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PLACES

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Editorial

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Speaking of Places

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**Places, a Forum of
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Form and Territory

Editorial

Donlyn Lyndon, 3

Speaking of Places

Colletta di Castelbianco

Giancarlo de Carlo, 4

New Urbanism:

The “Vancouver Model”

Trevor Boddy, 14

Folsom Street Blues

Trevor Boddy, 22

The Rincon Hill Projects

Allan Jacobs, 25

Research & Debate

Rethinking Public Housing

Robert Fishman, 26

Explaining Residential Density

John G. Ellis, 34

Portfolio

The View Downward: Cultural

Landscapes of North America

Barry Haack, 44

Review

Delta Primer: A Field Guide to the
California Delta, by Jane Wolff

Mark Anderson, 54

Places/Projects

Taj Heritage Corridor:

Intersections between History

and Culture in Designing the

Yamuna Riverfront

Terence Harkness and Amita Sinha, 62

Dispatches

Multi-Sourcing

Kevin Keim, 70

New Urbanism’s SmartCode

David Moffat, 74

To Rally Discussion

Rethinking Urban Parks

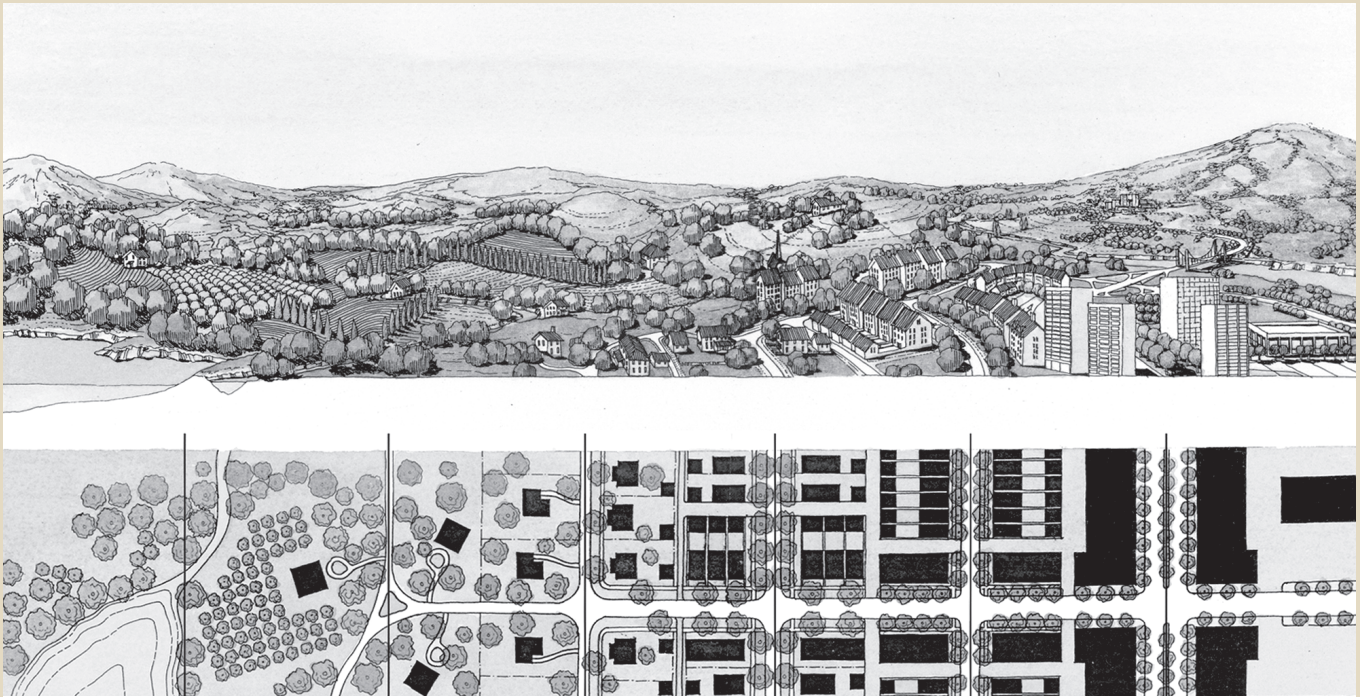
Paul Bray, 78

Contributors

*On the cover: Aerial photograph
of Cambridge, Ohio, courtesy
United States Geological Survey*

New Urbanism's Smart Code

David Moffat



As a movement, the New Urbanism has long been concerned about the connection between theory and practice. To its founders, the campaign to recover older, lasting principles of city form has always needed to go beyond windy critiques of sprawl development, to provide real tools for change.

