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Focus:HOPE Center for Advanced Technologies. (Smith, Hinchman and Grylls Associates)

Prospects for an Improved Public Realm

The public realm, those places to which we all have ready access, gets little attention these days. Or so it would seem. Most discussion of "the public" in the media is focused on costs and expenses, waste and malfunction, crime and anxiety. The simple daily benefits that accrue from public actions seldom make news. The places we live in are either taken for granted, if they work well, or maligned, if they do not.

The pleasures of the public realm — being able to move with dignity among strangers and acquaintances and to rest freely in places that are held in common are the foundation of civil society. Rewarding, instructive experiences like finding one's way through the city with ease, choosing among the activities it offers and enjoying the multitude of investments in buildings, landscapes and infrastructure — the legacy of what others have made — are made possible by the public realm, the places we build or maintain in common.

Our public realm sets the context for community exchange, for the interactions and encounters that construct our daily lives and for private real estate investment. It needs constant care, maintenance, repair and policing. But like so many of the complex things we need in our lives, streets and public spaces become fractured into operational routines, their differing aspects administered by differing agencies with little or

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Donald Canty W. Russell Ellis, Jr. James F. Fulton Lawrence Halprin Frances Halsband Donlyn Lyndon no communication between them. The result is often confusion and the visual evidence of cross purposes places that become emblems of neglect. If care begets care, it is even more certain that neglect begets neglect.

Our task as designers is to bring the public realm into focus. We must advocate for its benefits and point out the interplay of public infrastructure and private gain. We must counter the politics of neglect with evidence of how things can be cared for, how places can speak to the common interest even as they flourish through the fruits of individual imagination and investment. We must demonstrate that care for the public realm is care for the structure of our lives.

What, then, would be an improved public realm? One that is sustainable — a structure of relationships that encourages judicious use of resources and captures the imagination of its citizens in ways that will sustain their interest and their commitment to community well being.

One in which our collective investment, the heritage of the city as we continually reinvent it, is used to expand and embellish the lives of its citizens.

One that is just — a realm that accommodates diversity and assists the disadvantaged, that serves the interest of those who live and work in a place, who pursue their happiness there, as well as those who own property in its midst, and that is respected and cared for by its citizens and their government.

One that we can imagine and make a part of our lives — not easily, but with a little effort, that little effort that it takes to be civilized.

— Donlyn Lyndon



Aerial view of industrial districts of Emeryville and West Berkeley, Calif., including the Bayer, Inc., pharmaceutical research and production campus. (Stefan Curl).

China's Gardens of Time and Space

Thomas J. Campanella

Fifteen years of economic revolution has moved the People's Republic of China out of Communist isolation and onto the world stage. As an increasingly active member of the international community, China has absorbed certain aspects of foreign culture and has redefined its own heritage, often with a global market in mind.

At the Splendid China miniature theme park in Shenzhen, just across the border from Hong Kong, China's immense cultural endowment has been distilled to a "marketable essence." The fruits of 5,000 years of civilization have been compressed and arranged on a 75-acre site, enabling the visitor to experience the time-space immensity of China "all in one day."

Superficially, Splendid China is a profit-earning venture which, in the six years since its opening, has become one of the most popular tourist attractions in the Pearl River region. But more, it has become an effective purveyor of a debugged, politically neutral vision of Chinese national culture. Beneath the veneer of frivolity and cuteness, Splendid China projects to the world a highly manipulated clip from the coffers of history.

Touted as the "World's Largest Miniature Scenic Spot," Splendid China contains models of the nation's most famous monuments and natural landscapes — spanning "5,000 years and 10,000 miles." It is a masterpiece of the miniaturist's art, architectural cousin to the magnificent bonsai gardens of Suzhou. The superbly detailed models, mostly at a scale of 1:15, are constructed with tiny bricks, rare woods, carved stone and gold leaf. The grounds are landscaped with small trees and manicured hedges; hidden speakers fill the air with Chinese classical music. Some 50,000 figurines populate the various displays, attired in costumes researched by the Central Academy of Fine Arts in Beijing.

The "dwindled" natural scenes are arranged "roughly according to their position in China." Among the architectural monuments are the Temple of Heavenly Peace, Tibet's Potala Palace and the Forbidden City. A rambling model of the Great Wall, five feet tall and composed of six million little bricks, snakes its way across the north side of the park.

The park was developed by China's State-owned tourism development corporation (Hong Kong-based China Travel Service Ltd.) with the deep pockets of Hong Kong and overseas Chinese in mind. It is located in Shenzhen's "Overseas Chinese Town," an export-oriented center and base for introducing foreign Chinese to the land of their ancestors. Since opening



Splendid China is located just north of Hong Kong in Shenzhen, one of the cities that China has earmarked for foreign investment.



Travel Service/Hong Kong Ltd. unless otherwise noted)

in 1989, only several months after the Tiananmen massacre, it has drawn as many as 40,000 visitors a day from Guangdong Province, Hong Kong, and abroad. Some observers have placed Shenzhen "in the major league of tourist attractions and on par with such spectacles as Disney World."¹

Splendid China serves as a promotional agent for a selective vision of Chinese cultural history. It offers a controlled (and therefore distorted) representation of the past, a doctored snapshot of reality. While individual models replicate historical minutia with extreme accuracy, the ensemble is purely fictive. Places, peoples and artifacts far removed in time and space are compressed in a vortex of miniaturization, creating a blemish-free common heritage. The unspoken aim is to embellish China's image abroad, to enhance its appeal to foreign tourism and investment communities.

Achieving this means sidestepping contentious sociopolitical issues. Sharp historical edges are sanded over to create an idealized vision of Greater China. At Splendid China, numerous minority groups are presented as contented members of an extended Chinese family, their cultural landscapes annexed as curios and exotica. The theme park manufactures a thornless national identity, ignoring pleas for Tibetan autonomy or the de facto independence of Taiwan.

Another distortion is the manner in which Splendid China showcases landscapes on the verge of extinction —

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Model of the Temple of Heaven, where emperors worshipped heaven and prayed for good harvests.

something like setting up a zoo for rare tigers while tacitly approving their extermination. For instance, the traditional *butong* (lane houses) of Beijing, rapidly falling to make way for shopping malls and villas, have been beautifully pickled at Splendid China.

Nearby is a model of the Three Gorges of the Yangtze River — in reality a majestic canyon landscape considered to be among China's most spectacular scenic treasures. Three Gorges is at present being inundated for one of the largest hydroelectric and flood control projects in history. Studies have predicted apocalyptic ecological impacts and the forced relocation of some 1.2 million people. Frozen in its splendor, the miniature Three Gorges has become one of Splendid China's most popular sites.

The items omitted from Splendid China are often as revealing as those included. The twentieth century, a tumultuous time in China's history and much too fresh in the collective memory for even the most enthusiastic of boosters to sweeten, has conveniently been deleted. There are no traces of the Long March, the Cultural Revolution, the Glorious Revolution or the Great Leap Forward. There is not a single miniature dan wei or agricultural commune, no People's Parks or Liberation trucks or tiny statues of Chairman Mao. In front of the Forbidden City there is a space said to be Tiananmen Square, but it is empty and contains no Great Hall of the People or revolutionary memorabilia. In fact, the only item from the profoundly transformative twentieth century is a model of the birthplace of Sun Yatsen, the first president of the Chinese Republic and the father of modern China.

In what surely must be one of Southeast Asia's most remarkable juxtapositions of built form, the miniatures of Splendid China are viewed against a rising wall of skyscrapers. The park is an island of faux antiquity in the clutch of one of China's most bold experiments in modernization — the city of Shenzhen.

The Open Door reforms of the Deng Xiaoping era turned the Chinese economy into one of the most formidable in the world. Shenzhen, the first of several zones earmarked for foreign investment, became the maiden city of China's modernization drive. It captured international attention as it transformed from a quiltwork of rice paddies into a metropolis of two million and one of the fastest growing cities on earth. Today Shenzhen still has an adolescent air, with a cranespiked skyline and streets crowded with ox carts and Mercedes limousines.

One is tempted to invoke David Harvey's observation about the postmodern embrace of nostalgia in the

Above: Model of Potala Palace in Tibet — a region that is seeking autonomy from China.

Inset: Splendid China's miniatures contrast with Shenzhen's expanding skyline. (Thomas Campanella)

face of radical change, as shelter against capitalism's "bombardment of stimuli."² In this reading, Splendid China would be a reconstitution of the past to soothe a traumatic present. But this is clearly not the case. Both the emergent skyscrapers and the new–old relics at Splendid China are poignant expressions of the complexity and double coding of the so-called New China.

Like Shenzhen itself, Splendid China is expressive of the renewed spirit of optimism and outlook (as well as a new emphasis on materialism and consumption) that has become a leitmotif of post-Mao China. Shenzhen is the maiden city of China's opening-up to the world, and Splendid China is its cultural ambassador. The park is not a glance through a rosy lens but, rather, an act of outreach and annexation; not shelter against change, but one of its agents, a device adopted for distributing a revamped cultural identity to the four corners of the globe.

Notes

 King Chung Siu and Nick Stanley, "(Re) Presenting Chinese Culture: The Shenzhen Chinese Folk Culture Villages," unpublished paper, Hong Kong Polytechnic University, 10-11.

2. David Harvey, *The Condition of Postmodernity* (Cambridge, U.K.: Blackwell, 1990).

Is it time to declare manufacturing dead in cities? Maybe not.

In the past forty years, urban manufacturing has declined precipitously as industries have moved out of cities, first to suburban and rural areas, then overseas. The urban landscape is littered with shuttered plants and derelict lands. But the face of manufacturing is changing, and while many companies have left cities for good, others still find their competitive edge there. Often, these firms prosper because they have a geographic or historic advantage, provide goods for a local or regional market at a competitive price, or produce high value-added goods for specialty, niche markets.

Urban manufacturers are making their way by being small, smart and sensitive to design and market trends. Cities provide a number of conditions that help them be competitive — a diverse and flexible labor force; a network of specialized suppliers and jobbers; financial, marketing and wholesaling services; intellectual and cultural resources; and a large consumer and business market.

What is the place of manufacturing in cities?

For a century, planners have regarded industry as a health and safety threat and shunted it to segregated, marginal districts. Today, many manufacturers are finding a place in diverse urban neighborhoods. These specialized firms can operate in small spaces and use modern processes that meet strict environmental standards. And they depend on being part of a network of related businesses and services, near amenities like shops and restaurants, and close to housing for workers — benefits of an urban location.

Each of the following articles examines the design and planning issues that a particular industrial setting presents. Robert Lane critiques the destructive urban design practices embedded within planned, in-city manufacturing districts. John A. Loomis suggests that the flexible, easily mixed building types found in traditional manufacturing neighborhoods offer a format for urban reinvestment. Cheryl Parker describes the institutional and economic changes transforming San Francisco's industrial South of Market into a multifaceted working district.



The survival of workplaces speaks to the survival of our cities.

These articles about manufacturing offer a case study of broader, fundamental issues that face urbanism today. How can urban development accommodate a variety of activities — housing, shopping, offices and industry — at a grain and scale that enables healthy mixing and appropriate access while minimizing conflicts among them? How can the design of buildings and spaces address specific functional needs, in this case manufacturing, while enhancing people's visual and spatial experience of the city?

If these articles are particularly provocative, it is because places of production are so often overlooked, by public officials and designers alike. Urban manufacturing is surviving against the odds; the architecture and urban design of working districts should match the resourcefulness and vigor of the people who are keeping them alive.





Left: Bottling area of a brewery. (Lucien Kroll). Right: Focus:HOPE Center for Advanced Technologies. (Smith, Hinchman and Grylls Associates)

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Left and right: Corporate downsizing is pushing workers into self-employment and increasing the popularity of live-work housing. (Cheryl Parker)

Left: Sketch by LeCorbusier depicting the segregation of urban activities. Right: Hôtel industriel Le Dorian. Design by KLN Architecture. (© John A. Loomis)





The Machine Next Door

Robert Lane





Top: Jean Baptiste Godin's familistere proposed for Guise, France (1871) sought to remake the industrial city from scratch.

Above: Diagram for a garden city, from Ebeneezer Howard's Garden Cities of To-morrow (1898). Despite the well-documented decline of urban manufacturing, new in-city industrial districts are still being developed — not by private enterprises, as they once were, but by public agencies that want to revive deteriorating inner-city neighborhoods and bolster sagging urban economies.

The hope is that these new districts can offer modern, competitive accommodations for manufacturing. More often than not, their design looks to the model of the suburban industrial park, not to the neighborhoods that surround them or to manufacturing areas that have evolved more or less organically elsewhere in the city (and are considered obsolete). Characteristically, the result is a single-purpose district that is laid out on superblocks and developed with large floor-plate, single-story factories surrounded by ample space for off-street loading and parking.

These "in-city industrial parks" respond to many concerns that cause manufacturers to leave cities for suburban sites, their sponsors say. They minimize conflicts (environmental and transportation, for example) with surrounding areas, provide room for expansion and deter real-estate speculation. Most importantly, they create inwardly focused precincts exclu-



sively for industry, protecting the manufacturers from the problems of the marginalized neighborhoods in which they are located.

But how viable is the suburban industrial park model for in-city industrial districts? The appeal of ample space far from the congestion and conflicts of the city must be reconciled with the desire of many firms to locate near the city center — near specialized design, finance and marketing services; accessible to a flexible, diverse and specialized labor pool; and close to networks of suppliers and contractors that often remain centered around historic industrial nodes. (Two-thirds of New York City's industrial jobs, for example, are within a three-mile radius of Midtown.)

The single-use character and coarse grain of the suburban industrial park may be appropriate for some in-city industrial districts. But many manufacturers benefit from proximity to shops, services and housing. Even the suburban industrial park has been superseded by the mixed-use "business park," which contains light industry, offices, wholesaling, research and development, recreational facilities and day care. (Some aggressively managed urban districts, such as the Brooklyn Army Above: Diagram of Tony Garnier's prototype Cité Industriel (1904), showing segregation of industrial, residential and historic districts.

Background: Mixed industrialresidential Hunters Point district in Queens, New York, across the East River from Midtown Manhattan.

(Illustrations courtesy Robert Lane)

Research for this article was funded in part by grants from the National Endowment for the Arts, Design Program, a federal agency, and from the New York State Council on the Arts.



In New York, industrial areas (darkest shades) cluster along waterfronts and within three miles of the downtown and midtown commercial cores. Industry is remarkably dispersed, with more than a third located outside areas zoned for manufacturing. (New York City Department of City Planning)

Terminal, follow this strategy.) Also, a healthy manufacturing economy needs a mix of businesses — big and small; fabricators, assemblers and distributors; those that serve regional markets and those that serve special niches. In-city industrial parks are rarely developed with that complexity in mind.

If the agenda for urban renewal includes the economic and social goals of revitalizing deteriorating neighborhoods, then industrial districts must do more than address the programmatic and city planning requirements of manufacturers. They must weave industry back into the city by combining it with other uses, particularly housing. For many communities, large-scale, inwardly-focused or fenced-off industrial parks are as much a blighting influence as what was there before.

From Industrial Park to Urban Renewal

The practice of using suburban industrial parks as a model for new, in-city industrial districts can be seen as an outgrowth of the century-old planning practice of rooting industry out of cities and relocating it in the landscape.

Nineteenth-century ideal town plans abandoned the city, choosing instead to propose new communities in rural land-





Top: Nineteenth-century loft district near Commonwealth Flats, Boston.

Above: Pershing Road planned industrial district, Chicago.

scapes. Industrialists were motivated by the desire to find healthier and more productive living conditions for their workers ("workers villages" such as Saltaire in Bradford, England, 1852, and Pullman City, Chicago, 1867). Utopian Socialists, on the other hand, were motivated by the desire to remake the city from scratch according to new scientific, social or political programs (for example, Robert Owens' settlement at New Harmony, Indiana, 1826 and Jean Baptiste Godin's *familistere* at Guise, 1871).

Industrialists and reformers alike proposed that buildings be grouped according to function with housing and industry separated (a notion formalized in zoning). Even Tony Garnier's *Une Cité Industrielle* (1904), which celebrated industry as integral to the urban economy, followed this tradition, locating industry securely in a separate precinct, away from the "old town" city center and the new residential and commercial districts.



Typical contemporary suburban, industrial park.

Planned industrial districts were successfully pioneered in the U.S. at Bush Terminal in New York (1895-1915) and the Central Manufacturing Districts in Chicago (1905-1931) and Los Angeles (1922). The history of these districts (which were often sponsored by railroads) is not a linear progression from city to suburb or from lofts to horizontal factory; a mixture of configurations is evident even in the earliest districts. At Chicago's Pershing Road development (1916), elaborately detailed, monumental loft factories create an urban edge to a park and a residential neighborhood. At the other extreme, Chicago's Clearing districts (1909), were among the first to be located beyond existing industrial concentrations and to provide horizontal factories with removable end and side walls for expansion.

Nevertheless, these early developments shared a number of characteristics that became hallmarks of industrial district planning: the use of large sites (as much as 40 acres) to allow for expansion, off-street loading and landscaping; developer control over issues like the types of industries that could locate in the district, building materials; and, with the exception of some specialized support services, such as shipping management and banking, they all prohibited non-industrial uses.

