged upon a redefinition of the community connected to the site. While the original Commonwealth Sprague factory was the major employer in the city and the lives of its workers hinged upon its success, Mass MoCA is dependent on an enlarged community. In a political climate increasingly suspicious of federal funding for the arts, artistic institutions today must aggressively market themselves and utilize informal networks to survive.

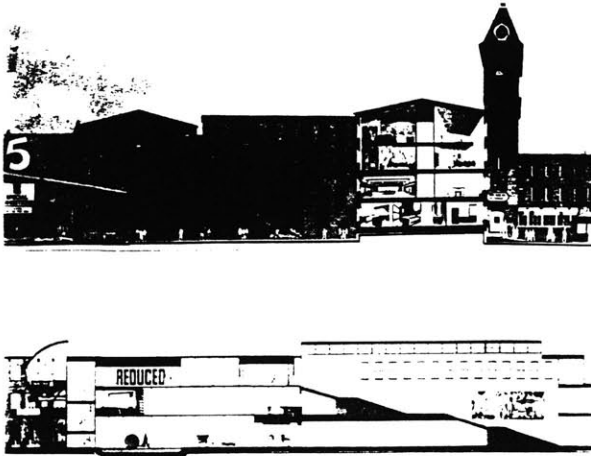


Figure 4-10. Sample sections through the Mass MoCA site. By Skidmore, Owings, and Merrill. (*Progressive Architecture*, November 1989.)

Institutions such as the dance theater Jacob's Pillow, the Japanese Cultural and Community Center have committed to using the Museum's black box theater and gallery spaces to develop new work and reach new audiences. Larger artistic institutions have other needs. The Guggenheim Museum, the Art Gallery of Ontario, and the Dia Center for the Arts have loaned works of art from their permanent collections that would otherwise go unseen for lack of space.

In April of 1996, the state released \$18.6 million to start construction, which is expected to be completed in 1997 or early 1998 at a cost of \$26 million. The Museum took title of the facility from American Annuities Group, a property management company which completed the state-mandated 21E remediation of the site. There is still approximately \$100,000 worth of interior contamination to the buildings that will need to be remediated by Mass MoCA.

A Cultural Center in the Regional Margins

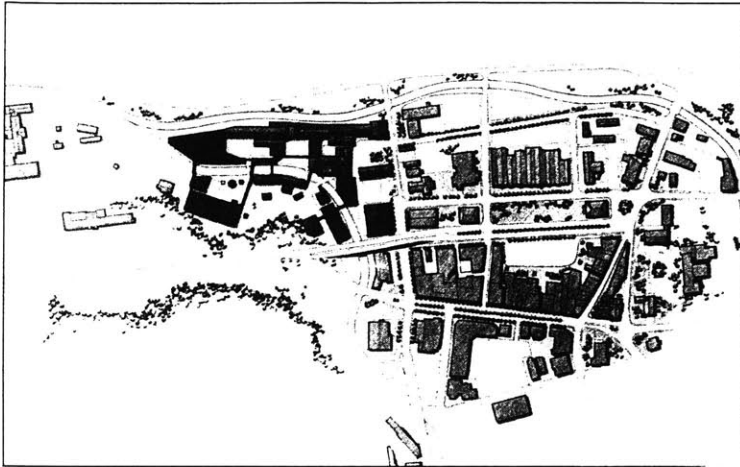


Figure 4-12. Site plan, Mass MoCA. (*Architectural Record*, November 1989.)

Mass MoCA is overseen by two boards that represent the cross-section of regional, national, and international communities it serves. The Mass MoCA Cultural Development Commission is responsible for the construction phase of the project. The Mass MoCA Foundation will operate the museum when it opens in 1998. From the region, the Cultural Development Commission includes the mayor of North Adams, the presidents of North Adams State College and Williams College, and the director of the Green Mountain Economic Development Corporation in White River Junction in Vermont. New York City's cultural and real estate interests includes representation by the curator of the Guggenheim, an environmental artist, and the executive director of Olympia and York, and a major British real estate development firm, as well as the secretary of exhibitions for the Royal Academy of Art in London. On the Mass MoCA

Foundation, there is one business representative from North Adams, four from the Northern Berkshires, two from New York City, and two from California.⁹⁰