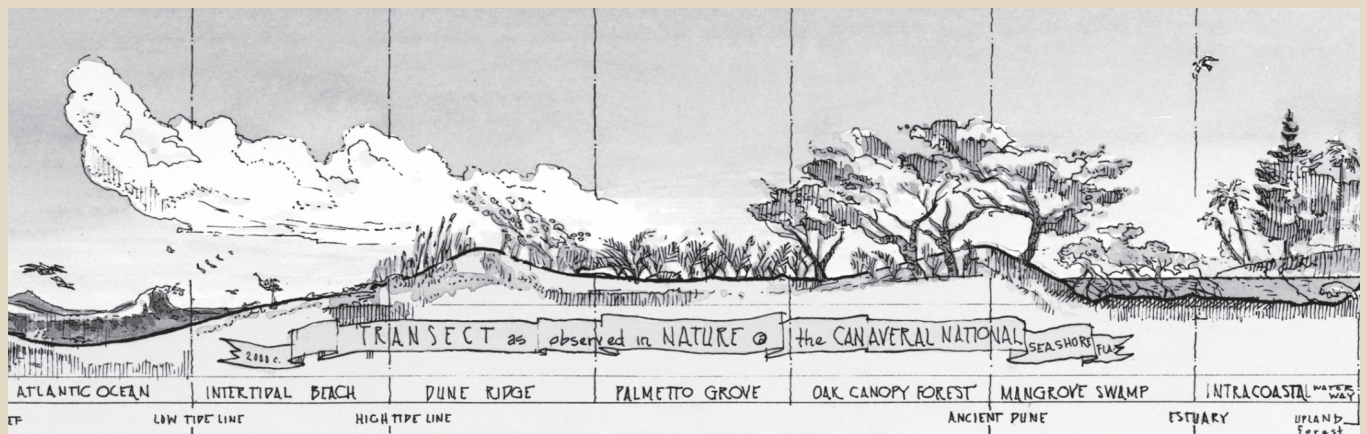
One of the best-developed of these is the Smart Code, a comprehensive municipal development ordinance written by Andrés Duany, Elizabeth Plater-Zyberk, and their Florida architecture and planning firm DPZ. As one of the founders of the Congress for the New Urbanism, Duany maintains most people don't want "dendritic" landscapes of cul-de-sacs, parking lots, freeways, and office parks. Nevertheless, current zoning laws almost guarantee this type of environment, because their driving concerns include almost everything other than form. The Smart Code, by contrast, begins with what people want their communities to be like, and works backward to create the legal framework to allow it to happen.

In technical terms, such a strategy has recently been referred to as form-based planning. In place of the separation and regulation of uses (at the heart of most modern municipal codes), it proposes the regulation of physical relationships and densities. And behind the Smart Code's particular approach is the idea of a transect: a progression of forms from rural to urban that its advocates claim most people "naturally" prefer.

When it first appeared in the early 1990s, the Smart Code was a free, one-page document whose intent to replace all a town's existing development ordinances was largely polemical. But in subsequent revisions, numbered like the releases of a computer program, it has been refined and expanded. It now includes seven articles that address everything from regional environmental analysis to the details of local sign ordinances. It is also now available for a license fee from Municipal Code Corporation, the same Florida publishing house that distributes 2,600 other model municipal codes.

Today, Smart Code advocates claim their all-in-one approach to development planning is not only a viable and "grown-up" alternative to standard forms of municipal regulation, but it is simpler and more transparent to administer. At its heart, it does away with the proliferation of use-based zones and special overlay districts (R-1, R-2, C-1, etc.) that dominate a typical zoning ordinance. And in their place it substitutes six transect zones — T-1 to T-6 — and "special district." These are tied to a specific gradient of development types, from the protected landscape to the dense urban core, that clearly describe, map and diagram what developers are allowed to build "by right."

Above: The development transect from the SmartCode. The vertical dividing lines in the lower drawing indicate the transect zones from T-1 at left to special district at right. **Facing page:** A natural transect. Drawing by James Wassell.



A Matter of Natural Law

To make sense of all this, and promote the Smart Code to city officials and planning practitioners, for the last several years the code been the subject of series of seminars organized by the planning firm Placemakers. A feature of all these events is an inspirational talk by Duany. However, at the seminar Feb. 19-20 in San Diego, the code's principal author also used much of his time at the podium to argue that advocates of a denser, mixed-use lifestyle need to recruit environmentalists to their cause.

According to Duany, the art of town planning was largely swept aside after World War II by the advent of technological modernism. By contrast, starting in the early 1960s, environmentalists were far more successful at establishing a countervailing moral position. But environmental arguments for the priority of natural systems have generally been based on notions of wilderness (in moral terms, Eden before the fall). And today, if New Urbanists want to make common cause with them, they will have to put people back in the picture.

This pairing of urban development and environmentalism is not as odd as it might at first seem. The language of New Urbanism is filled with biological analogies. Thus, sprawl development is a "monoculture" that cannot "evolve" according to a process of "succession." But Duany also pointed out that the idea of a development transect underlying the Smart Code is taken from topological stud-

ies of plant and animal communities. To reconcile an environmental transect with the New Urbanism, you only need to extend it into areas of human settlement.

The trouble here is that key writings, including Ian McHarg's *Design with Nature* (1967) and Ann Spirn's more recent *The Granite Garden*, have set the environmental movement on a collision course with those who believe the city to be one of the greatest "natural" human environments. Followed literally, McHarg's ideas have been shown to lead only to beautifully landscaped sprawl, Duany said; and Spirn's would have made the building of those rich urban environments we know and love virtually impossible.

To actually find a place for people within the higher morality of nature, you must begin a dialogue of forms and locations. And this is precisely what the Smart Code sets out to do. At one end are its T-1 and T-2 zones, designating protected natural areas and the rural environment, respectively. T-3 covers what might be considered the suburban condition — although compressed into densities more typical of the 1920s. T-4 represents the messy area round the core of most American cities, and T-5 represents the more orderly traditional town center. T-6 and "special district" are used to codify big-city places or areas dominated by a single, concentrated activity such as an industrial area.