By the late 1940s, industry began to locate along emerging highway networks, especially ring roads. The New England Industrial Center on Route 128 (Needham, Mass., 1949) is the paradigm of this kind of development. These are the first real suburban industrial parks, differing from earlier planned districts in their reduced site coverage, complete reliance on the horizontal factory and emphasis on appearance and landscaping. They offered large tracts of inexpensive, easily developable land with flexibility for expansion and convenient access. There was a political agenda as well: the suburban campus of low-rise factories surrounded by landscaping came to symbolize not only clean, modern industry, but also freedom from the crime, congestion and labor unrest of the industrial city.

At the same time, private developers abandoned the concept of the planned urban industrial district. Those who chose to build in the city found themselves constrained by zoning that seemed to reflect suburban planning principles — encouraging single-use areas with large-scale, low-site coverage buildings. Rather than building out the allowable floor area with expensive multistory buildings, industrialists built economical singlestory factories, leaving a third of the site open for the off-street parking and loading spaces required by the zoning.

The adoption of performance standards as a basis for zoning seemed to suggest that industry could be accommodated in the city and close to other activities, if nuisances could be controlled (noise, unhealthful or noxious emissions, truck traffic). But severe restrictions on commercial activities and



Above: Typical suburban industrial building, with articulated front office.

Below: A single-story factory recently built at the Rheingold Industrial Park in Brooklyn.



the absolute prohibition of residential uses in manufacturing districts seemed to suggest that industry must be isolated. These restrictions sought to protect the manufacturing areas from real estate speculation and displacement, but at the same time they tended to cut manufacturers off from the rest of the urban economy.

As urban manufacturing has continued to decline, the planning of new, in-city manufacturing districts has been left to public development agencies trying to save what remains. Theoretically, the urban renewal process allows these agencies to experiment with new configurations unconstrained by the limitations of zoning. But these agencies have ignored the lessons of earlier urban industrial districts, instead using urban renewal to replicate the building types and planning principles of the suburban industrial park. Often, urban renewal plans simply rely on the standard zoning regulations.

Neither zoning nor urban renewal practices have kept pace with the changing nature of manufacturing. Performance standards, for example, do not reflect innovations in production technology and environmental regulations have made many manufacturers less noxious. The separation of uses does not recognize that many manufacturers thrive on easy access to housing, services and shops. Nor does zoning easily accommodate the healthy mixing of activities that is occurring within manufacturing enterprises — fabrication, assembly, warehous-



Mixing Uses in Manufacturing Districts

One of the fundamental problems of fitting industry in cities is economic. Although manufacturers might prefer locations near the city core, they typically cannot afford the rents that commercial or residential activities command and can easily be priced out, through either redevelopment or speculation.

In Boston, designers are addressing this issue by proposing mixed-use building types that combine production spaces with businesses that generate ing, management and retail sales often take place in the same facility. Live-work spaces that combine small studios or workshops with living spaces are increasingly common.

In New York City, the resilience of mixed-use neighborhoods like Hunters Point and Williamsburghas resulted in increasingly complex and sensitive regulations for these places. Special districts that recognize and reinforce the existing mix of industrial and residential activities have been mapped. Unfortunately, special district zoning is essentially static, preserving what already exists rather than allowing a mix of activities to replicate itself in new places or to reinvent itself in a modern form.

The Problems of Building Type and Site Planning

The suburban industrial building type is essentially a one-story structure with a large floor plate and surrounded by open space for parking and loading. Often, when buildings like these are introduced into older urban areas, they are out of scale with their surroundings, and their architecture often lacks the complexity of the urban fabric.

They are rarely expressive of the activities that occur inside and relate poorly to nearby buildings and public spaces. In the suburbs, architects address this problem through the design of other program elements, particularly the front office, which



New York City manufacturing building with glazing at the upper level.

higher rents (such as offices or studio space) coupled with new public infrastructure (parking garages, pedestrian streets and public spaces) necessary to support denser working districts.

One proposal was set forth in the late 1980s for Marine Industrial Park, a former military base along Boston Harbor east of downtown. The plan, prepared by the design firm Arrowstreet for the city's Economic Proposal for Commonwealth Flats Industrial District. Buildings can accommodate industry, offices or studios. Some streets are pedestrian oriented, others are service oriented. Courtesy David Dixon.









Flatlands Industrial Park, Brooklyn, after (top) and before urban renewal, demonstrating the superblock strategy (1959).

Below: Chicago's West Central Industrial District (1956), an early industrial urban renewal project.



becomes a highly articulated and symbolic element placed in front of the factory to modulate the otherwise unrelieved mass of the factory box. On other walls, the only relief is an occasional row of clerestory windows that lets light into production and storage spaces. In urban areas, for reasons of cost and security, front office space tends to be represented only as a strip of windows at mezzanine level and a single large entry below. Blank side and rear elevations help give industrial districts a hard edge, but also create an uninviting streetscape.

The problem is not necessarily the large floor area that these factories seek; older manufacturing districts thrived with enormous, monumental loft buildings (sometimes 150,000 s.f. per floor) that not only have strong architectural character but also animate the street with their multiple entries and large number of workers. In urban renewal areas, however, factories can be several hundred thousand square feet on one story, one entrance and a loading area set back from the street. This building type provides the expansive, column-free space manufacturers favor for horizontal production methods, but it rarely incorporates other uses (restaurants, stores, etc.) at a neighborhood scale.

These problems are exacerbated by the application of suburban site planning principles, in particular the desire to create ample off-street parking and truck loading areas. These vast, passive open spaces result in reduced densities that are often

Industrial Development Corporation, suggested that buildings with up to four stories of industrial space and four stories of offices above (space for research and development operations, for example) would be economically feasible.

For the nearby Commonwealth Flats area, urban designer David Dixon has proposed a "kit of parts" of building and street types for a high-density industrial district. Mixed-use buildings would include industrial space on the ground floor and space for compatible, related uses, such as design or engineering firms, above. Industrial buildings would provide multilevel space for industry (such as high-tech assembly or food-related industries). Parking would be provided in garages.

Dixon also proposed that industryrelated activities and pedestrian-related activities be segregated onto alternating streets. Buildings on "city" streets would have a consistent streetwall lined at ground level with retail and support office space. Pedestrian entries to all buildings, including garages, would front these streets. Wider "service" streets would provide space for truck circulation and loading.

Street character was also an important issue at Marine Park. Pedestrians routinely pass through the site, not only to get to work, but also to reach public spaces along the harbor, attend jobtraining programs and take industrial tours. The plan established a "public pedestrian zone" that included both streets and key features like harbor overlooks, a transit center and a public plaza. These would be positive, comfortable, interesting spaces — with well-defined streetwalls; plantings, signage and street furniture scaled to pedestrians; and building design that makes industrial processes apparent from public places

- Todd W. Bressi

incongruous with the surrounding urban pattern. They can be contrasted with older manufacturing districts, in which onestory factories or multistory lofts create a streetwall that helps establish the street as a positive, urban space. Parking takes place on the street, on consolidated open lots or within the building itself. Trucks load from the street or within the building. In the in-city industrial park, however, a factory will cover at most two-thirds of its site in order to provide off-street parking, loading and landscaping — spaces that are not active enough to animate the street.

Finally, industrial redevelopment plans still labor under the legacy of the urban renewal process itself, which has tended to replace older urban patterns with larger scale, lower site coverage developments. This history is well known in relation to housing projects: Slums were cleared and streets were closed so they could be replaced with tall towers arranged in large open spaces.

A similar strategy was employed for industrial projects. Of the 676 federally assisted urban renewal projects planned or underway in 1962, 119 were industrial, comprising 23 percent of the acreage of all urban renewal projects. Streets were closed to create superblocks large enough for the large horizontal factories and the associated off-street parking and loading. By closing some streets and allowing others to remain open, the superblock strategy was a compromise between the notion of a secure, limited access precinct and the need to make some connections to the surrounding street system.

Industrial urban renewal areas were planned in locations as disparate as Murfreesboro, Tenn. (1954), Norfolk, Va. (1956), and New York City. The 1956 cover of *Commerce* featured a photograph of Chicago's new West Central Industrial District district and boasted: "Slums like this make way for new industrial plants." Significantly, the photograph gives no suggestion of the district's urban location, despite its proximity to Chicago's Loop.

While the "tower-in-the-park" approach to housing has fallen out of favor, the model of recreating the suburban industrial park in the city has not been abandoned. Recent industrial redevelopment projects such as the Rheingold Industrial Park (Bushwick and Flushing Avenues, Brooklyn, 1987) and the Mid-Bronx Industrial Park (Bryant and Longfellow Avenues, Bronx, 1988) continue to rely on suburban planning principles.

The Industrial Park Considered: Bathgate

Several industrial urban renewal projects have been located in the South Bronx. A comparison between the existing Bathgate Industrial Park and the proposed Morrisania Industrial Park illustrates the powerful hold suburban industrial park principles have on city agencies and the difficulty such projects have

Left: Plan for Marine Industrial Park, showing possible buildouts and the use of building form to define public ways.

Below: Prototype building forms at three densities that mix industrial uses on the ground floor and studio or office uses above.





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Heavy industry still exists near downtown Chicago in the Clybourn corridor, now designated a "planned manufacturing district."

in catalyzing renewal in surrounding neighborhoods.

Bathgate, developed by the Port Authority of New York and New Jersey, occupies a two-block by four-block site, about 21.5 acres, along Third Avenue just south of the Cross Bronx Expressway. Six large horizontal factories have been developed there; each is about 70,000 square feet; each offers a simple masonry shell with high ceilings and a flexible, column free floor plan. Unlike most urban renewal projects, existing streets (Bathgate Avenue and several cross streets) were maintained.

Bathgate has been a success as far as industrial redevelopment is concerned, so much so that there are plans for expansion. It has been almost continuously occupied by a variety of industries, including printing and manufacturers of generic drugs, aircraft supplies, picture frames, and computer hardware. Bathgate employs a total of 1,550 people, most of whom are from the Bronx.

But Bathgate has not been a successful catalyst for renewal of the surrounding area. Neither of the two housing projects built recently in the area engage the industrial park. To the east, the Crotona Terrace Apartments project (1994) is oriented towards Crotona Park, turning its back entirely on Bathgate. New housing is being developed to the south, probably because this is the one edge of Bathgate where existing residential fabric was allowed to remain.

Bathgate is an alien presence in the neighborhood. Despite the continuity of streets through the site, it is widely perceived as a fortress because of the fences, the security patrols and the fact that the few windows and doors that exist face only the park interior. Looking north from Claremont Parkway, a view framed by the few remaining tenements, one senses the tremendous contrast in scale and density between the industrial park (marked by its flat production buildings and strange high-mast security lighting) and the more typical tenementscale fabric of the Bronx.

Bathgate, according to its marketing literature, "combines the advantages of a well-supervised suburban industrial park





with a prime urban location." This statement is at least half true. Bathgate offers the advantages of a suburban industrial park, but it cannot possibly offer the advantages of an urban location if that is meant to include benefits like access to housing and business support services, the ability to share resources and information with companies in related industries, and local places to eat and relax. Ironically, because of the state of the surrounding neighborhood, a Business Assistance Center was built within the park to provide support services, such as photocopying, postal, secretarial and restaurant services — the very things that a truly urban location would offer.

The Industrial Park Reconsidered: Morrisania

The Morrisania Industrial Park has been proposed for an island of industrially zoned land in a desolate neighborhood at the geographic center of the South Bronx (although plans now are on hold). The site is especially attractive because its unusu-



The Bathgate Industrial Park site, before (left) and after (right) urban renewal took place.

al street configuration produces a number of over-sized blocks that contain what the city calls "mid-range industrial sites," parcels of 25,000 to 100,000 square feet that are difficult to find, even in the de-urbanized South Bronx. Unlike most urban renewal projects, no streets will have to be eliminated to accommodate horizontal factories.

In a number of ways, the city's proposal for the Morrisania Industrial Park represents a new direction. It accepts a mixeduse approach to the site, allowing community facilities (churches, a post office, a fire station) and even tenements to remain, at least in the short term.

More importantly, the proposal is organized not around an inward-looking parking and loading space but along a street, Washington Avenue, which connects two residential areas the Claremont Village public housing project and Melrose Commons. The plan calls for developing Washington Avenue as an urban amenity and all entrances and front office spaces associated with the industrial buildings face this central street.



Illustrations courtesy James Pettinari.

A Twenty-First Century Production District

Sandwiched between the east bank of the Willamette River and a commercial corridor a few blocks inland is one of Portland's "industrial sanctuaries" — districts in which zoning protects industry from the speculative advance of housing and offices. Several years ago University of Oregon architecture professor James Pettinari led a series of community charrettes to design a "Twenty-First Century Production District" characterized by mixed uses and modern industry.

The proposal shown above, one of several alternatives, couples a waterfront park with a "superblock" scheme for the sanctuary. Pedestrian-oriented streets run from the park through the sanctuary, connecting to the Union/Grand commercial corridor and neighborhoods to the east. These streets alternate with industrial service streets. The superblock edges along the pedestrian streets would contain retail, commercial and showroom uses; along the service streets they would be devoted to truck access. The larger-scale drawing shows the head building of a river-edge campus; it includes meeting and exhibit halls for industrial and public use. Instead of making a clearly defined and defensible precinct, such as Bathgate, this proposal attempts to make connections to the neighborhood.

Ultimately, the Morrisania Industrial Park would be subject to the same limitations as other industrial parks. It would be comprised of large, windowless factories, covering at most two thirds of their sites. Open space would be configured in a way that reflects only haphazard land ownership patterns, instead of a clear urban design intent. The problem of the vast parking and loading areas has not been solved but, simply, moved to Third Avenue, also an important local street. Placing frontoffice functions along Washington Avenue will not add much life to the street unless they are expressed more strongly in the building design than has been typical for new in-city factories. Most importantly, the plan does not include the non-industrial uses that the manufacturers depend upon and help comprise integrated, working neighborhoods — restaurants, shops, recreation facilities, support services, even places to live.

There is no argument in the surrounding community about the need for public and private investment. But as much as the community wants industrial jobs, it also wants housing because repopulation will bring more political representation and power. There is real skepticism in the community that the Morrisania Industrial Park will bring renewal to the neighborhood.

Morrisania as Middle Ground

The following proposal for Morrisania builds on the model of New York's working neighborhoods, in which manufacturing is part of a continuum of economic and social activities. It suggests ways in which the separation of housing and industry can be compromised in favor of a more complex and finely-scaled mix of activities — one that reinforces the neighborhood's physical, social and economic structure and reconciles the city's desire for industry with the community's desire for housing.

This proposal also accepts the principal features of a 1990 community plan prepared with the help of Columbia University's graduate planning program. That plan calls for both residential and industrial development in the area, with industry confined to the blocks west of Washington Avenue, which would function as a residential spine.

There are two strategies for combining housing and industry and for structuring open space. The first occurs along the west side of Washington Avenue, where blocks of housing are placed in front of or intersect with factories. The residential buildings modulate the massing of the factories, which would otherwise remain unarticulated utilitarian boxes, and maintain the character of Washington Avenue as an important residen-





Alternative proposal for developing a manufacturing district in Morrisania.

Above: Looking northwest. In foreground, live-work buildings, housing and associated spaces east of Washington Avenue. Housing fronts production buildings on the west side of Washington Avenue.

Left: Typical interior of mixed-use perimeter block east of Washington Avenue.

tial spine. Essentially, the residential buildings become the facades of the factories; at some locations, the first story of the housing penetrates into the factory at the mezzanine level.

West of Washington Avenue, large, horizontal sheds would be the basic factory type, as at other in-city industrial parks. However, exposed masonry factory walls would be glazed at the clerestory level, keeping with precedents for this type of building. Production buildings would be configured so that they could be subdivided and include additional entrances for multiple users.

Shared off-street parking and loading spaces would be staggered throughout the area west of Washington Avenue; some parking would be located along a railroad cut on the west side of the site and connect via a series of bridges. Parking and loading spaces would be configured to create a sense of spatial order and be located so that they reduce the occurance of streets fronted by unarticulated building walls on each side.

East of Washington Avenue, the proposal suggests another way to bring housing and industry together. Here, industrial buildings would penetrate blocks that are mostly comprised of housing. They would be smaller in scale than those west of Washington Avenue, constructed on the module of the housing and glazed extensively. They would contain industries of a small, almost artisan scale, some of which would provide support for the larger industries west of Washington Avenue.

The residential and industrial buildings would be arranged with strong streetwalls along the perimeter of the block. The grade change between Washington and Third avenues would





New York City's proposal for Morrisania Industrial Park. The street pattern is retained, but many existing buildings are demolished and no new housing is proposed. Housing is orange; industrial buildings are pink.





Alternative proposal that retains most existing buildings and closely integrates housing and industrial development. Housing is orange; industrial buildings are pink.



Site of the proposed Morrisania Industrial Park in the South Bronx.

enable the space within the perimeter block to be divided along its length, creating both private backyards for the housing and a semi-public space along the side of the factory.

This proposal would animate the streets and make connections among the different activities in several ways. Most current residential, commercial and community uses would be maintained, preserving a variety of activities and building types. As in active manufacturing neighborhoods, the ground floor of the residential buildings along Washington Avenue would contain small retail, service and manufacturing establishments, and the scattered parking and loading areas would generate pedestrian traffic and create opportunities for streetlevel retail to be interspersed with industrial development.