Yet while it may appear to be counterintuitive to locate a cultural center in the regional 'backwoods', the intentions of the museum clearly try to exploit the contraposition its center/margin quality. For one, the geographic distance from the museum is irrelevant for the cultural supporters and collaborators. The museum's intention is to blur the distinctions between front-end and back-office production and production versus consumption. The museum complex will serve as both a high-tech village, intimately related to locational synergies of daily interaction and collaboration, and as a clearinghouse for electronic and digital information to be sent nearly anywhere in the world. It exemplifies the 'virtual community' in that the complex will be internally hot wired and on-line with the most innovative information technologies. Multimedia technologies, audiovisual production and post-production facilities, high bandwidth connectivity, and sophisticated telecommunications systems will be accessible, allowing the arts to be transformed into new formats, for marketing and distribution nationally and internationally.

The museum and its contributors anticipate a ripple effect on the entire region. The regional locus of Mass MoCA is described in the museum's literature as well as the Northern Berkshire's Economic Development Commission's Business Development package. While most of the economic development in the area has concentrated on traditional industrial parks, Mass MoCA is viewed as a touchstone to the region's future.⁹¹ The public relations material graphically presents the distance of North Adams from the major cities within five hours of the museum: Albany, Boston, New York City, Montreal, and

⁹⁰Mass MoCA, Arrow Press, 1996.

⁹¹ from interview with Mark Pasquini, August, 1995.

Philadelphia. It also maps out the cultural and recreation attractions in the region from the Norman Rockwell Museum in the Southern Berkshires to Tanglewood to the Mount Greylock State Reservation, all within two and a half hours of Mass MoCA. The Northern Berkshires is distinctly rural, and is a destination point for hiking, skiing and cultural attractions, especially for people with substantial disposable incomes.

Originally, the plan for the reuse of the site resided in a notion of the active museum. However, when Massachusetts economy flattened in the late 1980s, the notion of the museum needed a boost. The old factory served a perfect symbol for its new incarnation. Yet the time lag between the conception and the end of the fundraising period gave the founders pause to consider the shifting role of cultural institutions in the future. Thomas Krenz, the director of the Solomon Guggenheim Museum in New York expressed his excitement for the project in these terms:

If there existed in the Berkshires the largest museum of contemporary art in the world, a place where you could see thirty Anselm Kiefers at a certain time; where you could see Robert Morris from 1960 to 1988, from his performance work to Minimalist pieces; if you could see a great collection of contemporary architectural drawings alongside dramatic multimedia installations; and you could see all of that in a fabulous 19th century mill complex-- you tell me if you'd go there. A museum of this scale will generate tangible excitement throughout the world of art.⁹²

In a metaphorical leapfrog from the original use, the proposed use brings electrical capability into the twenty-first century with multimedia, filmproduction and cutting-edge video imaging technology. Interment access and business activity was just germinating as a means of exchanging goods and services.

⁹² Mass MoCA, 1996.

The hull of the factory resonates with contemporary artistic creativity, just as New York City has seen its original manufacturing areas emerge as incubators for the avant-garde industries.⁹³ Mass MoCA plans to provide space for artists and cultural institutions working in sculpture, theater, dance, film, digital media and music. There will also be space for rehearsals, art fabrication, and production studios, all open to public view. The buildings on the thirteen-acre site will be linked by a series of existing and future bridges and elevated walkways, in addition to a fiber optic network that will run throughout the complex. The Museum described its intention:

Though the museum will have some high-security, climate-controlled spaces with clean white walls and sophisticated production equipment, the lion's share of space will be loft-like, with exposed timbers, brick facades, corrugated metal loading docks and a rough-hewn patina that bespeaks the site's hundred year factory history. We believe that unaffected, raw spaces promote experimentation, change, and speed, and that by lacing together vast interiors with high-end fiber optic digital pathways, MASS MoCA will position itself as a creative environment of a new order, with the flexible capacities needed for a new century's work.⁹⁴

The text on Mass MoCA describes its intent as a "permanent work in progress, with its mission to maintain itself as a premier platform for creating, presenting, and distributing the best of the art of our time. "

Cultural Centers disappearing?