New Urbanists are normally thought to be arch enemies of suburbia. But the Smart Code does not seek to eliminate

this type of development, Duany said — only raise its performance level, and limit its application to market sectors where it makes most sense. The problem is that today anyone setting out to build a compact, walkable community faces a near-Sisyphean task pushing their plans through the zoning approval process. What the Smart Code sets out to do is restore choice and “level the playing field.”

Despite such an ostensibly free-market orientation, a program of moral judgments clearly also informs the Smart Code. And during his remarks in San Diego, Duany touched on this with reference to a comment by architect Christopher Alexander, whose writings, including *A Pattern Language*, also seek to establish a basis for the ordering of built forms.

Duany said that Alexander once told him that when he entered a building, he asked a simple question: “Does this place raise one’s spirits or lower them?” A similar judgment might be seen as underlying the transect-based Smart Code: what is this form of development, and is this the appropriate T-zone?

Toe to Toe with the Technocrats

Following the presentation by Duany much of the rest of the two-day event was taken up by specialist presentations. Smart Code advocates believe that existing code structures will only be supplanted once they are able to match the authority of experts, issue by issue.

In today’s development climate, the fire chief does not care what the mortgage lender thinks, or the EPA biologist. But they have all devised specialist terminology to codify their concerns. By comparison, the warm and fuzzy of urban design has no “standing.”

“There is no such thing as a void,” Duany said. “Always there is an expert that will fill it.” The trick is to harness the power of code-writing to a general vision. Today, Duany said, those who buy into the Smart Code’s program of change are also buying the expertise of specialists who have embraced the New Urbanist vision, and who have contributed specific language to various sections of it.

Among the specialist presenters in San Diego, the first to the podium were two traffic engineers, Peter Swift and Richard Hall. Swift reported on research by his Colorado firm documenting how wide suburban streets actually increase the number and severity of traffic accidents. A less hierarchical net of narrower streets without cul-de-sacs would be more walkable, encourage drivers to slow down, and always allow fire engines to arrive somewhere from two directions.

Hall, from Florida, then pointed out how forty years of development using a modular “plug-and-play” model

along arterial boulevards has proven little more than a recipe for congestion. By planning patterns of land use first (and in ways that enable a variety of travel modes), you can actually increase “mobility” (the holy grail of transportation planners) by reducing the number of high-volume arterial intersections. But such a strategy involves rediscovering an older typology of walkable thoroughfares, the specifics of which are now part of the Smart Code.

Environmental planner Milt Rhodes next took on the issue of water quality. Environmental science has now established that the amount of land covered by buildings and paving is absolutely related to biotic integrity. In its second article the Smart Code creates a system for prioritizing lands for urbanization and preservation across entire watersheds. It then ties such regional planning to a gradient of provisions by T-zone for such important environmental concerns as stormwater retention and stream channeling and buffering.

Planner Eliot Allen from Portland, Ore., completed the first day of presentations by demonstrating how GIS computer modeling can be effectively used to manage information and implement Smart Code specifics. A precise quantification of benefits may be especially crucial to decision-makers when they receive that politically chilling “call in the middle of the night” challenging their new approach, he said.

The second day’s session began with a presentation on mixed-use real estate economics by former developer, now EPA finance analyst, Lee Sobel. The central point to emerge from his discussion of “lease structures,” “phasing strategies,” and “tipping points” was that retail development is critical to any new urban community, since it creates the sense of place that can serve and attract housing and other uses. However, nearly one third of all retail space in the U.S. is now surplus. Therefore, a shrewd approach is essential, one that stresses cheap, flexible space that can adapt to a variety of tenants.

Duany pointed out that if initial retail development is strategically planned, other aspects of a community can be built out in time on its parking lots. Another key lesson of existing retail development is that there is always a front and a back to any building, even on a traditional Main Street. This means there is no sense spending money on rear facades, he said.

Daniel Sloane, national counsel for the Congress for the New Urbanism, next addressed legal issues surrounding adoption of the Smart Code. As a model ordinance, it needs to be extensively calibrated to local conditions and applicable state laws, he said. Beyond this, the best method to integrate it into a town’s existing development code



Above: Photo collage of existing riverfront street in downtown Petaluma.

Below: Rendering of the same street as it might appear after development according to the SmartCode. In Petaluma, application of the SmartCode made use of California's Specific Plan law to create consensus between developers and environmentalists. Images courtesy of Laura Hall.

may be to adopt it as an overlay, giving developers a choice between parallel approval processes. Once its advantages in terms of speed and ease of use have been proven, the older system can be phased out over time.

The final technical presentation was by Tony Nelessen, whose New Jersey planning practice concentrates on community visioning. A pioneer in visual-preference surveys, he said an "extraordinary misconception" exists about what people want from their built environment. Given the choice, people from Delaware to Florida to Montana consistently prefer images that dovetail with the application of a rural-urban transect. What allows groups he jokingly referred to as CAVE (Citizens Against Virtually Everything) to drive local development politics is a failure by planners to communicate a long-term message of aspiration and empowerment.