This proposal for Morrisania represents a middle ground between two scales. One is the fine scale at which diverse but interrelated activities coexist in New York's working neighborhoods, where a single artisan may live and work in a row house or above a storefront shop. The other is the coarse scale at which manufacturers occupy industrial parks, where a single factory may be as large as an entire block. The bridging of



Alternative proposal for developing a manufacturing district in Morrisania. Above: Looking northeast, towards the mixed-use perimeter blocks east of Washington Avenue.

these scales is critical for building neighborhoods that work for manufacturers and residents alike.

Why Industry Can Work

Although there is a great deal of skepticism about the future of urban manufacturing, cities like New York have an important advantage: the economies that result from access to firms involved in complementary activities, to design, marketing, research and sales services, and to large consumer and business markets. This advantage is especially important for emerging industries that develop high-end, short production-run items, where the cost of the finished product is less important than the quality of the design and the ability to market it quickly.

While there will always be a need for some large-scale, isolated industrial sites in cities, the changing nature of production suggests that industrial development must also become more finely tuned. The tools of zoning and urban renewal must recognize the diverse mix of uses characteristic of true working neighborhoods.

A number of factors — building typology, zoning and the urban renewal process — have resulted in the substitution of industrial park planning for industrial district planning, favoring the creation of large, single-purpose developments. For industrial redevelopment to succeed, it will have to accommodate to the smaller scale enterprises that are the true strength of an urban location. The greatest obstacle is not the formal problem of combining disparate uses, but overcoming the prejudice that has made the suburban industrial park the totem of the reformed city — and has branded the working quarters of the industrial neighborhood a symbol of a dying past rather than a vibrant future.

Alternative proposal for developing a manufacturing district in Morrisania.



Hôtels Industriels

John A. Loomis

In considering Parisian architecture of the past decade, one tends to think of the grands projets, the highly published monuments to outgoing President François Mitterand's corporate welfare state. But there have been more modestly scaled public initiatives that have, perhaps, had a more profound collective effect on the well-being of the capital of France.

Some of these works have been in housing and are known among the international architectural public. But another type of project — *bôtels industriels*, or mixed-use, multitenant facilities that primarily house production activities — is relatively unknown. These works of architecture and urban design are a result of an enlightened public policy that recognizes the value of small- to medium-scale manufacturing to the urban economy and that seeks to maintain and nurture it within the city proper. The *bôtel industriel* projects illustrate how sensible economic public policy can result in architecture and urban design of merit.

Paris, known as a center of government, commerce and culture, has long been a center of production as well. Ninety percent of the city's production enterprises employ fewer than twenty people each. These small- to mediumscale manufacturing and craft production operations have been accommodated in various quarters of the city. These neighborhoods traditionally contain a rich mix of functions that include commercial and residential along with the production activities. These activities include printing, textile and clothing production, furniture and cabinetry fabrication, metalworking, electronic assembly, and craft-oriented activities like antique and art restoration. Some of these activities have traditionally been associated with specific quarters - jewelry and leatherwork in the Marais, furniture in Faubourg Saint Antoine, clothing in Sentier and metalworking in the northeastern part of the city.

Research for this project was supported, in part, by an Arnold W. Brunner grant from the American Institute of Architects, New York chapter.

Hôtel industriel Metropole. Design by Jean-Paul Viguier and Jean-François Jodry.

Photos © John A. Loomis.





Hôtel industriel Cité Beauharnais. Design by Patrick Colombier and Danièle Damon.

Paris has not escaped the forces of deindustrialization that have affected so many cities in Europe and North America since the 1960s. From 1962 to 1968 there was an average loss of 3,000 jobs a year in the production sector; from 1968 to 1975, 7,000; and from 1975 to 1978, the loss reached a shocking 20,000 jobs a year. These losses were not compensated by an equivalent gain in the service sector. By 1978, 180,000 production jobs remained in the city, representing ten percent of the work force. According to a 1987 census, 25,425 enterprises within the city were still engaged in some sort of production activity.

Instead of accepting this decline as a natural phenomenon of the postindustrial city as have so many other municipalities, Parisian authorities became alarmed at the situation and sought means to analyze and address it. The city took the position that production activities were an important part of Paris' economic base and served a more diverse working population that just the service sector. "All sectors of the population have their place in Paris. Each must be able to find appropriate housing and work and they must be able to live and work in the capital," stated former mayor Jacques Chirac (now France's president) in a report on the subject in 1978. The same report also recognized that a speculative real estate market often threatened neighborhood diversity, so vital to Parisian tradition, and stressed that it was important that well-serviced, diversified neighborhoods be maintained.

In 1978, Paris launched a program to retain existing production enterprises within the city and encourage new ones. It centered around the promotion of *hôtels industriels*, modern, flexible, multitenant, multiuse facilities to be located largely within Paris' working-class districts. By 1983 five *hôtels industriels* had been developed; today there are more than forty operating successfully in various parts of Paris.

The Bureau Municipal des Activities Economiques was largely responsible for developing the program and acted as organizer-facilitator, bringing together investors, developers and small producers. In many of the projects the city provided parcels of land that it owned for development. In these cases the developer had the use of the land lease free for seventy years, after which the land would revert to the city. In other cases, land taxes were structured so as to make development attractive to investors. The agency smoothed the way through permitting processes and other municipal regula-



tions to facilitate development, and it took an active role in helping developers secure tenants. While developers selected their own architects in early projects, later projects have most often been awarded to joint-venture teams through architectural competitions. This process has resulted in both architecture and urban design of high quality; some projects have been designed by internationally known architects like Renzo Piano, Paul Chemetov and Domenique Perrault.

Two projects of very different scales can be examined to indicate the variety of projects created by this program. The atelier-workshops of the Cité Beauharnais by architects Patrick Colombier and Danièle Damon, are part of a new mixed-use complex that was inserted into the nineteenth-century fabric of the 11iéme arrondisement (a district in east-central Paris), which has large North African population. The new project also includes social housing (its largest component), a day-care center, offices and a park.

Six ateliers lining the small street rue Beauharnais accommodate printing, woodworking and graphics workshops and take up a total of 1,400 square meters. The metal-clad ateliers, with their raised, boxlike mezzanines face the housing and form a very active part of the street life of this welldefined neighborhood.

Quite the opposite in scale is the Valin project, by architects Paul Chemetov and Borja Huidobro. Located in the 25iéme arrondisement



Hôtel industriel le Dorian. Design by KLN Architecture.

> and forming a strong urban edge to the six-lane boulevard Martial Valin, this is one of the largest *bôtels industriels*. Providing flexible production spaces along its 300-meter length, this fivestory building spans two long blocks and employs a modern architectural vocabulary; nevertheless, it makes a very Parisian and Hausmann-like edge to the busy and overscaled boulevard. Generous accommodations are made for pedestrians and bicycles along the tree-lined sidewalk. Stores share the ground floor with production concerns.

> The rest of the complex is occupied by a variety of activities including woodworking, printing, video production, lithography, graphics studios, software developers, offices and a high school. Around the southeast corner of the project the tree lined sidewalk turns into a nineteenth-century residential neighborhood, making an easy translation from one fabric to another in a very Parisian, good-neighbor tradition.

> The Valin and Cité Beauharnais projects demonstrate on very different scales how creative and innovative public policy can result in a socially responsible and well designed urban environment. These lessons are not inappropriate for our own cities.

Hôtel industriel Pantin, a similar project outside Paris. Design by Paul Chemetov and Borja Huidobro.

DETROIT





Focus: HOPE Center for Advanced Technologies

A deteriorating factory can be a sore reminder of troubled economic times. In Detroit, an abandoned, 50-year-old Ford engine plant is now a sign of hope — a Center for Advanced Technologies at which up to 175 students learn how to use state-of-the-art machinery and make components for the automobile and aerospace industries. CAT is part of a vigorous community and economic development program sponsored by Focus: HOPE, a Detroit civil rights organization.

CAT's program is supported by the building's design, which seeks to dispell the notion that factory work is a dusty, grimy dead end. Architects Smith, Hinchman & Grylls connected the lobby and conference area to the production floor by raising the first sawtooth, creating a visual connection that reveals the work process. Screens suspended in this triple-story "supertooth" are used for video displays. The production floor is punctuated by black "power towers," each of which includes a glass-enclosed meeting room, amenities and mechanical space. These dramatic structures anchor "neighborhoods," or clusters of work stations.

Viewed from the outside, however, the building offers few clues about this transformation. Monitors poke through the sawtooth roof above the power towers; a glass-enclosed, sawtooth-shaped enclosure was added behind an office block and two new stairwells were appended. "It's more important to look at the building's entire 60-year existence, rather than each chapter of its life," project designer William Jay Hartman said. The plant symbolized progress when it opened, discrimination when AfricanAmericans who moved to the neighborhood couldn't get jobs there and decline when it closed, he said. "It seems shortsighted simply to undo the last impression, because there certainly will be others in the future."

- Todd W. Bressi, Galith S. Marcus

Top left: CAT occupies a former Ford plant in a west side Detroit neighborhood where the unemployment and labor force dropout rate averages 45 percent.

Top right: The plant is divided into six manufacturing and teaching cells ("neighborhoods") anchored by dramatic, landmark "power towers."

Right: Each "power tower" includes glass-enclosed training and conference rooms that look out to the production floor, as well as restrooms, drinking fountains and local temperature and power controls.



(Illustrations courtesy Lyndon/Buchanan Associates, unless otherwise noted)



The Bayer complex in West Berkeley. Above: Historic industrial fabric and figure ground of current conditions. Below: Pedestrian and vehicles share an existing service alley.



Bayer Corporation's biotechnology research and production facilities in Berkeley are the city's largest industrial employer and the vanguard of its hope for an expanding biotech future. So the company's desire to chart a master plan for rebuilding its aging facilities posed important challenges, ones that have led many other companies to abandon cities for easily developable suburban sites.

Bayer (formerly Miles Inc.) sought a flexible plan that would allow its facilities to evolve over 30 years. That required variances from existing zoning heights for production buildings and assurance that the city's process and time frame for processing permits would be predictable and expedient. The city wanted to retain its largest employer and ensure that any changes to its development policies were balanced with adequate public benefit. And the community needed the jobs it might get from the company's expansion, assurances of about the safety of biotechnology, support for local educational programs and confidence that future development would result in a visually appealing site.

In 1991, the company hosted an invited competition and selected Berkeley-based Lyndon/Buchanan Associates to design the first production building and develop design guidelines for the rest of the site. The problem

required the designers to look both inward and outward. The plan had to establish a set of relationships among buildings and spaces that created the campus atmosphere Miles desired. Other concerns included servicing the site, making it secure and ensuring that spaces could be flexible enough to accommodate changes in technology and production processes. At the same time, the guidelines - which would require community review and city council approval - had to establish a mutually supportive relationship between the facility and the surrounding West Berkeley neighborhood, which includes a residential district and a waterfront park.

Creating an Urban Setting

The master plan deals with the internal configuration of the complex by setting forth a series of types of building spaces (eleven, including production spaces, service and utility spaces, office and reception spaces, parking and warehousing) and open spaces (ten, including street corridors, courtyards, windbreaks, delivery spaces, entries and boundaries, and surface parking). The streets and service access routes are classified as campus, industrial or service, each with its own characteristics and relationship to building spaces



Various types of building spaces are combined in guidelines for a production building. (1) Production spaces (2) Service and utility spaces (3) Office and reception spaces (4) Gathering, conference and relaxation spaces (5) Mechanical equipment spaces.



Entry court: next to offices and filled with plantings.

Production spaces: large, simple volumes with bays.



Office spaces: independently roofed elements.

and open spaces adjacent to it. The plan also designates uses by zone.

Architectural guidelines are attached to each type of building space; several types of space might be combined in any one building. The guidelines are related to the character of each type of space while meeting functional requirements. For example, production spaces have simple volumes that are large in plan and have high roofs; they would have a loose fit that allows equipment and processes to be properly arranged and serviced and easily changed as the need arises.

Office and reception spaces lend a human scale to larger production volumes and to the spaces next to buildings. So the guidelines recommend that elements for office, lobbies and circulation space should be more finely scaled and independently roofed, with their volumes defined by use of shadow casting eaves or other devices that establish a horizontal subdivision in the facades. These volumes also could be interrupted by incidental elements, such as recesses, balconies, porches or other openings or volumes that indicate entrances, internal gathering spaces and spaces of visible activity.

The open spaces at the project are also classified into distinctive types, each with its own purpose, character and relation to buildings. For each type of open space, there are guidelines for landscaping and the relationship to building spaces. Several types of space might be combined in any one area, or along any street. Entry courts, for example, located at each main building entry, will have special paving and colorful plants in pots or planters, and the building spaces that adjoin them should be offices and gathering spaces.

Creating a Setting Within a City

At the same time, the master plan was crafted with a sense of the Bayer campus' position in the city. This involved the treatment of the edges of the site,







Left: Composite of guidelines for buildings, spaces and streets.

Below: Important view and movement corridors through the site.

preserving visual corridors through the site and locating large production buildings among the smaller, incidental structures and warehouses.

Most of the campus is separated from the surrounding area by streets, and the character of the areas that abut the property ranges from a residential neighborhood to a waterfront park to heavy industry. Bayer acquired its site piecemeal over the course of several decades, and some of the streets that originally cut through the property still exist. The plan retains much of that street pattern, including the two streets that still relate to the city grid.

It also allows for a web of view corridors, particularly from the streets into the waterfront park, and from the park and the adjoining freeway into the Berkeley Hills two miles to the east. These view corridors are reinforced by setback requirements — some at ground level (especially the current street patterns) and others that locate the upper volumes of taller buildings.

Dwight Way runs between the site and perhaps the most sensitive context, a mixed-use, commercial-residential neighborhood. The plan calls for buildings to be set back enough so that a sequence of public open spaces can be created along the street, providing visual access to Aquatic Park; these spaces could comprise a promenade, open green or garden court. Buildings will also be configured so that offices and gathering spaces overlook the street; one new building has added a human presence and around-the-clock "eyes on the street" on a rarely used dead-end at the railroad tracks, which has been cited as a public nuisance.

Finally, the buildings would create a frontage with a cohesive scale, while the main building entrance at Dwight and Sixth would be made distinctive with an architectural element such as an arcade, porch or canopy, and new buildings at the area of Dwight and Seventh (a prominent intersection) would serve as an architectural anchor.

Approving the Plan; Building the Campus

The master plan is part of a "development agreement" between Bayer and the city. It was drafted through an intense process of community education, negotiation, public hearings and review by sixteen public commissions





Left: The Bayer campus sits at the edge of West Berkeley and is separated from Aquatic Park by a railroad line. This view looks south to Emeryville and Oakland. (Stefan Curl)

Below: Building 54, one of the new projects undertaken since the development agreement was approved. (Mark Darley/ESTO)

and was finally signed in February, 1992. Bayer's projects still need to obtain city permits and approvals, but the development agreement helps make the process predictable by providing detailed, up-front information about what is intended and expected.

Since the agreement was approved, more than sixteen projects totalling 250,000 s.f. of building construction have been reviewed by the city, most going smoothly through the process. Bayer has approved more than \$150 million for new construction, substantial rehabilitation and site improvements. These projects include new buildings, additions to existing buildings, an overhead pipe rack that distributes utilities throughout the site, and less visible improvements like seismic upgrades and interior renovations.

The plan has also helped Bayer make incremental investments with the confidence that they will add up coherently. Says Rick Srigley, a vice president at Bayer, "With each building, our project managers face a range of decisions. While technology, cost and project scope ultimately drive the decision-making process, the design guidelines have been extremely useful in directing the architecture and planning so that we are assured the site is developed with sensitivity and consistency."

Credits

Client: Bayer, Inc.

Urban Design and Architectural Consultant: Lyndon/Buchanan Associates, Berkeley.

Strategic Communications Consultant: Fern Tiger Associates, Oakland.

Landscape Architect: John Northmore Roberts and Associates, Berkeley.





C: Chiron site.

- D: Amtrak station.
- E. 40th street extension.

Reinventing the Wild West

Terezia Nemeth

Emeryville and Berkeley share a common heritage as vibrant early industrial settlements across the bay from San Francisco, and both have experienced the exodus of major industries in recent decades. Each of these next-door neighbors has been successful at reshaping its once-thriving industrial areas, but their responses have been remarkably different, following from their history, physical fabric and politics — from the distinct nature of each place.

This day-care center, a strategic infill development in Emeryville, makes a transition between light-industrial and residential areas. (Illustrations courtesy Terezia Nemeth)



In West Berkeley, live-work housing is helping to fill in a neighborhood that was once more solidly manufacturing.

Modulated Links

Seventy five years ago West Berkeley (then Ocean View) was home to a variety of industries, including Pioneer Starch and Grist Mill, Manasee Tannery, California Ink (now Flint Ink) and Cutter Laboratories (now Bayer). It was a diverse neighborhood, including inexpensive worker housing and small, locally oriented stores and saloons intermixed with the industrial uses. Today Berkeley offers few opportunities for new development. Most exist in West Berkeley, where the departure of major industries has left large gaps in the city's active fabric. But West Berkeley's history as an established, working-class neighborhood and its fairly extant street grid confounds the wholesale restructuring of underutilized areas.