The project for Mass MoCA sits in the liminal space between the cultural conception of city/center and nature/margins. The Northern Berkshires is Colorado for many Northeasterners; a wild landscape, a place of retreat and meditation. The Berkshires, Southern Vermont and Western New York State

⁹³ Kirk Johnson, "Where a Zoning Law Failed, Seeds of a New York Revival," *New York Times*, A1, 4/24/96. See also *Big City, Small Business*, New York: The Municipal Arts Society, Jan. 1994.

⁹⁴ Mass MoCA, Arrow Press, 1996.

have been refuges for many ex-hippies and ex-urbanites who left the City in search of a truer, more wholesome environment. Yet the amenities of urban living, such as cultural institutions and access to cutting edge technologies followed the 'neo-pioneers' to their rustic settings.⁹⁵ Additionally, today's emerging high tech industries do not need the city in order to go about their business. These facts support a reading of the built environment that does not attempt to demarcate boundaries between city and nature.⁹⁶

⁹⁵ De Tocqueville wrote, during his travels in the United States in the 1830's, how surprised he was to find such educated and urbane folk living in the wilderness. "When you leave the main roads you force your way down barely trodden paths. Finally, you see a field cleared, a cabin made from half-shaped tree trunks admitting the light through one narrow window only. You think that you have at last reached the home of the American peasant. Mistake. You have made your way into this cabin that seems the asylum of all wretchedness. But the owner of the place is dressed in the same clothes as yours and he speaks the language of towns. On his rough table are books and newspapers: he himself is anxious to know exactly what is happening in old Europe and asks you to tell him what has most struck you in his country. One might think one was meeting a rich landowner who had come to spend just a few nights in a hunting lodge." (Alexis de Tocqueville, *Journey to America*, J.P. Meyer, ed., George Lawrence, trans. London: Faber and Faber, 1952, p.334.)

⁹⁶ Ann Spirn attempts to describe the important role of nature in the city, thus redefining the City from a product of human intention to 'the granite garden' (*The Granite Garden*, 1984). Simon Schama describes the way in which Western society has constructed the myth of the natural landscape just as it constructed the supposedly oppositional, 'artificial' and 'urban' cityscape (*Landscape and Memory*, 1995.)



Figure 4-13. Photo of buildings and catwalks, July 1995. (photo by author.)

Chapter 5: Apprehending the Brownfield

Observations on process

This paper has involved a process of disassembling the package that is the brownfield-- the abandoned, derelict, industrial spaces in the urban landscape that have been shunned by developers and planners. The investigation looked at the approaches to old industrial sites and the actions that were taken to address the contamination. The paper has also looked at the economically driven responses to the strict environmental regulation from which the brownfield initiatives emerged. These initiatives succeeded in redefining these sites as both harbors of contamination and locations in need of investment. It was clear that while the brownfield initiatives were attempting to tackle the issues of risk assessment, the stronger underlying intention appears to have been purely economic.

In its mission to free up marginally valuable property and return it to productive use, there were no consistent evaluative criteria with which to prioritize the scarce remedial and development resources. Nor was there any way to assess the industrial sites in the context of their nearby neighborhoods. Without criteria for selecting sites and considering reuse strategies, it became apparent that not only would the resources allocated be ineffective, but also that the result of the redevelopment would have little if any comprehensive impact on the communities as a whole.

The rhetoric about brownfields talks about 'leveling the playing field', balancing the advantages of suburban development with targeted incentives for inner city development. These trends towards a risk management approach represent a great opportunity for redevelopment of industrial land. The

brownfield initiatives will help to eliminate unnecessary obstacles to development by creating liability endpoints, privatizing the regulation of low-level contamination cleanup, fostering voluntary cleanup programs, and creating public sector loan guarantees and funds.

There is a greater danger, however, that in the process of breaking down the regulatory walls, the provocative characteristics of these sites will be undervalued. These initiatives will likely shift the regulatory focus from one of redeeming contaminated sites to a perhaps premature redemption of the polluters. Often overlooked are the contradictory emotions that these places evoke. Contaminated industrial land often generates a great deal of emotion, both positive and negative. The abandoned factories gave sustenance to the grandfathers and grandmothers of the children of today. Although these sites evoke fear of disease and death, they also inspire industriousness and pride of place. The characteristics of these sites are distorted by this fear --divorced from their industrious past-- and too easily figured as a blank 'field', ready for a new incarnation. This failure may predicate the eradication of these places from the collective memory and history. In some cases, such an eradication is tantamount to a social lobotomy. Without a composite image of these sites in all their incarnations, we are divesting our children from access to the knowledge that comes from our failures as well as our mistakes.