A Question of Application

The audience at the San Diego seminar consisted largely of planning officials and technical consultants from such medium-sized western cities as Missoula, Bellingham and Albuquerque. Its authors believe the Smart Code is applicable in such places, both to contain expensive peripheral growth and transform "greyfields" such as dysfunctional older shopping centers into new mixed-use neighborhoods. It may also be applicable in larger cities such as San Diego, which is currently looking at ways to create multiuse district centers in its outlying suburbs.

But away from the official presentations a number of attendees questioned whether any city council would have

the fortitude to go cold turkey and throw out its existing codes to adopt a new system of T zones. Likewise, many were skeptical of creating a parallel system, as Sloane suggested, since this would mean having to administer two regulatory regimes instead of one.

One of the most revealing presentations, therefore, was that of Laura Hall, a private planning consultant from Sonoma County, California. In 2003 her firm managed the process by which a Smart Code was adopted for a 400-acre section of downtown Petaluma, a small city at the northern fringe of the San Francisco Bay Area. What made this application possible, she said, was California's Specific Plan law, which allows a city to craft a highly detailed, site-specific amendment to its local zoning ordinance.

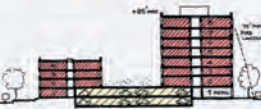
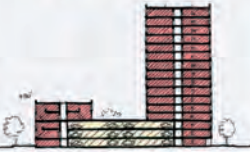
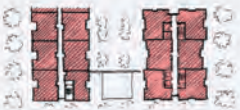
Hall also said the Smart Code was valuable because it gave the community a tool to focus on the real physical attributes of the place it wanted to be. And once people were provided with a comprehensive structure to guide their discussions — one that did not resort to incomprehensible formulas and overly complex and qualified definitions — consensus was remarkably easy to obtain.

In the end, a local newspaper reporter confided he was having difficulty writing the story. Was this a win for the developers, or for the environmentalists? Who could say when the two groups were holding hands and singing "kumbayah."

Explaining Residential Density

John G. Ellis

Residential Density Matrix			
	Single Family Detached	Semi-Detached w/ In-Law Unit	Front Loaded Row Houses
	(2 Story) Alley Loaded	(2-3 Story) Alley Loaded	(3 Story) Front Loaded
			
			
			
Density Dwellings/ Net Acre	10 DU/ AC	15 DU/ AC	20-25 DU/ AC
Parking Type	2 Car Garage	1 Car per Dwelling	1 Car per Dwelling
Construction Type	Wood Frame	Wood Frame	Wood Frame
Construction Cost Index	1.00	0.95	0.90

Rear Loaded Row Houses (3 Story) Rear Loaded	Stacked Rowhouses (4 Story) Rear Loaded	Stacked Flats (5 Story) 1 Level Podium	Midrise Stacked Flats (below 8 Stories) 2 Level Podium Below Life Safety	Highrise Stacked Flats (above 8 Stories) 3 Level Podium Above Life Safety
				
				
				
25-30 DU/ AC 2 Cars per Dwelling Wood Frame 0.90	30-35 DU/ AC 2 Cars Per Dwelling Wood Frame 1.20	35-45 DU/ AC 1 Car per Unit Wood Frame Over Concrete Garage 1.60	45-75 DU/ AC 1 Car per Unit Concrete Frame 2.00	75-125 DU/ AC 1 Car per Unit Concrete Frame 2.50
Unstacked	Stacked			
	Tuck Under Parking	Podium Parking		
		Wood Frame Construction	Concrete Construction	

On many occasions when presenting proposals for higher-density housing at community workshops or planning commissions, architects are faced with an emotional type of opposition they find difficult to understand. Behind this opposition, which may have nothing to do with designs actually being proposed, usually lies a misunderstanding of terms. In particular, the words “high-density housing” conjure up images of closely spaced highrise apartment towers, with a consequent lack of daylight, reduced open space, and blocked views. Even at medium and lower densities, there is little public awareness of the different potential configurations of buildings and their impact on streets and neighborhoods.

One reason for this misunderstanding is easy to see. At the planning stage, describing a project in terms of the number of dwelling units per acre is about as revealing to most people as telling them how much the buildings weigh. Without a sense of what “25 dwellings per acre” means in real terms, for example, discussion may get bogged down in abstractions that are difficult to resolve. Worse, without a clear sense of what is being proposed, a simple fear of change may take over. Any new housing means the “wrong” type of people will move in, traffic will increase, property values will decline, etc.

Ultimately, perceptions of residential density are as tied to design quality as actual numbers. But even the numbers may be complicated to explain. One reason is that levels of residential densities cannot be considered in a vacuum; they can only be understood with reference to three related factors: building typologies, parking configurations, and construction types. Thus, housing layouts that require parking for two cars per dwelling can produce a completely different density and typology than those that require parking for only one car. Higher density, therefore, doesn’t necessarily mean highrise buildings.

In this article, I would like to provide an illustrated guide to some of these issues. My hope is that this examination of the current building blocks of residential architecture will be of value both to practitioners and citizens as they wrestle with choices for how their communities will meet future housing needs.

The Density/Building Typology Chart

Architects and planners generally use the term “building typology” to refer to a range of typical structures. In the field of housing, at the lower densities, these include such forms as single-family dwellings, semi-detached units (duplexes, etc.), row houses, and secondary in-law units.

Middle densities can generally be achieved with stacked walk-up townhouses or flats. At the highest densities, elevator- and corridor-accessed units are necessary.

Parking arrangements generally form a gradient that corresponds to these increases. It progresses from individual garages, to common surface lots, to podiums or basement garages.