West Berkeley has charted its resurgence by creating, through an intensive and arduous eight-year community process, a plan to guide development efforts towards a clear vision of the place. The changes have been subtle in comparison to action-packed Emeryville, but the plan is bearing fruit: small-scale conversions of industrial buildings to new uses, including light industry, commercial and residential; the emergence of centers of focused activity, such as a specialty retail area; the reinvestment of existing businesses, such as Bayer's 30-acre research, development and production campus; and

Stitching in Between

Emeryville's earliest reputation was as a working-class entertainment area, complete with an amusement park, race track, saloons, card rooms and brothels. Later it became a haven for heavy industry and large food processing enterprises, including ironworks, slaughterhouses and meat-packing plants.

This history set up a physical, social and political structure that encouraged large- and small-scale redevelopment to occur very quickly and randomly, but with great impact. Emeryville still has a low population and a physical structure characterized by many large parcels. Its business and political leaders have moved aggressively to transform the small city from an industrial enclave into the commercial heart of the East Bay. Now Emeryville is faced with stitching together its nodes of activity in hope that it can become something greater than the sum of its parts. The task is formidable: turning suburban megaplexes and insular industrial campuses into interconnected urban areas.

East of the Southern Pacific Railroad tracks lies most of the city's historic industrial fabric, where a multitude of large- and small-scale changes have been occurring. This part of the city houses the headquarters of new light-industrial enterprises like Chiron, a biotech plant, and Sybase, a software manufacturer. The newest projects are a 10-acre hopsital, research and office campus for Kaiser-Permanente and the 30-acre, "big box" retail East Baybridge Mall. These very large projects have reshaped Emeryville's physical structure, creating somewhat isolated centers of activity.

At the same time, many warehouse and industrial structures have been converted into live–work offices, wholesale operations and small-scale industrial and commercial ventures the continued reinvestment and expansion of residential areas. This mix of projects is creating links between existing ventures and new enterprises and having a modulated effect on the surrounding neighborhoods.

The plan establishes four land-use districts, finite zones with characteristically predominant land uses and development patterns. The districts provide a basis for identifying the spectrum of permitted uses and densities that will reinforce each area's existing character.

For example, the "mixed use–light industrial" district (about fifty square blocks on scattered sites) has traditionally been light industrial in character, along with a few exceptions — scattered houses, a Mexican restaurant, a branch of the East Bay Humane Society, a recording company in a multistory tower and offices in converted industrial space. New development has enlivened the area with restaurants, professional offices, artist space and wholesale retailers. The development has grown incrementally from its core at the center of Ninth and Parker streets, helped in part by the pattern of regular blocks and the prevalence of on-street parking, which generate and encourage pedestrian movement.

To the north of this area is a mixeduse residential and industrial district. As enterprises like the Berkeley Pump Co. began to move out, this district lost its manufacturing vitality, leaving older residences scattered among an array of abandoned industrial structures and disconnected from the more solidly residential areas further east.

Now new nodes of activity are emerging. The Berkeley Pump Co. buildings have been turned into professional office space, live-work units and a cafe. The design and character of the original complex were maintained even as it was adapted for new uses. The complex is decidedly in an industrial area and its design provides a pedestrian scale appropriate to its location, helping to enliven the streetscape and re-establish the links between Aquatic Park and the residential areas to the east.

New light-industrial users such as Peerless Lighting, machine and auto repair shops, are moving into some of the older, nearby industrial structures once occupied by manufacturers that made everything from water pumps to clocks and mattresses. This array of mixed-use development brings people from the industrial and residential areas together around the Tomate Cafe, offices and live-work units.



Small pedestrian-scale courtyards, such as the terrace of this cafe, are opening in the spaces between Emeryville's large-scale industrial buildings.
The plan also includes improved connections to existing parks and community assets, a street tree planting program, and improvements to existing traffic arteries. It has been effective, in guiding the type, size and preferred design of new development in the area. The district concept serves to cluster mutually supportive projects that provide a sense of community and considered growth within West Berkeley.





New investment on Tenth Street, in West Berkeley's "mixed use-light industrial district" — live-work units to the left and Nolo Press offices and retail at the right. The Fantasy Records building, behind Nolo Press, was developed earlier.

(such as printers, restaurants and manufacturers of specialty products like pasta, clothing and medical instruments) — enriching the mix of activities within the city.

Places are emerging where a synergy might develop. North of East Baybridge Mall, surrounding Emeryville's charming old Town Hall, is an area that still has many historic brick warehouse and industrial buildings intact. The city recently commissioned a plan to envision and implement changes that will create pedestrian activity between the mall, the future Kaiser Hospital site and the planned Chiron expansion.

The city has also used its coffers, well supplied through redevelopment generated tax-increment funds, to pay for housing projects, child-care centers, live-work projects, parks and infrastructure improvements. For example, the new Amtrak station started as an isolated island but is now being melded into the city's fabric with better street connections and the addition of a nearby child-care center (sponsored by the redevelopment agency). Another significant step has been to extend existing streets or create new ones to improve connections between places. One project will connect residential areas to the east with the East Baybridge Mall, the historic industrial area and the large, primarily commercial developments between the freeway and the railroad tracks.

The city is also trying to influence the design of newly proposed projects, Both Chiron and Kaiser, for example, have been encouraged to design "liner buildings" that incorporate retail uses along their public edges. The success of this strategy, however, will depend in part on the location of the retail activity, the volume of pedestrian traffic and the configuration and size of the retail spaces.

Emeryville has always been a place where big, bold things happened. As industry moved out, a combination of large- and small-scale users of all kinds began to claim the space. The result has been a sequence of not-so-well connected, but highly viable and interesting new activities in new and rehabilitated structures. It remains to be seen whether Emeryville's response — active participation in encouraging redevelopment of key locations, extending streets, making strategic public investments and increasing the review of development projects — can effectively weave together this scattered city. These efforts are constantly being reinvented as new projects are proposed without the restraining effects of a preconceived plan.



An example of Emeryville's architecturally expressive industrial fabric, across the street from the cafe shown on the opposite page.

Making a Twenty-First Century Neighborhood

Cheryl Parker

Since the late 1980s, San Francisco's South of Market, historically an industrial and port area, has been changing. In the blocks closest to the waterfront and downtown financial center, this change has been characterized by large-scale commercial and residential development, typical of the so-called post-industrial evolution that many cities are experiencing.

Just beyond this area a more complex, diverse community is emerging — one that includes people of different incomes, ethnicities, occupations and lifestyles while showing few signs of gentrification. This change, characterized by small-scale infill and renovation projects and a fine-grained mix of uses, is being fostered, in part, by the area's remarkably adaptable street patterns and building types.

From the 1950s through 1970s, this area was designated to be redeveloped by outside-in government forces into an extension of the city's financial district, but that plan collapsed under political opposition and financial difficulties. Today a different combination of revitalizing forces is at work — changes in corporate structure, new approaches to government regula tion and new channels for developing property and delivering services.

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Ironically, the roles are now reversed; the area is being revitalized from the inside out by a network of neighborhood-based builders, developers and service providers, who have invited public agencies to assist them.

South of Market offers lessons about how cities can nurture cosmopolitan neighborhoods while avoiding gentrification and lengthy, expensive redevelopment. Its story is especially timely in the wake of increasingly polarized settlement patterns throughout the U.S., the downturn of largescale, speculative real estate development and the decline of areas that surround downtowns. Its experience has broad applicability, especially to medium-sized and large cities that have administrative downtowns and successful networks of community-based nonprofit service organziations.

Historically, South of Market hosted manufacturing, light industry and infrastructure serving San Francisco's port. Long blocks, wide streets and flat land made the area ideal for this purpose: buildable parcels could be large and unhindered by the city's rolling terrain; goods could flow easily to and from the port. Products could be made and stored here, then shipped elsewhere in the nation and the world. Above: The web of relationships among landowners, local community development groups, government and foundations that is shaping the South of Market today.

Background: New live-work housing.

(Photos and graphics by Cheryl Parker)



South of Market is near San Francisco's waterfront and downtown. Financial, retail and tourist districts and the civic center are just across Market Street.

In the early 1960s South of Market's port-related activities started to become obscelescent, and business leaders proposed ambitious urban renewal plans for the area that sought to bolster San Francisco into a headquarters city. The redevelopment agency, federally backed and very powerful, razed neighborhoods and proposed superblock plans for high-rise office buildings, a stadium, convention center and hotels.

The intent of this large, fortress-like project, called Yerba Buena Center, was not only to accommodate white-collar office workers but also to initiate gentrification in nearby neighborhoods. Yerba Buena's development character would be foreign to the area's existing urban form, reflecting the new uses, the scale of the project and the desire to establish a visual symbol of progress.

But citizen protests about relocation stalled the project for years, and local and federal actions fundamentally altered its nature; financing ultimately collapsed in the the late 1980s real estate recession. Yerba Buena is now a cultural and entertainment district that includes a convention center, hotel and cluster of museums along with housing (some of it affordable housing developed under court order by nonprofits) at the edges.

Today, the area near Yerba Buena is changing quickly: half the property was sold between 1988 and 1993 (450 buildings in a twenty-block area).¹ Yet, this turnover has not resulted in widespread gentrification, displacement or large-scale projects. Rather, development has been incremental, through renovation or infill construction. The neighborhood's mix of housing, small business and light industry offers an attractive setting for people with a range of work situations and lifestyles.

The uses introduced by this new activity are diverse: business consultants, furniture-makers, printers, clothing manufacturers, photo-supply businesses, auto-body repair shops, architects, artists, florists, restaurants, cafes, art exhibit spaces, movie and television studios and so on. Some of these businesses serve downtown corporations, others are self-contained designer-manufacturers and others serve the emerging local community. Many of these businesses are reinhabiting older warehouses or lofts, suggesting that the infrastructure of a prior industrial era has been easily adapted to the needs of this emerging, diversified economy.

South of Market's existing building types and street pattern also readily accommodate small new residential communities. These "pocket communities" are tucked away throughout this mixed-use area, mostly along alleys. Characteristically, pocket communities are residential clusters no more than a block long that offer a sense of definition, safety and collective ownership. They can be associated with new residents and raised land values, though not always. Just as manufacturers have moved into both existing and new warehouses, pocket communities comprise a range of housing types — existing Victorian row houses or walk-up tenements, new infill live-work loft development and affordable housing built by nonprofit groups.

South of Market has a substantial low-income population. These residents are not concentrated in one large area; they live in separate, smaller communities that are dispersed and distinct from one another. This pattern avoids creating a ghetto of low-income people and it seems to curb full-fledged gentrification; with well-established, low-income communities living in physically separate, well-defined neighborhoods, new neighborhoods can emerge only by filling in left over spaces. An important component of cosmopolitanism, therefore, may be a dispersed pattern of many socioeconomic groups in pocket communities, rather than large concentrations of only one type.

Pocket communities feel safe, a perception that may be related to a sense of ownership. For example, several pocket communities abut Sixth Street, which is perceived to be high in crime. Yet, residents on some of these alleys claim not to have much crime. The residents explain that the regulars who hang out at the entrances to the alleys guard their turf: they are not likely to let outsiders through, nor are they likely to damage their own territory. Perhaps diverse groups can coexist peacefully if each has a sense of ownership of an area and neither desires part of the other's turf.

Why the Area is Changing in this Way

Restructuring corporations. Corporations are reorganizing in several ways. Some are creating smaller units and calling on shortlived, intensive, multidisciplinary work teams to design products, which are often tailor-made to respond to rapidly changing customer preferences. Many corporations are shedding middle management, support divisions and clerical staff replacing them with consultants or outside vendors. At the same time, telecommunications technology has enabled many types of workers, whether permanent employees or short-term consultants, to work in a more dispersed way.

Changes like these have several implications for building design, settlement patterns and urban form. For example, older office buildings (those built from the 1920s through 1970s) with large floorplates are often less desirable for these smaller, reconfigured corporations. Increasingly, they are being left vacant or renovated to suit other uses. (In the case study area, the vacancy rate of office buildings along Market Street that have sold since 1988 is 50 percent.) Loft office buildings have the highest vacancy rate of any properties recently bought. Thus, even though these buildings were designed and used for light industry (such as jewelry and furniture makers), that activity is now attracted to warehouses.²

There also has been a proliferation of work-from-home professionals and small business services companies. This may account for some of the pockets of home-based workers in South of Market and increasing demand for live-work spaces.



Redevelopment officials hoped South of Market would continue being developed with buildings like this office tower, near the financial district.





Two proposals for Yerba Buena Center. The bottom drawing depicts the cultural facilities, convention center, hotels and gardens that comprise the redevelopment area and its surroundings.



Above: A single-room-occupancy hotel, typical of the moderate-scale, infill development sponsored by local nonprofits.



Below: Infill housing and a pocket community typical of the South of Market today.



Lastly, companies that tailor-make products must be very accessible to suppliers and clients. It is increasingly common to see concentrations of consultants and suppliers close to central business districts and near major transportation routes in large cities. South of Market suits this need well: it is near the financial district, major regional transit lines and freeways that lead to corporate districts outside the city. Inexpensive land and warehouses easily accommodate their space needs.

A network of service providers. Community development corporations have been evolving for thirty years. These neighborhood-based groups emerged during the federal social experiments of the 1960s and have now become primary housing developers and service providers for low-income populations in old city centers. In South of Market, there is an umbrella organization that coordinates all community development and service activities and mediates between city agencies and nonprofits. This organization is still evolving, and is akin to a neighborhood government for the needs of a low-income population.

This network is impacting the nature of development in South of Market in two ways. First, since it represents the interests of the existing low-income populations, it has used its considerable political influence to advocate a development approach that maintains the existing affordable context, particularly through mixed-use zoning and small-scale projects.

The incremental, infill approach is partly a result of the lessons learned from early renewal projects: large-scale demolition and redevelopment tend not to create new housing for the people they displace, and they tend to provoke either speculation and decline (if buildings are removed and not replaced) or gentrification (if the new large-scale uses command higher land prices than previous uses) in surrounding neighborhoods. This approach also results from the limited amounts of capital and land available for any one project.

The second impact is related to how community-based nonprofit developers finance projects. Typically they patch together funding from various sources, build housing and then funnel rent proceeds back into maintaining it, providing social services and constructing new housing. However, the housing, services and economic base are almost exclusively for lowincome people. This is largely due to the many regulations associated with outside funding sources, which make mixedincome and mixed-use developments very difficult.

Mixed-use regulation. South of Market's "live-work" zoning seeks to control both gentrification and large-scale redevelopment and to reflect more accurately the lifestyles of people in the area. The zoning was created in 1988 by city planners who recognized the economic value of having suppliers and light industry close to downtown. It permits residences next to light



industry, a mix of uses not commonly allowed. It also prohibits office-only uses, which can drive land values so high that light industry or housing are priced out. Live-work regulations, in turn, are fairly restrictive, prohibiting "non-art" work activities (including architecture, accounting, legal services, etc.).³

The market response to this ordinance can be seen in the renovation of warehouses and the many new infill live-work developments that are being constructed. The market for this type of space, however, is clearly limited to a certain population as new units are being absorbed slowly but steadily.



Location of pocket communities.

The Physical Characteristics of Pocket Communities

Street level doorways. Front doors that open at street level create human activity and a sense of density. This is especially true of people in live-work communities, because people are always there. An area can seem busy even if few people live there.

Parcelization. A greater frequency of front doors (which results in part from parcelization) helps create a sense of activity and community. A 20 to 25-foot rhythm is associated with this sense.

Back alleys. Back alleys to businesses in warehouses that front a main street are not likely to become pocket communities.

Two-sidedness. A sense of community can be perceived in a group of as few as four buildings whose front doors face each other across an alley.

Exposure. Alley properties that are exposed to a main thoroughfare are not as likely to develop into a pocket community.

Length and width. Pocket communities are more common on shorter alleys and on alleys that run the short width of the block. Narrower alleys are more likely to develop as pocket communities than wider ones.

Definition. Strongly defined, twosided alleys, that have strong endings are more likely to develop as pocket communities.

Relation to main street. Mid-block alleys that align with mid-block alleys in an adjacent blocks often incorporate the main street as part of the pocket community.



Examples of infill livework space and commercial development.



After the 1989 Loma Prieta earthquake, the area between Fifth, Seventh, Market and Harrison streets was designated as the Earthquake Redevelopment Area. Ironically, this project involves many of the same players as the one in the 1960s. However, the redevelopment agency, rather than proposing large-scale plans for razing neighborhoods and promoting fullfledged gentrification, adopted the zoning as its plan.

The agency is still a powerful change agent, funding smallscale, affordable housing developed by nonprofit groups — the type of small, incremental development the zoning envisions. The city planning department, in turn, advocates policies that both preserve the existing character of the area and guide future development to be of the same scale and architectural quality through conditional use design controls and selected historic preservation district controls.

A physical environment that enables diversity. South of Market's mix of building types and street patterns make it easily adaptable to new activities, lifestyles and manners of working. The grid of wide, through streets is overlaid with a delicate web of narrow, short alleys, and much of the land is subdivided into small parcels. This framework encourages safe, hidden pocket communities to form, allows for incremental development at a range of scales, preserves affordable opportunities for owning or renting residential or commercial space and contributes to a very human street scale and rhythm. Also, warehouse space is available in many different varieties and locations. Because this building type lacks a close fit to any specific activity, it can readily accommodate a myriad of uses.

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Make the network of service providers even more effective. Lowincome community leaders want a presence of affluence to help make the neighborhood more economically viable by attracting services, businesses and customers. However, they know little about the presence of incoming residents, some of whom are affluent.