The cultural history of the urban margins sheds light on the richness of meaning these places can evoke. As an economy passes through transitions, industry moves in and out of cultural focus; sometimes it bespeaks order and progress while at other points it emerges as sublime horror. The waste and byproducts of industry have also had negative and positive connotations. Disgust and dismay are two common negative reactions, yet alternatively, hope

for the future and optimism in the human pursuit of perfection are also legitimate responses.

Today, the urban margins are a rush of conflicting emotions and symbols. Increasingly, the distinction of the margins and the center is all but irrelevant. In today's cutting edge industries and in cultural institutions, a distinction between production and consumption is difficult to draw. In fact, drawing definitive boundaries anywhere in today's culture is futile. Delineating the city from nature, use from form, local from global no longer serves a cultural end. The rule is disjuncture and fracture. Periodically it is perfectly acceptable to take a romantic view of the rush of change and relish in the piles of discarded meanings and theories. In terms of public policy, the task is not complete when one has simply appreciated the richness of cultural responses to the industrial landscape.

This paper looked at three existing projects on formerly industrial sites. Six project elements were characterized as common features to compare and contrast the projects. Each of the elements can site as a layer of meaning to be interpreted by both the intervenor (i.e. the designer) and the viewer. The selection of the six was meant to provoke thematic questions which may or may not have been posed about the three well-known projects before.

- 1) *Was risk or contamination a consideration for the redesign?*
- 2) *What role did the designer play?*
- 3) *What was the community to which the place belongs, and how (if at all) was it involved?*
- 4) *How did memory contribute to the design?*
- 5) *How did the reuse relate to the original use?*
- 6) *And finally, how did the design deal with the liminal nature of these sites?*

Analysis of case studies:

After analyzing the case studies with specific regard to the six questions posed above, there are five important considerations. The five considerations are followed by examples of such techniques in the case studies.

- 1. Processes that make visible the remediation, danger, or sense of disjuncture provide the public with symbols its own anxiety.*
- 2. Park uses are appropriate for these places.*
- 3. Designed places need to be able to communicate to multiple publics.*
- 4. Designed places need to allow for fluid interpretation over time.*
- 5. Reuses need to integrate contemporary industriousness with redesign.*

1. The redesign, process, and terminology should provide the public with symbols to deal with the symbolic and physical component of danger and risk associated with the site.

In all three of the case studies, the unruly elements of the sites were not suppressed. Rather, **systems** were created to structure the symbolically or physically dangerous conditions.

- Gas Works Park clearly identified the contaminated parts of site and clearly **demarcating hazards**. Possibly the most important element was that the cleanup was a **publicly accessible** process which allows a cultural process of reflection, repentance and acceptance. In contrast, the prevalent remediation methods prevalent today, such as cement capping, cut the public off from the deep strata of meaning in these sites. A well-publicized bioremediation process gives credence to such a radical remediation technique. The innovative techniques of bioremediation are appreciated by a certain strain of landscape designers and ecologists but have not yet been incorporated into brownfield policy.
- As his theoretical texts indicate, Tschumi's design for La Villette is predicated on **systems of allowed disjuncture** and contamination. His deconstructivist approach makes evident the non-rational, chaotic systems that he believes typify contemporary life. For Tschumi, the **point and grid system** of follies, and the **layering technique** aesthetically organizes the postmodern world.

In sharp contrast to Gas Works Park whose design mediates successfully between wasted-ness and public amenity, La Villette is overwhelmed by its own rhetoric, and does not take advantage of the preexisting contextual, Parisian formulas that could tie deconstructivist theories of creative dislocation with the historical culture of urban living. While the parks works in theory, the lack of historicity, common language, or local specificity, makes one wonder how accessible those notions are to the park-goer.

- In Mass MoCA, the rational element is less apparent. The **industrial form** of the factory signifies the industriousness and rational production of the past and offers a shell for the undefined boundaries of multi-media technology.
- Older symbols of dereliction and dirtiness may be couched in **metamorphological terminology** such as afterbirth or creative space in order to suggest the transformative power of human intention.
- The **vernacular language** of the community can also be involved in the redefinition process. Appreciation for the reuse is minimized when redesigns do not address the source of contamination or history of original use, such as in La Villette.