The range of application of different construction types is determined by local interpretation of national building codes. But there are common variables, and these may be used to arrive at a common index of construction cost. Generally, as densities increase, building construction changes from wood-framed Type V construction (up to 50 feet) and Type III construction (up to 65 feet), to concrete and steel-framed Type I and II construction for mid- and highrise buildings. For units located more than 75 feet above the ground, the introduction of special life-safety code requirements has an important impact on building design.

Considering the above qualifications, the accompanying chart attempts to show how increases in residential density are related to different building typologies and specific thresholds that trigger different construction types. The chart also attempts to compare the relative cost of each category. This particular study focused primarily on higher-density urban conditions, where smaller dwelling units and lower parking ratios were the norm.

In preparing the chart we measured the density of units per acre in relation to the net area within the property lines, and excluded the public right-of-way. For the purposes of comparison across unit types, certain assumptions were also made: all dwellings were in the range of 1,000–1,200 net sq.ft. in area; a parking ratio of one car per dwelling applied for all off-street parking; and open space of at least 100 sq.ft. per dwelling was required either as a yard, a balcony, or communal open space.

Based on these assumptions, the chart divides building types according to certain categories. These include stacked vs. unstacked units; units with separate individual garages vs. those with communal garage types; wood-frame vs. concrete-frame construction; and units below vs. above the life-safety limit (75 ft. to the floor level of the uppermost unit).

To fully understand the chart, some additional definitions may be required. “Front loaded” means that car access is from the street; “rear loaded” means it is from

Right: Low-density residential typologies.

a rear alley or parking court. “Single aspect” means a unit has windows that face in only one direction; “double aspect” means the unit faces in two directions. Walk-up units have stairs only; elevator- and corridor-access units give residents the choice of stairs and elevators. Flats are dwellings on one level; townhouses have more than one level. Lofts are two-story units with a double-height space. Garages may come in a variety of different types: single car; or tandem (front and back) and side-by-side for two-car garages. Secondary units (carriage-house or in-law units) are smaller units on a single property, and may be located either in the main structure or in a subsidiary building.

Low-Density Residential Development

To show what these various levels of residential density mean in physical terms we prepared a series of standard block diagrams. The first pair illustrates low-density development in the range of 10-15 dwellings per acre, on lot sizes that range from 3,000 to 5,000 sq.ft. The building types considered here are either single-family houses on 50 x 100 ft. parcels or semi-detached houses on 30 x 100 ft. parcels.

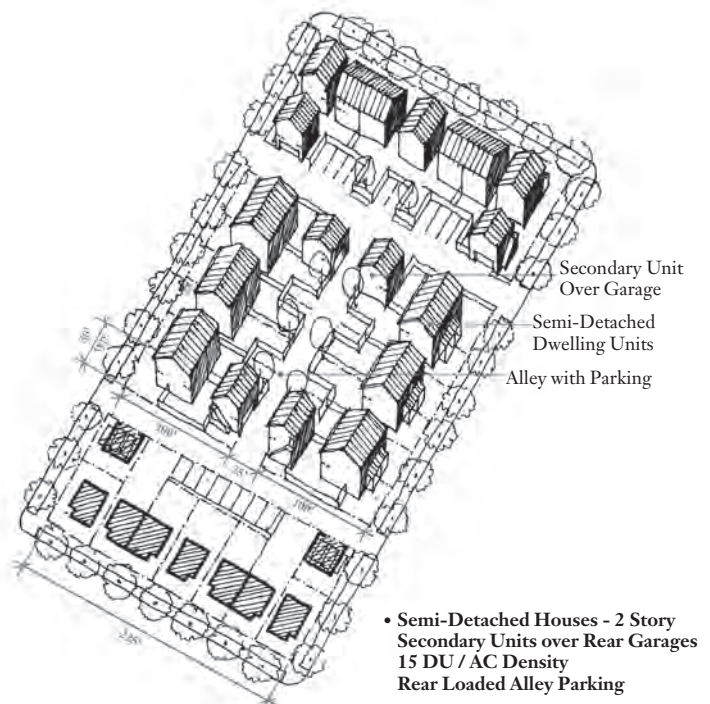
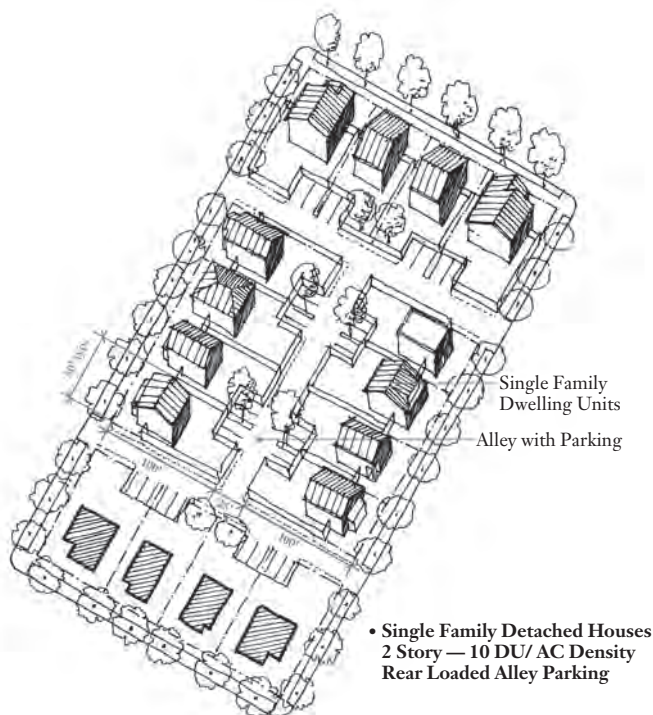
Buildings at this density can be either front loaded, with parking from the street with a side drive (sometimes

shared), or rear loaded from an alley. The presence of alleys offers the opportunity to create street frontages that do not have frequent curb cuts, and so can provide more on-street parking for visitors. Alleys may also be desirable to hide all the service activities, cars, trucks, and the other detritus of everyday life.