The neighborhood is composed, on the one hand, of people who are privately benefiting from their own affluence by having the values of their properties increase, and on the other, a nonprofit network that is constantly struggling to find funding to serve a low income population. These discrepancies may be characteristic of an evolving, cosmopolitan inner-city neighborhood held captive by outdated or still-developing mechanisms for serving the needs of a diverse population.

South of Market's nonprofit developers and service groups have a great potential for serving a more cosmopolitan population. It may be time to revamp the regulations regarding financing for affordable housing and make them more applicable to the mixed-income populations or other types of development.

This network of community developers might launch a pilot program to test new ways of providing services like safety, street maintenance, postal delivery, building inspection and business development. Service providers might become mixed-use themselves, combining postal carrying with building inspection, street maintenance with a neighborhood watch. Perhaps the neighborhood could use a portion of the tax revenues it generates to fund in-house service providers. City agencies would continue to evolve as players to assist the network of neighborhood nonprofits. Such a reorganization of service provision might make the city more efficient at providing other services, such as education, transportation and fire protection.⁴

The nonprofit network might also establish an ongoing source of information that documents the area's local economy, noting both its resources and service needs. This database, in turn, may serve as a means for creating neighborhood-based PROS SEGIONNY

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service providers that cater to both businesses and residents. It could also help coordinate space that is for rent with small businesses that are looking for short-term leases. Buildings might be subdivided into small offices and serviced by residents trained to clean and maintain office space.

Planning and design regulation should nurture the market for small-scale development and promote attention to streets as neighborhoods. South of Market's current urban design regulation mandates attention to both architectural and areawide character. Yet, in the comfortable residential pockets that are emerging in alleys, the character of the streets is what establishes a feeling of community. Therefore, urban design regulation should also address the design of streets, particularly their definition as positive spaces (some of these design issues are described in a sidebar to this article).

Leave room for change. South of Market's proximity to the financial district makes it a logical place for extending downtown. This area could accommodate downtown expansion (whatever size new office buildings might be) because few of its large parcels have been developed. However, it would be susceptible to speculation, displacement and redevelopment if high-density office or residential were allowed unchecked.

South of Market should be considered as having economic importance as a whole rather than being valued for the economic potential of its individual parcels. The highest and best uses for the area might not be those that can bid the highest, but those that support the higher-bidding office and residential uses nearby. A cosmopolitan neighborhood (accommodating residences, shops, offices and some industry) can be both comfortable and desirable because it has a continued presence of people day and night. Moreover, it is important to have a critical mass — and variety — of suppliers close to the financial district. Restructuring corporations are cutting out middle management and support staff and relying on consultants — many of whom are former employees working from their homes.

A good planning strategy might, therefore, protect and invigorate the market for small-scale development, while reserving some of the available larger properties, "pocket-zoning" them to permit offices (and other high-value uses) and letting the market decide how they develop. This strategy will leave room for the inevitable expansion of the financial district yet protect the area as a comfortable context for suppliers to flourish.

Encourage dispersed development. The present patterns of scattered and dispersed communities and of uses that may be in conflict seem to keep gentrification and speculation under control while also making a more lively pedestrian streetscape.

Development is dispersed in several ways. Pocket communities that are similar socio-economically are physically separated from each other, rather than concentrated into one area. Also, the prevalence of commercial and light industrial uses



A "regular" who keeps watch over one of South of Market's pocket communities.

Innovative mixes of activities are emerging.



between pocket communities seems to control land values. If the area were to become solidly residential, land values would likely rise because nuisances would be gone and because the aura associated with warehouse living is attractive and trendy.

The present zoning and redevelopment strategies are successful at encouraging a mix of uses and small-scale, infill development within the existing street and lot pattern. This seems appropriate for creating cosmopolitanism and controlling gentrification. A "pocket zoning" strategy might also assist in encouraging a dispersed development pattern.

Promote safety tbrough increased ownership and a sense of place. Pocket communities feel safe, but this sense does not seem to depend on gentrification. It does, however, seem to be correlated with a sense of ownership and a sense of place and definition. "Owning" may be actual (as in purchase of property) or it may be a perception (as in claiming turf). Both forms seem important to making a feeling of community.

Ownership of newly built, privately developed residential properties is increasing. Most are affordable, small scale and infill. Their newness, highly articulated and colorful nature add a cheerful aesthetic to the area. They create a look of care which, in turn, translates into a feeling of ownership.

The maintenance of these properties will be very important to continuing this sense of ownership. On many new buildings, the materials are inexpensive and the detailing is busy (interestingly, nonprofit housing developers tend to use higher quality materials). Poor maintenance can quickly create an appearance of neglect and disinvestment. Developers should keep this in mind when choosing designers and contractors. Sometimes simple designs with quality materials are more elegant and contribute more handsomely to the making of a cared-for neighborhood than fancy, cheaply executed designs.

Collective owning of territory is also important for establishing a feeling of safety in an area. It also can help different groups co-exist peacefully, if each group feels responsibility for an area. Areas that feel collectively owned often have a sense of physical definition and a feeling of being peopled. This study identifies many physical characteristics that lead to a sense of definition in a place and that urban design regulation should mandate, such as doorways fronting the street, a high degree of parcelization and narrow streets.

Thoughts About Other Cities

South of Market is experiencing a phenomenon that is not supposed to be happening. The conventional wisdom tells us that inner cities are becoming unsafe war zones, faced with permanent cycles of poverty and filled with obsolete buildings and infrastructure. It tells us that more people are moving to homogeneous, gated, safe communities beyond suburbia. It tells us that these changes are related, inevitably, to "global restructuring." Is South of Market a fluke, or could the same phenomenon happen elsewhere?

South of Market shows important similarities to other cities. Its development history — the fall of large-scale redevelopment and the rise of small-scale infill development — is typical. Also, many cities have large areas that once provided the infrastructure for manufacturing and industry and now need revitalization. Community development corporation networks are now scattered all over the country. Restructuring corporations are impacting the work lives of many Americans and the structure of many communities.

On the other hand, this area is unusual because it is next to the financial district of San Francisco, a city with economic significance in the global economy. This difference matters because companies in the central business district seem to attract the new population of suppliers and consultants. The



experience in South of Market, therefore, might apply more directly to the inner-city neighborhoods in larger cities that have strong, service-oriented downtowns.

Given the fundamental changes in how people live and work, and given the aging infrastructure in most American cities, it seems critical that more studies such as this one be done for cities of all sizes and types. Our generation of urban designers should first understand the birth of places like South of Market, and then celebrate them through thoughful, innovative inquiry and design.

Notes

1. Other than speculation in the 1970s, there has been no evidence of a real market in this area since the 1950s.

2. There is a very clear distinction between what I call "loft office buildings" and "warehouses." The former are office buildings designed to be used by small light industry, like jewelry and furniture makers. They are usually four to six stories in height with large, industrial windows, high ceilings and large open floors. The latter tend to have larger floor plates, higher ceilings and fewer stories, and were once mainly used for storage or manufacturing.

3. These controls acknowledge many types of living and working and, therefore, do not require a formula for the amount of space devoted to either living or working. They are also are highly permissive in terms of parking and open space requirements.

4. A very successful program that already exists matches local residents who are trained in street steam cleaning with commercial areas where businesses have agreed to pay for this service.



Top: The web of relationships among landowners, local community development groups, government and foundations that has shaped South of Market at various times in its history.

Above: Affordable housing developed by a nonprofit group.



Workplaces for Workers

Lucien Kroll



Top and above: Proposal for the Kronenbourg bottling plant in Selestat, France.

In the plan, production spaces and a train shed are at the top. These large spaces are designed as a combination of smaller volumes. Activities that do not have to be located in the production building, such as administration and storage of raw materials, are located in the smaller structures shown in the bottom of the plan. (In the model, the production floor and train shed are in the foreground.)

The buildings are arranged along a linear open space and courtyards so the complex resembles a traditional brewery village.

In the 1970s, new thinking about industrial working conditions was developed in Europe. In France, the National Agency for the Improvement of Working Conditions developed relationships with all the people concerned with this issue - business associations, unions, universities, ergonomics engineers, industrial designers and others. The agency initiated a movement of research about creating work spaces based on the experience of workers rather than the prescriptions of experts, who are only interested in "mechanical spaces." It is a pity that we do not hear about this association any more and that its bulletin is no longer published.

Before and during the competition for a new Kronenbourg brewery (named "K3") in Selestat, France (near Strasbourg), we attended informational sessions in Strasbourg on the improvement of working spaces; of the four competitors, we were the only one to do so. Those sessions involved experts in psychology, employment, ergonomics and brewing techniques and representatives of German and French workers' unions. The discussion with the ergonomics engineers was rather tense; they pretended to be neutral but were, above all, interested in the productivity and efficiency of workers' gestures. They anxiously prevented themselves from extending their

approach to less mechanical relations, such as the health and comfort of workers: They were mercenaries!

The K3 competition took place under this renewal of attitudes toward the conception and design of working spaces, right after the completion of some rather rudimentary experiments. The Volvo factory built in Kalkar, Sweden, was one of the better attempts.

Everywhere else, productivity and discipline were considered first. At best, some views to interior gardens were provided. The rest of the spaces and environments were dedicated to the engines' comfort — not the workers' culture, nor the involvement of workers in teams or their creativity in their own organization or their ability to create rewarding social relationships.

Our intentions of creating more lively places was understood differently by Kronenbourg's director and by workers' teams: we just had to adopt an open-minded attitude and translate working relationships we could observe into architectural forms.

The competition deeply worried Kronenbourg's management. After it eliminated the first two competitors, Kronenbourg could not make up its mind between Renzo Piano (modern and brilliant technique; humans should be grateful for the opportunity to assist a beautiful machine) and us (complex



Courtyard adjacent to the bottling plant and the administrative buildings, typical of the intimately scaled spaces located throughout the plant.

(Illustrations courtesy Lucien Kroll)

team composition and a rather populist image). We had spent some days in the old factory, questioning workers and supervisors, and we could not ignore their energy and friendly cooperation.

Piano's project finally won. It was really up to date in that it foresaw the extinction of those fragile workers' participation in redefining the concept of "factory," and it absolutely declined the possibility of using the workers in the design of the project, being exclusively technical (serious work).

What is going on today? The tendancy is even more brutal and machinededicated. It seems that designers have forgotten about the experiments mentioned before. Architects, frustrated, have given up and just make money. When I tell my students in the U.S. that the notion of citizen's participation in city planning comes from their country, they do not believe me. Sadly this shows a loss of creative culture. Industry has simply given up dreaming, at least of a more friendly environment for workers.

Translation by Guillaume Delemazure.



Above and below: Plan and sketch of bottling plant production floor. Machines are placed to increase opportunities for worker interaction. Workers are given desks where they can store their work materials and personal effects.



Manufacturing Communities

John A. Loomis

The U.S. currently faces two urban priorities: providing jobs for a diverse population and rebuilding neighborhoods. While urban areas from South Central Los Angeles to the South Bronx epitomize the unraveling of our cities' economic, physical and social fabrics, the potential for linking urban policy and industrial policy is rarely considered. The revival of urban manufacturing is a viable opportunity for creating jobs and rebuilding communities.

Cities have traditionally been places of production. Today, however, conventional wisdom and the real estate industry favor service sector development in cities, ignoring the role manufacturing can still play in urban economies. This missed opportunity undermines a city's economic diversity and social welfare.

The key to an industrial renaissance in U.S. cities lies not in large, traditional, smokestack industries but in the nation's 20 million small manufacturing concerns, most of which employ fewer than 50 workers. These small and flexible firms are a major economic engine; production in this sector employs two-thirds of the country's blue-collar workers and is



growing faster and creating more new jobs than any other sector of the manufacturing economy.

Many of these firms flourish best in urban environments. They exist as clusters of compatible and interrelated production facilities; consequently, proximity to each other is important. They act as specialized suppliers to large producers, providers of specialty products for exclusive niche markets, or makers products for local and regional distribution; therefore, proximity to marketing and financing operations typically found in center cities gives them a competitive edge. New forms of production, organized into the small firms described earlier and increasingly reliant on computer technology, take up less space and are more urban friendly than their smokestack forebears.

In New York, the garment industry is an example of a still important and evolving manufacturing network. Advances in technology increasingly enable New York firms to specialize in small, specialized orders for which close communication with designers and marketers and quick turnaround time are critical. Sources of future growth include high-value-added speBackground: Street life in mixed-use neighborhoods like Northside, Brooklyn, is animated by manufacturing activities.

Above: A proposal for extending the mix of buildings and uses characteristic of Northside onto abandoned waterfront property.

(Photos and graphics © John A. Loomis, unless noted otherwise.)

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Bedford Avenue, Northside's well-tended main street, also includes a mix of community serving retail and office space. (Todd W. Bressi)

cialty production activities like metalworking, woodworking, food processing and electronics assembling — all operations that could be compatible with mixed-use communities.

Manufacturing and Urban Form

A rich mix of functions woven throughout the city, in plan and section, has characterized traditional manufacturing cities. Before the Industrial Revolution, craft production was tightly knit into the urban fabric, often taking place in small buildings that were indistinguishable from or included residences.

In the late nineteenth century, these relationships began to dissolve for a number of reasons, including the advent of Taylorized, assembly-line manufacturing processes and the emergence of national markets for manufactured goods. The scale of production grew and so did the impact of factories on cities: Critics noted unsafe and unhealthy urban industrial conditions and the negative impact of industry on residential and commercial property values. Public officials sought to segregate industry from other functions, particularly through zoning, and industry often found it difficult to find suitable sites in built-up cities. As a result, hazardous and unhealthy industrial activities began to disappear from cities, but the increasing compartmentalization of activities diminished the diversity of urban life.

There still exist, however, in many cities across the country, mixed-use manufacturing and residential districts formed prior to the codification of modern zoning. Parts of the "flatlands" in Berkeley and Oakland, Calif., neighborhoods in South San Francisco, New Market in Boston, East Cambridge and many other communities that ring the urban cores of American cities are living examples of this type. Many of them are still vibrant and vital, defying the conventional wisdom that favors separation of functions. These places can be both loci and models for urban industrial revitalization. They have much to offer in terms of existing infrastructure, services and a local work force with a vested interest in the community. An understanding of the physical and social elements of these communities could lead to creative new planning and development strategies for new mixed-use communities.

Brooklyn's Northside: A Model of Mixed Use

Brooklyn is home to several traditional mixed-use neighborhoods, such as Sunset Park, Red Hook, Greenpoint and Williamsburg. Each functions as a small town containing a "main street"-style commercial district as well as schools, churches and parks serving the local population. Each includes a variety of kinds and scales of activities (production, retail, housing) that are housed in a variety of building types and interact to form a productive community. Walking to work is a way of life in these places, with residences and workplaces located a short distance from each other or actually sharing the same blocks and streets.

Northside, across the East River from Manhattan, opposite 14th Street, is a representative mixed-use, manufacturing-residential community of about 11,000 inhabitants. Despite the decline in manufacturing in New York, Northside still supports a diverse range of production activities that largely serve markets in the metropolitan area. They include food processing, metal spinning and stamping, steel fabrication, woodworking, and the manufacture of textiles, garments, corrugated paper products and plastic bags — activities that contribute to the 4,000 production jobs found in Williamsburg.



Several generations of industry, in this case beverage bottlers and distributors, have located in Northside. (Todd W. Bressi)

These activities form a network of small, local enterprises that contribute to the diversified economic base of the neighborhood, providing employment for its inhabitants and helping to support other local service and commercial businesses. Northside's population is mostly Polish and Hispanic, and it is also experiencing an influx of artists, driven out of Manhattan in search of affordable studio space.

Bedford Avenue serves as Northside's main street, providing a physical, commercial and social spine for the community. On this street, ground floors are given over to commercial uses, predominantly neighborhood retail in character — grocery stores, bakeries, coffee shops, travel agencies, etc. The floors above these stores are mostly residential.

Around the node of Bedford Avenue between Sixth and Eighth streets, blocks are predominantly residential and lot sizes generally conform to the city's standard of 25 by 100 feet. As one moves east or west, building uses change to production and warehousing, but not evenly. Lot sizes also tend to become larger and the massing of buildings sometimes increases with the lot size, but not always. This transition from residential to production uses results in many blocks whose uses and building types are heterogeneous and in buildings that accommodate a variety of uses.

The social patterns of neighborhoods like Northside are as varied and rich as their physical patterns. The social life of the street takes its character from the mix of building types and uses along it. One neighborhood in Northside worth examining contains the Rosenwach Wood Tank Co., a well-established business on North Ninth Street between Wythe and Berry avenues.

Rosenwach, which has made wooden water tanks for New York City for generations, is an example of a good neighbor, an urban friendly industry. Though Rosenwach takes up half its



A block of North Ninth Street in Northside, showing relationship of Rosenwach Wood Tank Co. to adjacent residences and industry.



The small-lot workshop, the basic productive cell of the neighborhood, generally accommodates craft, production or repair activities employing only one worker.





Row houses next to a smalllot workshop. Row houses can be used for residential, commercial or production purposes, and can accommodate one or several tenants.



block, it in no way dominates the tree-lined street. The rest of that side of the street comprises five-story, residential row houses. The opposite side of the street is anchored by a multistory, multitenant manufacturing facility; the rest of that side also comprises residential row houses, notably eleven charming, two-story cottages with small front gardens facing the Rosenwach shop.

On sunny days residents of these cottages sit in their welltended gardens, watching the comings and goings at Rosenwach. The coiling doors of the production shop are open to the street. The whirring saws and other production activities are part of the life of the street. A forklift scooting in and out and around the corner to a storage yard is a part of normal activity.