Table 5-1. *Design* techniques to reconcile perception of danger.

| | Parc de la Villette | Gas Works Park | Mass MoCA |
|---------------------------------|--|----------------------|---|
| rational system | point and grid system; follies, layers | signs, fences | industrial factory forms |
| symbolic/physical danger | chaos, disjuncture, madness | fear of health risks | power of information and multi-media technology |

Table 5-2. *Process* techniques to reconcile perception of danger.

| | Parc de la Villette | Gas Works Park | Mass MoCA |
|---------------------------------|-----------------------------|-------------------------------|---|
| rational system | -- | public bioremediation process | --- |
| symbolic/physical danger | chaos, disjuncture, madness | fear of health risks | power of information and multi-media technology |

Table 5-3. *Terminology* used to reconcile perception of danger.

| | Parc de la Villette | Gas Works Park | Mass MoCA |
|--------------------------|----------------------------------|----------------|--------------------|
| rational system | "architecture within the frames" | "afterbirth" | "work in progress" |
| symbolic/physical | chaotic urban | contamination | multi-media |

2. Park uses are appropriate for these places.

- Industrial sites should be considered beyond a simplistic economic assessment. The regulatory forces that held these industrial spaces in a limbo of sorts have also protected them from the development pressures. They would have been obliterated under commercial development or residential subdivisions.
- As **recreational open space**, these industrial spaces can have room to breathe for both remediation purposes and for passive recreational activities in which the process of decay is visible as in Gas Works Park.
- Sometimes these abandoned or underused sites are consciously chosen for use as **high-brow cultural space**, such as in La Villette; at other times they are the **valuable leftover space** that is developed when there is no other land available, as in Gas Works Park, or when an **innovative mixed-use** idea emerges in a financial crisis, such as in the case of Mass MoCA.
- Mass MoCA exploits its location within the **regional 'park'** of the Northern Berkshires. It utilizes synergies of other cultural and educational activities in the area.
- All three projects could be defined as parks, but the characteristics of those parks are very different. Gas Works Park **challenges the myth of the park** as an idyllic, picturesque landscape unaffected by time and human waste. Tschumi's design questions the possibility of creating cohesive overarching spaces that have any relationship to contemporary culture. Mass MoCA follows the tradition of the industrial park, but turns it in its head by bringing the campus office park back to the hinterland and into yesteryear's vision of progress. All three projects acknowledge that they are unfinished; time and future generations will continue to add to the collage of each urban landscape.

3. Designed places need to be able to communicate to multiple publics.

- As reclaimed space, redesigns should attempt to communicate their aesthetic to many kinds of communities. There is a social imperative to redesign in languages that can be appreciated so that the places may have enduring value.
- Gas Works Park has an **abstracted language** of forms, with references to prehistorical, modern, and post-modern symbols.

- La Villette is more difficult for the visitor who is not well versed in deconstructive theory.

4. Designed places need to allow for fluid interpretation over time.

- These sites **blur the delineation of specific uses** which is consistent with the site's marginal location. Its absence of definition evokes a certain uneasiness that is simultaneously repulsive and attractive.
- These sites **challenge the value of simplistic solutions** to safety, use and accepted forms. This is an important characteristic because solutions be it aesthetic or scientific, are rarely permanent.
- These projects **take advantage of their marginal or 'liminal' locations**: Gas Works Park opposite downtown Seattle, Parc de la Villette at the edge of the heart of Paris, Mass MoCA hours removed from the nearest metropolitan hub. It will be challenged in attracting tourists not just from those tourists visiting the Northern Berkshires, but also from neighboring communities who knew the original factory.

5. Reuses need to integrate contemporary industriousness with redesign.

- Today's industriousness includes **active recreational activities** such as those housed in the Parc de la Villette and Gas Works Park, and multimedia technology that **blur the line separating work from play**, and production from consumption such as the hyper-village at Mass MoCA. Our future industriousness requires spaces where children of all ages can imagine new futures, such as in Gas Works Park. There is a parallel sentiment of optimism that the process and products of new activities on these sites will help make the world more interconnected and interactive than ever before.

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