The alley can also provide the setting for secondary “in-law” units above garage spaces. In this way mixed-income housing can be easily created within the same block. Such housing also offers a greater level of security because there are more “eyes on the street,” and it serves as a way of increasing density without affecting the appearance of the surrounding streets.

Row Houses

At medium densities of 15-25 dwellings per acre and up, one moves into groups of dwellings arranged as row houses. These are shown in the middle two pairings of block diagrams. Typically, row houses comprise two- or three-story dwellings ranging in width from 16 to 25 feet. They can be front or rear loaded, but parking is preferable at the rear to avoid a street frontage dominated by garage doors. Where front loading is unavoidable, tandem parking is preferable for two-car garages.



Using the row-house typology, various site configurations can be used to increase densities without creating an overwhelming impact on the street. Two such arrangements were developed by nineteenth-century builders in San Francisco: the tandem house and the mid-block alley. “Tandem housing” consists of a second row of houses located behind the street-facing units and accessed through a garage court or portal. This works well on deeper lots, because from the street the appearance is the same as for ordinary row housing, but at double the density.

Alternatively, using a mid-block alley, a new narrow street lined with single-family two- or three-story row houses can be inserted between two main streets. This allows the same number of units as would be accommodated in a pair of taller buildings facing the main streets.

A popular variant on the tandem-housing model is to place six- or eight-plex row house modules around a common parking court. This permits a greater number of units to be built while minimizing the impact on the street frontage by having a single curb cut on the street. Parking can either be accommodated in an internally located surface court or in individual garages on either side of a drive-in court.

Another type of dwelling, known as a “tuck-under,” consists of a two-story house raised half a level above the street with a rear-accessed garage half a level down. This arrangement avoids the arduous building-code requirement of a secondary staircase from a third-floor bedroom. The dwelling is measured as a two-story unit from the street frontage, even though it is three levels high when measured from the garage alley.

Densities of 25-30 dwellings per acre are possible with the tuck-under arrangement. It can also be used to create attractive street frontages, since garages are hidden away at the rear, and the ground-floor rooms are raised half a level above the street, preserving privacy from pedestrians passing by on the sidewalk.