Nearby, on North Sixth Street between Berry and Wythe avenues, production is spread among a network of independent food processing, distributing and warehousing companies. Many of the buildings have residences above, where artists live and work. The street functions less as a social space and more as a collective loading dock. On work days, during business hours, commercial activity is heavy, but on weekends residents relax on the loading platforms as if they were broad stoops.

Streets like these breed a familiarity between the residents and the workers. They regularly wave to each other and cross the street to chat. The diversity of building types and activities along the street contribute to, rather than detract from, the success, harmony and stability of the neighborhood.

Building Types and Combinations

The diverse mix of economic and social activities in Northside is enabled by a mix of building types common to many New York mixed-use neighborhoods. These commonly found types are background buildings, characterized by architectural anonymity; they are modest structures that nevertheless form the overall fabric of the community. Their form, the ways they are occupied and the ways they are organized within blocks provide valuable urban design lessons. Different building types support different activities, so a mix of buildings along a block contributes to a rich experience of everyday life along the street.

Multistory Lofts are found where lot sizes expand from the standard 25-by-100 feet. These buildings tend to have large footprints and rise from three to twelve stories, serviced by elevators and, usually, a loading dock. The generally large floor plates and sturdy construction make them flexible and easily subdivided and suitable for a variety of uses. Some still accommodate multiple manufacturing tenants and others, because of their large, well-lit floors, have more recently become livework space for artists and artisans. Others lie vacant due to the



Infill production buildings offer broad, one- or twostory spaces. They provide accessible and flexible production space integrated into a mixed-use block.





Multistory lofts next to residential rowhouses. Lofts tend to be solidly built and offer large floor plates; they can accommodate large companies or multiple tenants.



economic forces that have caused the decline in many areas of urban manufacturing.

Pancake Production buildings dominate areas further away from the neighborhood's center, toward the river. They are broad and flat, are exclusively one story (sometimes with a mezzanine) and often have large footprints, which make interior subdivision easy. These buildings are utilitarian and often present an unfriendly face to the street, contributing little to it as a social space. Nevertheless, they serve a definite economic need by providing inexpensive, accessible storage and have the potential to become flexible production space.

The *Infill Production* type is a hybrid between the Multistory Loft and Pancake Production types. It takes on various configurations — flanking a street, wrapping a corner, or weaving through the block — and ranges in height from one to two stories. These buildings generally are used for production, not storage, and they are usually quite compatible with the neighborhood's scale and context. Metalworking and woodworking activities are often found in these buildings.

The *Row House* type is remarkably flexible in terms of use. It is predominantly found on 25-by-100-foot lots, is typically three to five stories tall and generally repeats itself along the street. Along Bedford Avenue, row house ground floors are often occupied by commercial activities; on cross streets, ground floors are sometimes occupied by productive facilities; in some places, the upper levels are used for storage. Even within a row house that is exclusively residential or production, there may be multiple tenants.

The *Small Lot Workshop* is the basic productive cell of the neighborhood. This type of building characteristically covers part or all of a 25-by-100-foot lot and is one story high, sometimes with a mezzanine. Where it does not extend the full depth of the lot, it accommodates a rear service yard and, sometimes, a residence at the back. Like the row house, it is often found in a series. These buildings generally accommodate craft, shop-production or maintenance-repair activities employing only one or two workers.

Northside's geometry is defined by rectangular blocks, generally 200 by 400 feet, that accommodate many types of subdivision and arrangements of uses. While the block is the basic module of urban form, the street is the organizer of urban activity and the means through which the urban environment is experienced. The ways that different building types are combined along streets, particularly their groupings and relative locations, affect the nature of the communities that form along each block.

The purely *Residential Block* is rare in Northside but common in other neighborhoods. It is made up predominantly of rowhouses with backyards and occasionally includes apartment buildings. Its friendly, tree-lined sidewalk, greeted by stoops reaching out from the residences, is a familiar, welcoming sight.



Above: After work hours, stoops and loading docks become places for play and relaxation.

Below: Northside is characterized by a mix of building scales and types.



The exclusively *Production Block* is quite common around the periphery of Northside, especially toward the river. While this type of block might be homogenous in use, it might not be homogenous in building type and scale, accommodating a mix of all five types described earlier. Where there is active production taking place, the street can be full of activity. But if the buildings are used as warehouses, or are empty, the street can become a desolate place.

The clustering of residences in mixed-use areas, both side by side and across the street from each other, tends to create friendlier streets than situations where residences are very scattered or individually isolated in mixed-use blocks and streets. By observing the urban form and social life of Northside, it appears that at least 30 percent of the street frontage needs to be residential in order to create a critical mass for a friendly neighborhood.

Northside is a patchwork of mini-neighborhoods composed of these street and block relationships. Some minineighborhoods are more successful and vital than others. Their success might depend, for example, on the degree of residential clustering or the relationship of loading and materials handling to the neighborhood. When deliveries are an occasional occurrance and are handled by medium-sized vehicles, they do not tend to conflict with residential activities. Where deliveries are frequent or require large tractor-trailer trucks, they are best served when they are grouped to one end of a block or located on a side street.

Toward a Mixed-Use Enabling Strategy

Mixed use can occur on different scales: within the community at large, divided into different groups of blocks of like uses; within blocks and along streets; and within buildings themselves, with the building's section being a framework that accommodates a diversity of functions.

Mixed-use communities are complex systems, at first glance seemingly random and disordered. But like all complex systems, clusters of order exist. These clusters have formed around nodes that generate other development. A node could be a small factory, a group of related workshops, or a series of residences that support further development.

These clusters of order, such as the Rosenwach block, are themselves systems that have occurred more or less spontaneously at different times throughout the community. The clusters of cottage row houses and standard row houses provide a critical mass of neighborliness. The clustering of the tank factory and the multistory loft building gather the loading activities along the street. Northside's patterns of use, clustering of building types, block types and hierarchies of circulation can be extrapolated into a "kit of parts" that can help direct the design of infill projects and larger development along the waterfront. Prototypical arrangements may be prescriptive in terms of size and scale, but not necessarily in terms of use.

Reviving The Brooklyn Eastern District Terminal

Northside is bounded on the west by the now abandoned Eastern District Terminal, from whose docks and warehouses materials and goods were once shipped to and from the many factories throughout Williamsburg and Greenpoint. The freight terminal's docks and warehouses, which occupy a stretch of waterfront along Kent Avenue, have been neglected since the terminal was abandoned in 1985.

This site could be developed as a new mixed-use addition that respects the positive natural ordering and organization of diverse uses found in the successful street and block formations in the existing community. Small- to medium-sized flexible manufacturing concerns — the smart, flexible and urbanfriendly firms described earlier that offer the potential for economic growth — could be accommodated. The plan could also introduce new interventions, such as a public promenade at the water's edge.

Northside's existing block system could be extended through the terminal site west to the river, respecting the fundamental framework of the neighborhood and providing the opportunity for blocks and streets that are friendly to a variety of uses (including various scales of residential and production space). This strategy would maintain view corridors to the river and Manhattan and allows Kent Avenue (a major thoroughfare for passenger vehicles and for moving goods) to continue as a permeable seam between Northside and the terminal area.

Kent Avenue would be lined with new and infill multistory mixed-use buildings, reflecting the massing of the existing fabric. The ground and, perhaps, the second floors would be given over to the type of factory outlets and discount warehouses that already exist along other parts of Kent Avenue to the north and south. This retail activity would support local production and activate Kent as a commercial strip with pedestrian and vehicular activity. Open lofts above the commercial space would provide flexible production or live-work space.

The northern and southern ends of the new development would consist of multistory, multi-use production facilities. One would consist, in part, of an existing multistory production facility; the other would be entirely new construction. They would be similar to the Brooklyn Army Terminal or





Above: Northside's manufacturers depend on the presence of skilled laborers in the neighborhood to fill jobs.

Below: A food preparation company and residences share one Northside block.

(Photos by Todd W. Bressi)



Bush Terminal (historic loft facilities in Sunset Park, Brooklyn, that are almost entirely leased) — providing flexible production space for a variety of businesses and would also provide ammenities for common usage, such as loading, storage, cafeteria, classrooms and community meeting spaces. They would be connected by a new north-south avenue lined with mixeduse row houses that would tend to favor production activities.

The cross streets would be composed of row houses that could be used for both residential and production activities, concentrated around Seventh and Eighth streets, giving way to a mix of small-lot workshops and infill production facilities as one moves to the north and south. The mix would favor residential uses in the central area and shift to production as one moves toward the large complexes at the north and south ends. These streets are intended to welcome a rich and diverse mix of residential, production and live–work uses.

Finally, the waterfront is a wonderful potential public amenity. Since it is no longer needed for the delivery of goods, there is no reason that it should not be given over to public activity. Its edge would be marked by a new north-south avenue and esplanade with attached public access piers. Apartment buildings looking toward Manhattan would line the avenue, which would terminate to the north at a public plaza and passenger ferry stop.

The development of a project like this would, of necessity, result from a creative joint-venture, public-private initiative; it does not have any precedents in the private sector. But the project does have very real precedents in the way mixed-use communities function and in the way mixed-use communities take shape physically.

Industrial Policy, Urban Policy

All too often, production has been forced out of cities by misguided public policy and short-sighted economic priorities that have favored the service sector. While manufacturing may never resume the dominant role it once had in cities, it nevertheless can still be an important component of a diverse, successful urban economy. Flexible technologies, custom manufacturing and other new forms of production offer new opportunities for urban manufacturing and the resurgence of mixeduse communities.

Successful productive activities should be encouraged to remain in the city and new ones should be encouraged to become part of mixed-use urban environments that support a healthy mix of living and working. There would be many economic, social and urban benefits to encouraging manufacturing to continue as part of established urban communities.



Perspective of a typical street in the proposed redevelopment of Brooklyn's Eastern District Terminal. (Drawing by Irv Glassman)



Computer-rendered drawing of proposal for Brooklyn's Eastern District Terminal, showing the mix of building types and blocks characteristic of Northside.

Rethinking the Conservation of Urban Open Spaces

Catherine Howett

There is a need for a deliberate and conscientious re-examination and questioning of the philosophical premises, principles and values that have informed the preservation movement worldwide. We cannot assume that current attitudes toward the conservation or rehabilitation of urban parks, squares and streets — the preservation perspectives that influence design decisions about what should be saved, discarded, or significantly modified for contemporary use — will continue to serve us well in the future.

Many familiar realities suggest the disintegration of old certainties. Familiar terms such as "heritage" and "cultural patrimony" have taken on added resonance within certain cultural groups at the same time that their meaning and implications have become more ambiguous. As communities around the world struggle toward a reaffirmation of historic identities based on race, religion, ethnicity or geopolitics, the social and institutional systems that previously ordered their lives in common with other groups have been assaulted and, in many cases, overthrown. This is as true at the neighborhood scale as it is for regions and nations.

Traditional ways of thinking about historic landscape conservation have largely failed to address the environmental crisis as it manifests itself in the urban centers of industrialized and developing nations. Problems of population growth and overcrowding (in other places, the debilitating loss of population), air and water pollution, the wholesale destruction of natural resources, famine, plague, poverty, crime, homelessness, illiteracy, territorial aggrandizement, social upheaval and open warfare are as familiar in places on this continent as they are in parts of Europe, Africa and Asia.

This essay is based on a keynote address presented at the International Symposium on the Conservation of Urban Parks and Squares, sponsored by the ICOMOS International Committee of Historic Gardens and Sites, the Alliance for Historic Landscape Preservation and the Canadian Society of Landscape Architects in Montreal, Quebec, May 12-15, 1993.



Above and background: Kelly Ingram Park, Birmingham, after recent redesign.

Right: Sculpture by James Drake, Kelly Ingram Park.

> (Photos courtesy Catherine Howett)





Proposal for redesign of Lafayette Square/Old Man's Park, Oakland, Calif., by Walter Hood and Willie Pettus. Left: The park's current layout, based on an early twentieth-century design. Center: Recreation proposals, with basketball court, horseshoe pits, amphitheatre, stage and strolling area. Right: Social programming proposals, with children's play area, restrooms, garden and card tables.

The possibility of finding solutions to the environmental, economic, political and social ills that threaten the collapse of urban institutions as we know them seems somehow beyond the reach of our best planning efforts.

This sense of confusion and helplessness in the face of the complex forces eroding the quality of urban life is a relatively recent phenomenon. For most of the twentieth century, Western societies embraced an optimistic faith in the perfectability of human environments — and, ultimately, of society itself through the wise application of rational planning methods. That faith had its roots in the Enlightenment and contributed to the philosophic foundations of the preservation movement.

Nineteenth-century models of large-scale urban planning (such as Baron Georges Eugène Haussmann's transformation of Paris and the 1893 World's Columbian Exposition at Chicago) nourished the imaginations of generations of architects and planners. The energy of the City Beautiful movement, with its Beaux-Arts imagery of a magisterial social order grounded in classical tradition, eventually dissipated — but not before, as Spiro Kostof noted, Beaux-Arts layouts were employed as instruments of European colonialism, providing "new quarters alongside native towns that kept the European population at a safe distance and afforded it the comforts of the mother country."¹

It remains true, however, that many of the most admired public spaces in cities shaped by Beaux-Arts planning have come to symbolize modes of a gracious, cosmopolitan, and secure communal life that we believe to have been common in earlier times and that we would like to recover in our own day. These places represent the city conceived as a built work of art and architecture: "a city of agreements, not differences, of freedom and undisturbed repose, of progressive rationality."² In a real sense, such parks, streets and squares gave physical expression to an ideal of order, beauty and a stable community based upon shared values and continuous over time. Small wonder that those of us who have grown up within a culture for whom such places summon up a sense of identity, of the empowerment that comes from feeling at home in the public spaces of a well-loved city, will join efforts to restore or preserve them.

While they were in many respects no less utopian, rationalist and formalist in spirit, the ostensibly progressive and reformist social and political movements before and after World War II reacted to Beaux-Arts aestheticism and historicism by demanding a pragmatic functionalism in the design of urban spaces. A kind of anonymous landscape replaced the rhetorical splendors of the monumental city.

What is more important than this stylistic shift is recognition of how the racial, ethnic and economic ghettoes dividing American cities were expanded and solidified in this period, when deliberate segregation was frequently used as an instrument of enlightened planning policy. What was grandly called the "War on Poverty" has among its monuments of defeat "the forlorn hulks of public-housing projects like Chicago's Robert Taylor Homes and Cabrini Green."³ Similarly, the Model Cities program that gave Oakland, California, a series of parks that Walter Hood is proposing to redesign demonstrates the limitations of even well-intentioned social engineering.

Ironically, the International-style modernism that originally inspired the stripped-down functionalist vocabulary of welfarestate planning was also appropriated, though in a much gilded and glamorized form, for commercial and institutional buildings and the parks, plazas and streets associated with them. The sheer scale of these enterprises reflects the degree to which corporate capitalism has taken over responsibility for determining the character and course of development within cities,



Proposed community buildings, Lafayette Square-Old Man's Park. (Illustrations courtesy Hood Design)

a prerogative that once rested in civil authority. The plazas and malls that are touted as public-spirited contributions to communal life are almost entirely private; a discreet plaque or sign reminds visitors they are there at the sufferance of the owners. The "logic of the market" dictates land use changes, and "even people get sorted out on the basis of their economic value."⁴

While the conception of the city as a force field of economic interests competing or cooperating with one another is an intellectual abstraction, it seems to bear out the felt experience of those who decry the decline in many contemporary societies of the public realm itself — and with it, those urban forms through which the civil contract to promote the common good of all citizens was expressed.

Analysis of this urban malaise has fostered the postmodern discourse among architects, urban planners and preservationists aimed at finding ways to re-integrate the public realm by restoring and re-forming public space using historic models. European theorists and practitioners led by Manfredo Tafuri, Aldo Rossi and Leon Krier castigate design that simply mines historic elements in order to evoke a nostalgic and idealized version of the past. These critical voices have demanded instead a fresh examination of historic urban morphology as a foundation for architecture and urban design.

Tafuri wants history to become the guide for planning, but insists that in using history, critical awareness must focus not on architecture alone but on the larger urban context: government regulation, political and economic concentrations of power, and the realities of the sociocultural milieu.⁵ Rossi, like Krier, believes that archetypal urban and architectural forms possess inherent power because they derive from collective memory and are therefore familiar and comprehensible. However, Rossi recognizes that cultural memory is a doubleedged sword. He wants his own architecture and urban design to be at once an invocation and a critique of history. Urban critic M. Christine Boyer has suggested that this duality of intention in Rossi is a radical stance that "can be like walking on a thin tightrope," since the archetypal urban forms of park, square and street "come polluted with political meanings and burdened with cultural memories."⁶

The notion that in using history to tap into collective memory as a source for archetypal forms, urban planners and designers might also provide opportunities for their client communities to grapple with the distortions, limitations, inequities, even the injustices of the past, seems far removed from the arguments advanced by American adherents of neo-traditional town planning. This school of thought betrays a sunny confidence that urban problems will be solved and viable communities established when we can all get about town more easily and when the appearance and configuration of the town itself taps into what is presumed to be our communal dream of an imagined idyllic life in an earlier, small-town America.

In its naive optimism, American neo-traditionalist townplanning seems rather like a conservative mirror-image of the rationalist and utopian movements that characterized so much of the history of twentieth-century architecture and urban planning. It presumes, for one thing, the possibility of genuine community — even within a population more diverse with respect to characteristics like race, class, ethnicity, age and income than recent projects have had to accommodate. It presumes that in spite of this potential mix of cultural backgrounds — a mix of memories, if you will — all of the citizens of these new towns will experience a sense of belonging, discovering some part of their own history in the historic fabric of their city or town. It is hard to imagine how this could happen. If daily news reports teach us anything, it is that real history is fractious and messy. While it binds us as members of one group it may be dividing us from another. In our communal lives as in our personal lives, sad or guilty or bitter memories of the past coexist with the good. Furthermore, there is plenty of evidence all around us that different cultural groups within just about any given larger society are increasingly unwilling to have their own stories obliterated or subsumed within the mythic narratives of the dominant group.

In the center of the historic square of Santa Fe, New Mexico — a square laid out by the Spanish conquerors of the region at the beginning of the seventeenth century — a large bronze memorial honors the memory of the federal forces who put down the Indian rebellions of the nineteenth century. Every morning, Native American artisans, descendants of those conquered tribes who had fought to repossess the land of their ancestors, their own ancient home, gather under the arcades surrounding the square to sell their handicrafts.

Out of respect for that reality, the monument in the square had an official-looking postscript added — a simple statement on a small sign explaining that the language on the monument reflects the historic perspective of the time when it was made, but not that of today. Together, the two inscriptions serve history (and the community of Santa Fe and its hordes of visitors) better than a new, politically correct inscription — or removal of the monument — could ever have done.

Birmingham, Alabama, provides another illustration of how a public space can become a crucible of authentic history and meaning for the community it serves. In the 1960s, Birmingham became a symbol of southern resistance to the civil rights movement and notorious for the repressive measures its municipal authorities and supporting white supremacist groups within its population took to block racial integration. The city had its share of decent men and women pleading for the acceptance of social change, but they were powerless.

Just across from the Sixteenth Street Baptist Church, where the Rev. Martin Luther King, Jr., and Birmingham's Rev. Fred Shuttleworth rallied protest marchers, was a "whites only" park — Kelly Ingram Park — a one-block-square, tree-shaded green in the heart of downtown Birmingham. In the tragic spring of 1963, Birmingham's Chief of Police "Bull" Connor repeatedly used fire hoses and police dogs to disperse marchers moving from the church into the streets. Many were arrested when they entered the park, where they clung to trees for protection from the fire hoses. That September, four children died when the church across from the park was bombed.

Kelly Ingram Park was redesigned in 1992, in connection with the construction of a Civil Rights Institute, which houses a museum and library for which the park now serves as forecourt. The park and the Institute are the center of a Civil Rights Historic District. The city's black mayor, Richard Arrington, chose a theme for the park, "Revolution and Reconciliation," that is inscribed on low walls at its entrances. The essential character of the formal quadripartite plan of the historic park has not been significantly modified, and most of the old trees have been preserved as well, so that continuity between past and present has been preserved. That is important, because the program for the design chose to interpret the history of the park in the time of protest.

A new circular "Freedom Walk" intersecting the major paths is punctuated by memorial bronze and steel sculptures by James Drake, an artist whose work frequently addresses themes of contemporary violence. The sculptural elements include figures of the jailed children who were sent out as marchers in the false hope that they would be spared the attacks to which adults had been subjected; in another sculpture, fire hoses are trained on crouching men and women; another memorializes the event of the police dogs attacking the marchers. The theme of "reconciliation" finds expression chiefly at a large central water feature composed of four basins over which water brims and sounds.

I do not mean to suggest that we have an obligation to introduce themes of social struggle into the interpretation of every historic space or the design of new ones. What I do believe is that we must, indeed, look with a revisionist eye at the cultural messages encoded in the public spaces of our cities. We need to acknowledge the degree to which the formal and material elements in their design give expression to specific values embraced by specific segments of historic or contemporary communities. In rethinking the conservation of urban parks and squares, we need to deepen the seriousness and honesty with which we ask the initial questions "Why are we doing this?" "For whom is it being done?" "How shall it best be done?"

Neither am I calling for a new iconoclasm or a capitalist version of the Cultural Revolution. We feminists and pacifists will not demand, I hope, the removal of all the mounted generals in the parks — although it is time at least to acknowledge, if not to abjure, their message of military triumphalism.

I not am proposing the obliteration of any of the records of our complex social pasts that have been built into public spaces — such an approach merely substitutes a new utopianism for the conceptually exhausted and failed models that have brought us to the present historic moment.

Let us rather — and this may represent the most difficult accommodation to new realities for preservation philosophy develop a tolerance for the additive, the inclusive, the complex and, perhaps, the disordered in design and restoration, as a reflection of our respect for the experience and the memories of the "others," whoever they may be in a particular neighborhood or city. Let us everywhere open up the conversation, welcoming confrontation instead of measuring our success on the basis of how little criticism or conflict there is. Let us make clearer by our actions that we recognize the priority that human social intercourse must have over aesthetic values and any one social group's sense of history in the planning of our cities.

We preservationists must let our cities and neighbors know that we know that urban parks and squares bring into being a public good that is more precious than the individual histories of these places or our own histories, more precious than the quality of their design, more precious than trees or water or plants. That good begins just with encountering one another, with an exchange — a look, a smile, a greeting, simple human respect, the acknowledgement that we are joined to one another by the place that we are in. Encounter holds the promise of conversation, and conversation is the basis of civility.

Perhaps the nurturance of civility seems too modest a goal around which to rally at the dawn of a new millennium. It is a "little plan," after all, but it is a little plan that has the potential to "stir the souls" of men and women of our own time.

Notes

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 Debra Shore, "The House that Gatreaux Built," University of Chicago Magazine 87 (Feb. 1995): 23.

4. Lisa R. Peattie, "Planning and Image of the City," *Places* 7:2 (Winter 1991): 38.

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Sculpture by James Drake in Kelly Ingram Park. (Catherine Howett)

Reinnovating the African-American Shotgun House

Sheryl G. Tucker

ROOTS:

A row of shotgun houses derives its power and its timeless, universal appeal from the rhythmic recurrance of simple geometric forms and elements. Artist John Biggers, who was born in a shotgun house in Gastonia, N.C., uses the shotgun house as a recurring symbol of the African-American cultural landscape throughout his work. His paintings of shotguns reveal the poetry inherent in the repetition of this simple house form.

When Houston artist Rick Lowe discovered an abandoned, desolate lot of twenty-two identical shotgun houses in the city's predominately African-American Third Ward, he thought of Biggers. Lowe realized that the site could provide both a powerful and

Tierney Malone, The Hope Apothecary. (Project Row Houses)



accessible material link to the African-American past and a setting within which the work of contemporary African-American artists could be produced and experienced.

Lowe's vision evolved into a nonprofit organization, Project Row Houses, which purchased the property and, with the help of hundreds of volunteers, rescued them from demolition. The result is an important prototypical public art project that encompasses not only the production of art, but also art and cultural education, historic preservation, neighborhood revitalization and community service.

Since Lowe conceived the project in the summer of 1992, eight of the houses have been opened to the public with revolving art installations. Artists spend six-month residencies at the site and in the surrounding community, each developing concepts to transform one house. One house serves as the project's business office and another as an artists' residence. The remaining houses are being restored for community service programs and low-income transitional housing. Lowe is also negotiating the purchase of an adjacent two-story storefront that would be adapted as a multi-media performing arts center.

When the Project Row House structures were built in the late 1930s, the Third Ward was a flourishing business district and the neighborhood's

(Quote by John Biggers) I see them as I walk the Fourth

population was split between African-Americans and immigrant whites. Frank and Katie Trombatore, an Italian family, built the houses as rental property adjacent to the two-story storefront, where they lived and operated a grocery store.

The one and one-half square block site originally included thirty houses arranged in two parallel rows. One row faced a narrow alley to the north, the other faced a major thoroughfare. The tiny (six hundred square feet), one-story houses are elevated on stone footings and are separated by side yards only three feet wide. As with Biggers' paintings of shotguns, the striking presence of the Project Row House site comes from the repetition of the houses' spare, identical elements - factorymade, double-hung windows, standardsized wooden attic grills, prefabricated concrete steps and a single square post on the front porch.

Shotgun Form and African-American Identity

According to American folk architecture historians, the shotgun house is one room wide, one story tall and several rooms deep, has its primary entrance in the gable end and has no hallways. The term "shotgun" was coined because one could shoot a bullet through the front door and have it exit



John Biggers, Shotguns, Fourth Ward (1987). Acrylic and oil on board. Courtesy Hampton University Museum, Hampton, Va.

through the back door without piercing any walls. This plan also makes the narrow houses well-suited to the hot Southern climate because it allows cross ventilation from front to back.

The project's clapboard houses are typical of the shotgun in their general appearance, but, in fact, they are a hybrid of the shotgun and the compressed bungalow, with gabled tin roof tops, long narrow plans and shallow rear porches. The houses represent one of the many variations on the shotgun found in African-American communities across the country.

Ward of Houston, the rhythm



In addition to accommodation, both retention and reinterpretation occurred; certain cultural traits and practices were passed on unaltered while others were integrated with Native-American and European practices, evolving into what might be considered African-American traditions. — Melville J. Herskovits, The Myth of the Negro Past (Boston: Beacon Press, 1959), xxiii.

Left: Site plan.

Below: Volunteers refurbishing the exterior of the abandoned shotgun houses. (Stephen L. Clark)



The shotgun house and its many hybrids have long been identified with the African-American cultural landscape. The shotgun was introduced to the U.S. by free Haitians who settled in New Orleans after the Haitian slave rebellion against the French in the early nineteenth century. The Haitians, in essence, reconnected African Americans with the socially intimate housing space that many historians believe evolved from the narrow, oneroom units of the Yoruba compound in West Africa — where most slaves brought to America were captured.

The shotgun form grew out of the value traditional African society placed on the continuity of the extended family and a reverence for one's ancestors. The lives of family and clan members were so interwoven with each other that the boundaries between self, family and community were ambiguous. The architecture of the Yoruba compound reflected the lack of importance Africans gave to individuals within the dwelling unit. The emphasis was, instead, on the celebration of family life and the development of interpersonal relationships. The one-room units of the Yoruba compound were used mostly for sleeping and surrounded a large, communal space where the rituals of day-to-day existence were performed.1

Even as transformed by Caribbean and European building techniques, the shotgun house expresses the enduring social values and cultural traditions of generations of African-Americans. For newly freed African Americans, the shotgun was not only a symbol of freedom but also a means of defining themselves as a united community outside of the confines of slavery. The identical facades of a row of shotgun hoses create a sense of collective identity; the front porches transform the street edge into a community gathering space.

of their light and shadow,

Much of life on the Project Row House site, like that of the Yoruba compound, took place outside the tiny houses in the collective outdoor room framed by the two rows of houses. Punctuated by large trees, rusted clothesline posts and the porches that Biggers called the "talking places" where men "can discuss the meaning of Bible,"² this common green space gives the site a distinctive rural character although it is located in an innercity neighborhood.

Project Row Houses Begins

The Third Ward's economic decline is evidenced by the large numbers of boarded up and abandoned houses and empty lots scattered throughout the neighborhood. Despite thriving African-American churches and public institutions, the neighborhood's lack of a viable private enterprise has fostered a high unemployment rate and its associated ills — poverty, crime, deteriorating housing and poor health care for the community's citizens.³

Like Biggers, Lowe has always believed that art was capable of spiritually healing the lives of individuals and communities by helping people "recognize the beauty and wisdom in their own culture." His idea to create temporary public art installations in African-American neighborhoods grew out of discussions several African-American artists in Houston were having about how they could make their work more accessible to the African-American community.

When Lowe stumbled upon the site of identical housing in the Third Ward, he recognized its striking resemblance to many of Biggers' paintings and felt that it would be an ideal place "to engage the ordinary people of the community in a dialogue with the



Volunteers refurbishing the exterior of the abandoned shotgun houses. (Stephen L. Clark)

arts. The physical (shotgun) houses have relevance to people in the area, those who grew up in the houses or lived near them."⁴

By summer 1993, Project Row Houses had been incorporated as a nonprofit organization, had obtained a five-year, lease-purchase agreement for the site and had been awarded \$41,000 in grants from local and national arts foundations. Lowe, who supplemented his artist's income with carpentry work, began renovating the first house himself with the goal of opening the project to the public within the year.

Lowe had originally intended to acquire only ten of the site's houses and use them as art installation spaces, but it became clear that much more funding from foundation and government sources would be available for housing than for galleries. A low-income housIn general, aesthetic education has been treated as a kind of supplement to the development of intellectual knowledge. The results are not convincing, as is proved by the present crisis The reason is that one has concentrated too much on the aspect of expression, without simultaneously developing the sense of what should be expressed. Modern art is a mere display of "means." ... What we need is a better understanding of the (interconnectedness of the) world." - Christian Norberg-Schulz, Architecture: Meaning and Place (New York, Electa/ Rizzolli, 1988), 14.

the triangle of their gables,

As a Negro, I do not need to go looking for "happenings," the absurd, or the surreal, because I have seen things that neither Dali, Beckett, lonesco nor any of the others could have thought possible; and to see these things I did not need to do more than look out of my studio window above the Apollo theatre on 125th Street. So, you see, this experience allows me to represent in the means of today, another view of the world. - Romare Bearden, quoted in Campbell and Patton, Memory and Metaphor: The Art of Romare Bearden (New York: The Studio Museum in Harlem, 1991), 44.

ing component would provide ongoing income to keep the galleries open, and by acquiring all the houses on the site, the project could control the ensemble of buildings and spaces.

Lowe and co-director Deborah Grotfeldt assembled a multidisciplinary team of community members, social workers, artists and architects to apply for a HUD grant that would provide funding for restoring the site. The application was unsuccessful, but the process led to the development of a master plan that would include all of houses on the site, including seven as transitional housing for low-income families and five for community service projects. One house would become the Spoken Word House for poetry readings and writers' workshops.

The adjacent two-story storefront, an integral part of the site, would serve as an ideal landmark for the project as a multimedia performing arts center. The center would be programmed in conjunction with the artists' installations and provide income for the project. An open space where five houses had been demolished would be developed as a community sculpture and vegetable garden and would visually unite the houses and the two-story storefront.

With foundation grants and favorable media reports in hand, Lowe and Grotfeldt quickly found corporations, local museums, community churches and individual donors to sponsor the galleries. The exterior of the houses would be restored to their original appearance in accordance with Texas Historical Commission guidelines, but the interior finish would be left up to the individual artists, who would transform the space with each installation.

The Art Projects

Project Row House's central mission is to establish a forum for dialogue between artists and the Third Ward community within the context of its African-American history. During a residency, an artist is required to conduct workshops with community members where they discuss their installations in the houses or give instruction on small art projects. Many of the artists' interventions are created to be completed by visitors to the space.



Ancestral shrine. George Smith. (Stephen L. Clark)

the square of the porch,

The art produced and exhibited within this framework of cultural selfdefinition and collective identity is inherently bound up with the traditions, history and social values of the African-American community. The project challenges each artist to interweave his personal vision with the community and the unique space of the shotgun house — echoing the traditional African artisan's creative process of melding collective values and personal visions.⁵

In her installation Recollections, Annette Lawrence, artist and education art curator for Houston's Children's Museum of Art, created one of the project's most holistic yet personal expressions of art, place and culture. Preferring the purity of a single vaulted space, Lawrence removed the house's interior partitions and ceiling, exposing its wooden rafters. She finished the roof and walls with sheet rock, creating a light, pristine space interrupted only by a brick chimney. The space was layered with vertical planes of strings strung from the rafters to the floor. Woven between the harp-like strings are tiny paper bag notebooks made by neighborhood children, who tell the story of the community through their eyes.

Lawrence, whose work often has musical overtones, compares her stringed installation to the "inside of a piano" and "bars of music." "I wanted my piece to be as light as possible and quiet. The strings in my piece refer to the lines of clapboard siding on the houses." The delicate installation seemed like a melody played against the heavier cadence established by the rhythm of the identical houses along the street.

Many of the installations transform the houses with metaphysical metaphors echoing African themes of spiritual healing found in Biggers' work. Art historian Robert Farris Thompson describes one of Biggers' paintings, *Sbotguns*, as a "*nkisi* painting" and compares it to Grant Wood's *American Gothic.*⁶ A *nkisi* is a West African Kongo charm or portable shrine that is created to heal and protect its owner and contains the spirit of one's ancestors. Thompson writes:

On the front porch of each of the five closest shotgun houses appears a key feature of traditional African-American yard art: vessels by the door. They stand for African-American culture in practical, domestic acts: preparing soap, cooking pork, bathing infants. But they also signify covert spiritual protection, Grant Wood's pitchfork taken underground. The pot before the door cooks or contains more than meets the eye. It metaphysically caparisons the traditional African-American yard and houses, Scholars of African-American culture have emphasized that the underpinning of African-American creativity is marked by constant improvisation: "It is an integral part of the process of African-art to constantly reshape the old and familiar into something modern and unique to simultaneously express one's self and reinforce the image of the community." — John Michael Vlach, Afro-American Tradition in Decorative Arts (Cleveland: Cleveland Museum of Art, 1978), 3.