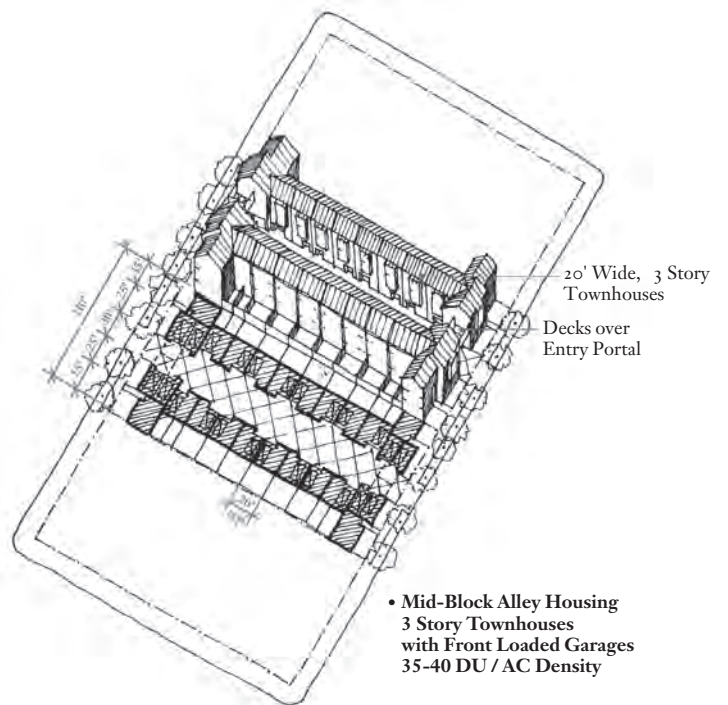
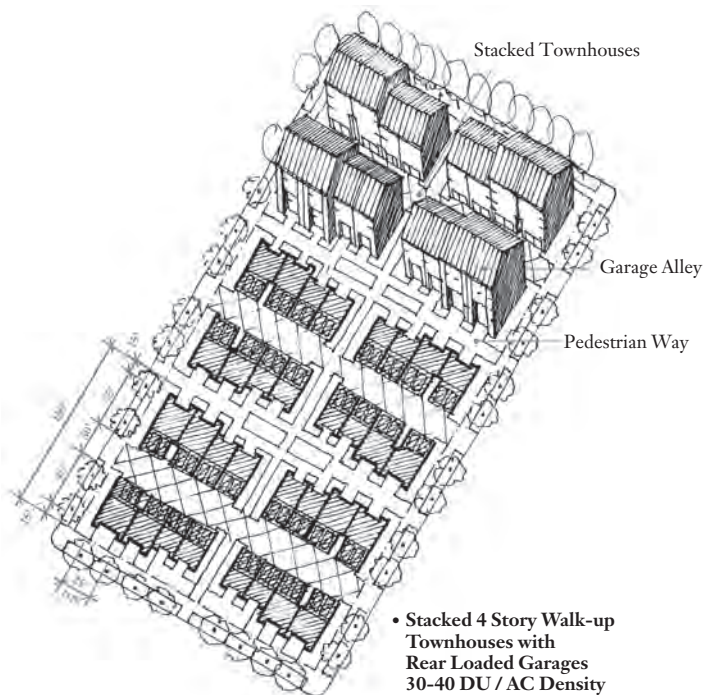
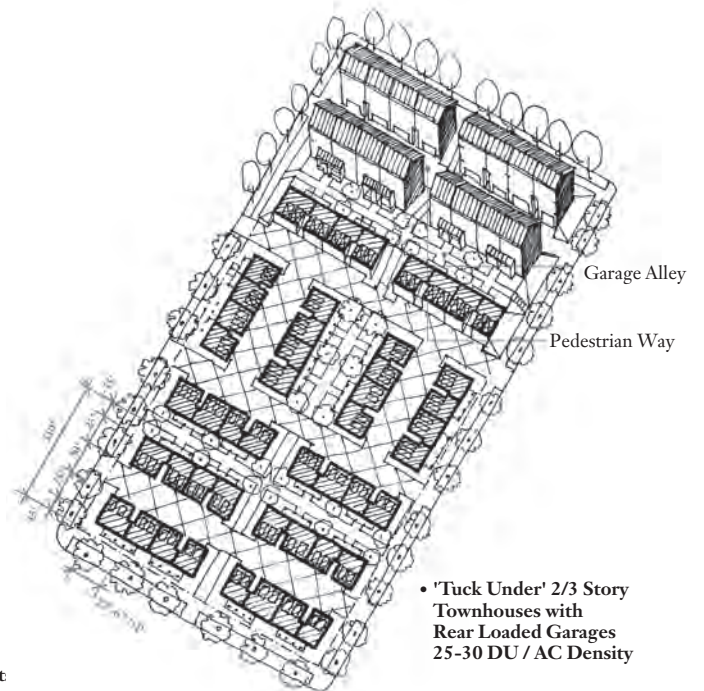
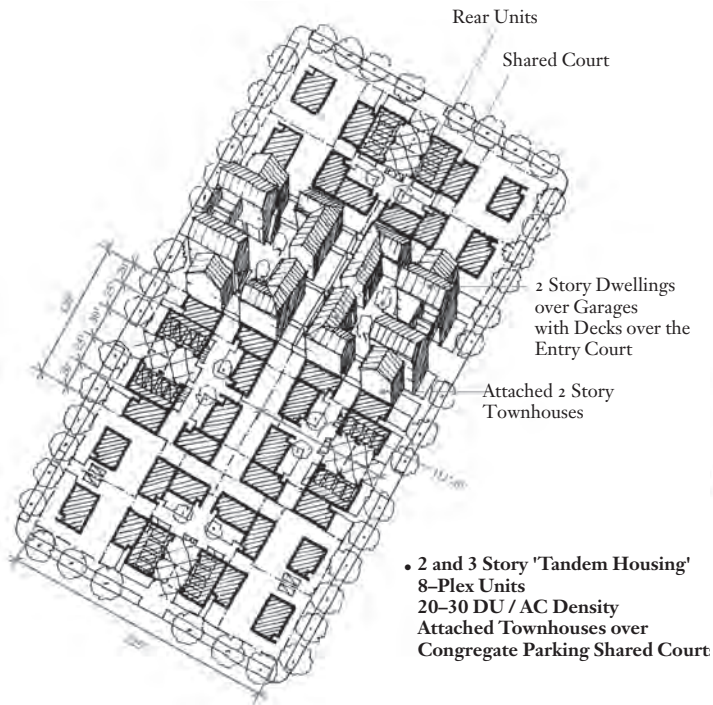
Moving up the density scale, four-story stacked walk-up townhouses over their own garages can be built at a density of up to 40 dwellings per acre. Stacked units above two stories, however, require two means of escape, so stairs need to be provided to give access both from the street and from rear parking areas.

With units built over their own garages, two vertically stacked townhouses can be arranged with a rear-accessed garage on the first level, and a four-story building above with an interlocking section for the separate units. A 50-ft. pairing of stacked 25-ft.-wide units can share a common stair from the garage and require only a total of three stairs for four units.



Above: Townhouse typologies can create a variety of urban conditions. Examples from San Jose, California.

Right: Townhouse residential typologies.



A simpler pattern, which achieves the same density but replaces townhouses with flats, involves arranging three stories of stacked walk-up flats around a pair of stairs, one facing the street, the other giving access to surface parking at the rear. Each flat thus has a double aspect, facing both the street and the rear of the site. With a 25-ft.-wide frontage, there is also enough room for each flat to be designed with side-by-side rooms.