Recollections. Annette Lawrence. (Stephen L. Clark)

three over four, like the

as do African-American bottle trees and bottle shelves and bottle-lined walks and garden beds.⁷

Artist Tierney Malone transformed the shotgun house into a mythical drugstore, Hope Apothecary, a rich installation of rooms filled with bottles and cans that contain potions for curing the ills of the community. Stacked on shelves, Malone's containers are collaged with images of African-American heros like Langston Hughes and Jackie Robinson and are juxtaposed with scenes of poverty and violence. Malone left the walls as they were - rough and textured with bent nails, staples and remnants of wall and newspaper that recall the African-American tradition of "dressing" the house to ward off evil spirits. The rooms, filled with beautifully detailed and well-crafted collaged containers, transcend the sentiment and nostalgia of the artist's message.

In Biggers' paintings the narrow, gabled elevation of the shotgun house is often abstracted as a temple-like icon and domestic chores are treated as sacred rituals. In *Shotguns* the female figures clasp tiny versions of the houses — "held like lanterns to guard the purity of the people."⁸ The flying birds in the upper left corner and the vertical washboards on the porches represent ascension to the heavens.

George Smith, an artist and professor at Rice University, has often alluded to African and African-American burial rites and traditions in his sculpture. Like Biggers, Smith has interpreted the narrow form of the house as an ancestral shrine:

This shrine represent(s) an African-American interpretation of the Mhari shrines that are built by the Ibo people of Nigeria. These public shrines were used for celebration whenever it was felt that a community needed spiritual renewal or strengthening after a crisis caused by drought, war, famine or similar adversity.⁹

Smith, in an early study for his house-shrine, explored the domestic link between African-American house and grave. In keeping with the African-American tradition of placing broken, inverted cups, saucers, dishes and other possessions of the deceased over the grave site to keep the spirit content, Smith created a sacred ring of broken white dishes in the middle of the house. "Gathering together to eat is lifeaffirming and china was always the family's most revered possession," he notes.

Smith's idea of creating a shrine to African-American ancestors evolved into the construction of a wood-frame altar around a brick chimney that was once connected to a wood stove. Providing warmth in the winter and a means for cooking, the chimney was the internal focal point of the house. Smith's altar will be completed over the six-month installation period with offerings from community residents, who are invited to participate in "urban renewal through the celebration of life with art."

Project Row Houses is a spatial unfolding of Biggers' paintings. Like Shotguns, Project Row Houses is also a nkisi. Acknowledging the healing power that comes from a connection with one's heritage, the project seeks a transformation of spirit of the Third Ward community by encompassing not only the production of art, but also art and cultural education, historic preservation, neighborhood revitalization and community service interweaves art, life, religion and philosophy. Project Row Houses, like the community it embraces, like the art it cultivates, reveals to us the interconnectness of things.
beat of a visual gospel.

Notes

1. John Michael Vlach, Sources of the Shotgun House: African and Carribbean Antecedents for Afro-American Architecture, Vols. I and II, Doctoral Dissertation (Indiana University, March, 1975).

2. Robert Farris Thompson, "The Song that Named the Land," in *Black Art Ancestral Legacy: The African Impulse in African-American Art* (Dallas: Dallas Museum of Art, 1989), 23-30.

3. Robert D. Bullard, Invisible Houston: *The Black Experience in Boom and Bust* (College Station, Texas: Texas A & M University Press: 1987).

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5. Frank Willett, *African Art: An Introduction* (New York: Thames and Hudson 1971, 1993), 153.

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7. *Ibid*.

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9. George Smith, Project Row House Artists Notes, April, 1995.

John Biggers' quote is from Robert Farris Thompson, "The Song that Named the Land," Black Art An-cestral Legacy: The African Impulse in African-American Art (Dallas: Dallas Museum of Art, 1989).



Scarification. Steven Bernard Jones. (Project Row Houses)

Another Look at Boulevards

Allan B. Jacobs, Yodan Y. Rofé, Elizabeth S. Macdonald

Above and below: A classic boulevard, Paseo de Gràcia, Barcelona's premier shopping street.

(Illustrations by authors)

This article is excerpted from a monograph by the same authors: Boulevards: A Study of Safety, Behavior, and Usefulness (IURD Working Paper 625). It is available from the Institute of Urban and Regional Development, University of California, Berkeley (510) 642-4874. Boulevards, we believe, should be reconsidered — classic, multifunctional boulevards, with side access roads and strong lines of trees in medians.

These days, planners and designers accept the idea that streets should serve one primary traffic function — such as local traffic, collector traffic, through traffic, or fast, long-distance traffic. With persuasion (which is readily accepted) from engineering and public works professionals, we often design for these single purposes.

But life and what happens on our streets is not so simple, nor should it be. Boulevards often represent excellent transportation and design solutions to complex urban movement and land-use issues.

During the 1980s in Los Angeles, participating in the design of a major



new development through which a high-volume arterial road passed, we proposed side access roads to serve the adjoining commercial and residential properties and to slow and calm local traffic, basically a boulevard configuration. However, we discovered that lane width standards for the new access roads were so wide as to take away the local quality desired, and we were advised that intersections along such streets would be exceedingly dangerous. Solving the problems would take so much space under operative standards and norms that the idea died.

During field research for the book Great Streets, considerable time was spent on a variety of boulevards, especially observing intersections and the nature of motorist and pedestrian movements there. These streets did not appear to be particularly dangerous; people simply adapted to what was there and did so safely. Perhaps most importantly, these streets were delightful places to be. Pedestrians, local motorists and those passing through quickly seemed to get along together.

A Brief History of the Boulevard

The classic boulevard is characterized by a central roadway of at least four lanes for fast through traffic and two access lanes on each side, which are separated from the central roadway by



medians that contain lines of trees. The medians can be of various widths, as are the side access roads for moving vehicles and (usually) parking. Medians may be nothing more than planting strips or they may contain walks, benches, transit stops and even horse trails or bike paths. The sidewalks may or may not have their own lines of trees.

The boulevards we know today follow models developed in France during the mid-nineteenth century when they were inserted into the existing medieval street patterns or laid out as part of city expansions. In addition to the objectives of beautifying the city and of asserting the public role of city building, these boulevards were designed to move people and goods through the city, improve communications, add sanitation lines and other infrastructure systems, and open up crowded neighborhoods where social unrest was fermenting. They also gave structure and comprehension to the whole city, often as large monumental ways that linked important destinations.

Boulevards were imported to the U.S. as a part of the park movement and City Beautiful movement. Coinciding with the rapid expansion of cities, they were more often associated with new development than with streets cut through old quarters. Often built before the buildings that were to

line them, they were intended to give a sense of good things to come.

11 19 20

In the twentieth century, the emerging field of transportation planning embraced the notion of the functional classification of streets. This approach sought to resolve the potential conflict inherent in the dual roles of urban streets as thoroughfares and access providers by specializing them according to the movement functions they were intended to serve. For the most part, only local streets were to provide access to adjacent property, while "collector" streets, "arterials," "expressways" and ultimately "freeways" were characterized with increasing restrictions to access. Each road type was associated by lane-width standards, curvatures, superelevations, intersection geometries and spacing.

In this context, boulevards of the type we are studying are problematic. They do not fit easily into any one

functional classification category. Analogous to mixed land uses - a victim of the preferences and standards of city planners and developers since World War II — the boulevard is a mixed-use public way that is multifunctional by nature and was therefore discarded.

Boulevards have also fallen prey to changing standards of road building. Over the years, there has been a tendency to widen lane widths, for example, from eight or nine feet to twelve or thirteen feet. Median widths have also increased, left- and right-turning lanes have become standard, and turning radii at intersections have become larger. Parking lanes have become wider. Acceptable tree-spacing norms have become much greater, especially required distances from intersections.

The reasoning for these changing standards always includes a major safety component. Safety considerations are often based on geometric and physical









The Grand Concourse, a prewar residential boulevard in the Bronx.

(Top) Plan of intersection at 167th Street.

(Center) Vehicular and pedestrian volumes at the Grand Concourse and 167th Street, measured at peak hours on a weekday afternoon.

(Bottom) Section.

assumptions and applied logic, not necessarily on observation of real behavior on streets. On boulevards, these considerations are especially focused on intersections. The sheer number of possible conflicting movements — weaves from side access roads to the central lanes and, vice versa, possible right turns from central lanes across straight moving traffic on the access roads — suggest logically that boulevards must not be as safe as other streets. Our research suggests otherwise.

The focus of this study of boulevards has been on countable data, such as accidents and traffic volumes, on physical measurements of boulevards and their immediate environments, particularly at intersections, and on visually monitoring behavior on boulevards in person and through the use of time-lapse and video photography.

So-called "hard" data, we have found, is seldom as hard as we might wish. Accident data is counted differently from city to city and country to country. Different phenomena are counted, precise locations of accidents may or may not be given, and accidents at intersections may be "credited" to one street, thereby raising its accident rate, when perhaps they should be counted for the other street.

Traffic volume data may also be less reliable than desired. At times, the volumes are not based on actual counts, but on samples and partial data that is then assigned and expanded via traffic modelling. Nor is in-the-field monitoring of behavior without its limitations; one always wonders if anything critical is being overlooked.

These caveats notwithstanding, what we found is that boulevards, in general, are no less safe than other major traffic carriers. To be sure, all boulevards cannot be said to be safe. But that is true of other streets as well.



Conflict point diagram of the intersection of Ocean Parkway and Ditmas Avenue, Brooklyn, illustrates the numerous traffic movements possible at boulevard intersections.

Traffic Volumes and Accidents, Selected Boulevards

	VOLUME	ACCIDENTS	ACCIDENT RATE	PEDESTRIAN ACCIDENTS	PEDESTRIAN ACCIDENT RATE
Grand Concourse	57.950	20.94	0.36	4.88	0.06
Queens Blvd.	37.654	14.25	0.63	2.08	0.09
Eastern Parkway	61.000	42.38	0.69	3.65	0.06
Ocean Parkway	74.000	27.30	0.37	1.20	0.02

"Volume" expressed in terms of Average Daily Trips/1000. "Accidents" and "Pedestrian Accidents" expressed in terms of yearly mean per intersection. "Accident Rate" and "Pedestrian Accident Rate" expressed as ratio of Accidents/Volume and Pedestrian Accidents/Volume.

opportunities that may be against the rules. Observed behavior suggests that people see a chance to achieve an objective, understand that the action might not be according to the rules, make an assessment as to whether or not they can do what they want safely and without getting caught, and then do it if the answers are positive,

People on boulevards adapt their behavior to situations; but when choices are many and complex, people move with more caution. The intersections of boulevards seem problematic on traffic flow diagrams that show all the possible conflict points. But the travel world does not necessarily work as foreseen in those diagrams, particularly on the best-designed boulevards.

On Avenue Marceau in Paris, there are some truly complicated intersections, not so much with access streets but with cross streets. At one point, four streets intersect Avenue Marceau, which has access streets on both sides. The number of possible movements is staggering, and it seems that all of those are executed. Over two hours of observation reveals that drivers become aware of the complexity of the place they are entering and act with caution. Accident data at this intersection reveals that none of the intersections have more than ten accidents a year.

Boulevards with wide traffic lanes and long blocks are associated with higher vehicular speeds and more mid-block crossings by pedestrians. Queens Boulevard and the Grand Concourse are considered among the most unsafe streets in New York for pedestrians. Both have similar physical design characteristics that might account for this status: they have two access lanes for fast traffic

The research not only permits a conclusion as to the general safety of boulevards but also leads to observations (the reader may call these hypotheses) about boulevard design and the relationship between design and behavior on them.

Why Boulevards Work

First, a general observation regarding behavior on boulevards: people follow the rules. Motorists do not generally go through red lights, they do not generally make right turns from central lanes of a boulevard if that is clearly prohibited, they use mid-block breaks in medians (if provided) to move between the central lanes and the access lanes, they obey left-turn prohibitions and they park where they are supposed to park. Pedestrians generally pay attention to lights, cross with them and, for the most part, are very mindful of vehicles.

But motorists and pedestrians will take advantage of opportunities that may be against the rules, if doing so is perceived as safe. This observation is most dramatically exhibited by the large number of pedestrians who regularly cross access roads against a traffic light to get to the median, using it as a haven, before crossing the fast-moving central lanes when they are supposed to. Pedestrians also regularly walk on narrow access lanes, even mothers with small children.

Motorists will back out of slowmoving or stopped access lanes into intersections if they perceive that will get them moving again without accident. Some motorists move from central lanes to access lanes, or from access lanes to central lanes, at intersections where this is prohibited. Uturns are not uncommon whether or not they go against the rules.

It is notable that, generally, people pause before taking advantage of





that are wider than any other of the boulevards we studied. Traffic volumes on these lanes approach those on the central lanes and traffic speed is equal to or rivals that in the central lanes.

These boulevards also have greater distances between intersections than other boulevards, or greater distances between designed crossings. Given these physical conditions more people, apparently, choose to jaywalk rather than to walk to distant intersections and double back to their destinations across a wide street.

In general, street trees are less of a visual barrier than other objects placed at street intersections, and less of a barrier than parked or stopped vehicles, whose existence is inevitable. Simply put, it is considerably easier to see around a tree trunk, even around a wide one, than it is to see around a parked or stopped car, a transformer box on a light pole, or a battery of newspaper vending machines lined up along the curbs at intersections. Neither accident data nor observation carried out as part of this study permit a positive correlation between safety and trees, their spacing, or their nearness to intersections.

To work well, a boulevard must estab-

lish an extended pedestrian realm. If the access roads of a boulevard are separated strongly from the center roadway and are narrow, and if the medians have closely spaced trees and perhaps benches, have a different paving and a level change, and if there are transit stops or other functions that draw people to the median, then pedestrian and motorist behavior suggests that people consider the whole space from buildings to the central lanes — the sidewalks, the access roads, the medians — as a pedestrian realm, or at least an area in which they are equal with vehicles.

On boulevards where this pedestrian-paced quality exists, it is common to see autos and pedestrians sharing the access roads. Vehicles move slowly and quietly behind pedestrians who are walking on the street, or a mother may feel safe enough to stroll down the access street with an infant in a stroller.

Boulevards can work well as major commercial streets, residential parkways, or mixed residential and commercial streets. The boulevard form also allows the street to change as the context of the city changes around it. There seems to be no reason, based on reviews of the case studies, why a boulevard cannot work as well for a residential, commercial or mixed-use environment.

Conclusions

In situations where both through and local traffic are heavy, each with different needs and conflicting with the other, boulevards seem to be most appropriate as solutions to the needs of both. They balance the different and conflicting uses, and do so in an elegant way.

When a major urban street passes through an area of sufficient residential density, or of intense commercial activity (either of which may include public transit service and stops), or a mix of the two, areas through which pedestrian activity may be significant and in which vehicular access to adjacent properties is relatively constant, safety problems potentially exist in the conflict between those activities and through traffic. Boulevards, because they separate through traffic from local traffic, and because they can accommodate public transit as well as private vehicles and pedestrians in appropriate subrealms of the same public right of way, can resolve the inherent conflicts on such corridors.

But, to be effective and safe, boulevards must be designed appropriately. The data and observations of this research suggest very strongly that "appropriately" means that a pedestrian realm must be established along the side access roads, and that, within this context, relatively narrower vehicular cartways are essential.

To be sure, the research we carried out and the data we collected from existing sources as a part of this study cannot be said to prove, unequivocally, our hypotheses — particularly those about safety — but they come close enough. The combination of quantitative data and physical observation makes the argument for well-designed boulevards compelling.

Boulevard safety, as with other streets, depends on many factors, not the least of which is design. Essentially, bigger may not be better, especially in relation to the side access roads. Wide lanes, fast traffic, absence of parking, widely spaced intersections, easy turns and widely spaced trees — standards and norms most associated with contemporary roadway design — may be counterproductive on boulevards.

Good boulevard design lies in understanding and accepting the notion of multifunctional streets, rather than single-purpose streets, and then in designing them accordingly. The side access roads are for local traffic, slow-moving traffic, pedestrians, for access to public transit, access to abutting properties, parking and maybe for various recreation and cycling. Complex, even crowded designs seem to work best. Tightness of dimensions characterize the best boulevard access roads.

Future Opportunities

Just as planners and designers increasingly look upon mixed-use areas as both convenient and healthy, so, it seems, they should explore the possibilities of multifunctional streets such as boulevards.

Only in newly developing areas, largely peripheral to existing metropolitan development, may we expect new roads at a significant scale, and these are not likely to be new freeways. We may expect increasing efforts at better arrangement and management of the existing framework of roadways, consistent with a higher priority of attention and funding given to





A Frederick Law Olmsted boulevard: Ocean Parkway, Brooklyn. Boulevards work best when they establish an extended pedestrian realm.

public transit, to higher densities, and to revitalization policies and programs in inner-city areas and older suburbs.

Within central cities and older suburbs, there are two notable situations where boulevards can provide solutions to movement and land use problems: the redesign of existing boulevards that for one reason or another do not function well presently, and the redesign of major roadways, usually arterials that either need to be or can be reconfigured. A significant finding of this study is that a right-of-way of 125 feet, or slightly less, is all that is required.

Urbanites have been delighted with boulevards, with the prospect of strolling along tree-lined streets in dappled light, meeting friends, shopping, stopping at a bench or a cafe, protected from fast-moving traffic in the center by parked cars along a side access road and by rows of closely spaced trees. The best of them that remain offer all of these experiences still. Boulevards deserve a second look!

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