Medium Density to High Density

The last two pairs of images show medium to high-density residential arrangements. A great number of configurations are possible at this end of the density scale, but as the chart shows they are more expensive to build, largely because of the need to build common structured parking.

As a general rule, above 45 dwellings per acre one gets into elevator and corridor access, with communal parking garages either below grade or in a separate structure. At a density above 75 dwellings per acre one moves further to multilevel parking arrangements. These can take the form of underground basement parking or internal podium parking on several levels — both of which require mechanical ventilation and fire-separation. Alternatively, independent multilevel parking garages may be designed which can be naturally ventilated and do not require expensive fire separation, but these may require more space.

The simplest and least expensive arrangement is often to build a multistory, concrete-framed garage in the center of a block or parcel with a 20-ft. gap around its perimeter to permit natural ventilation. Surrounding this garage one can build four-story, corridor-accessed, single-aspect units in Type V wood-frame construction.

If the surrounding units adjoin the parking garage, the garage needs to be mechanically ventilated and have a four-hour separation between the autos and surrounding residential or commercial/office uses. One alternative is to build above a parking podium, with special “liner” units wrapping the perimeter and facing the street.

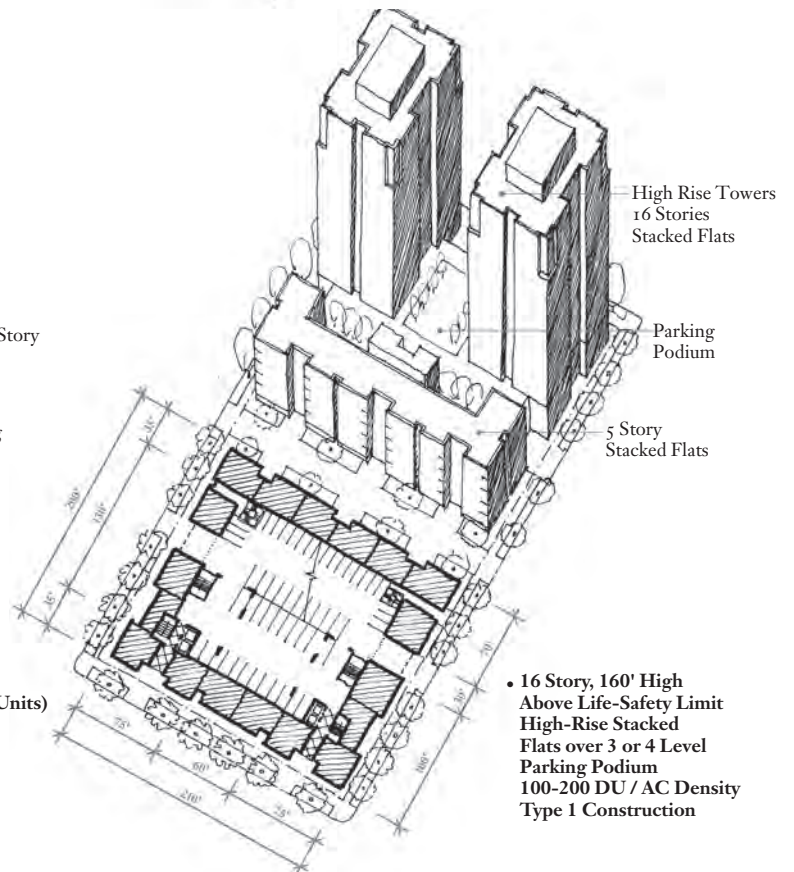
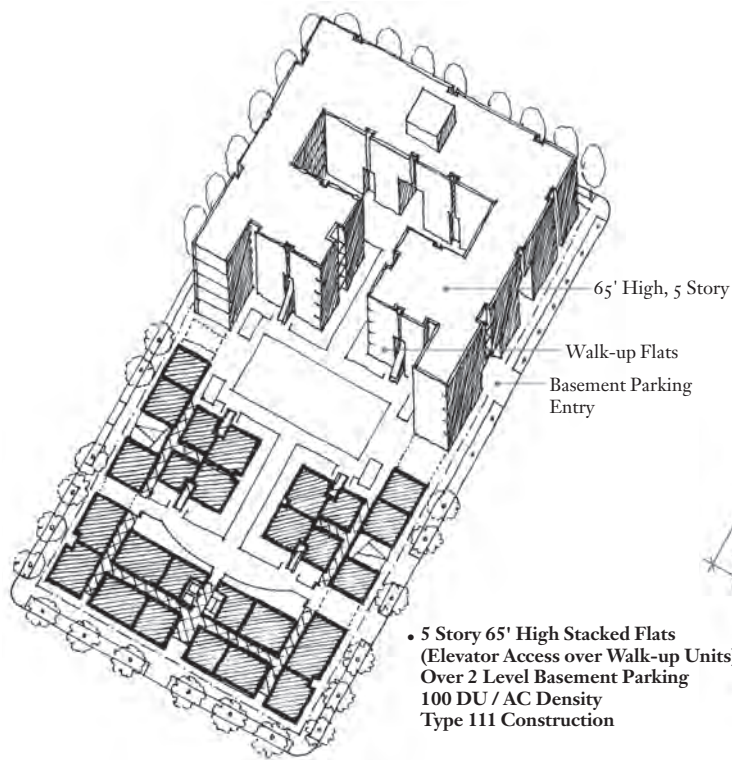
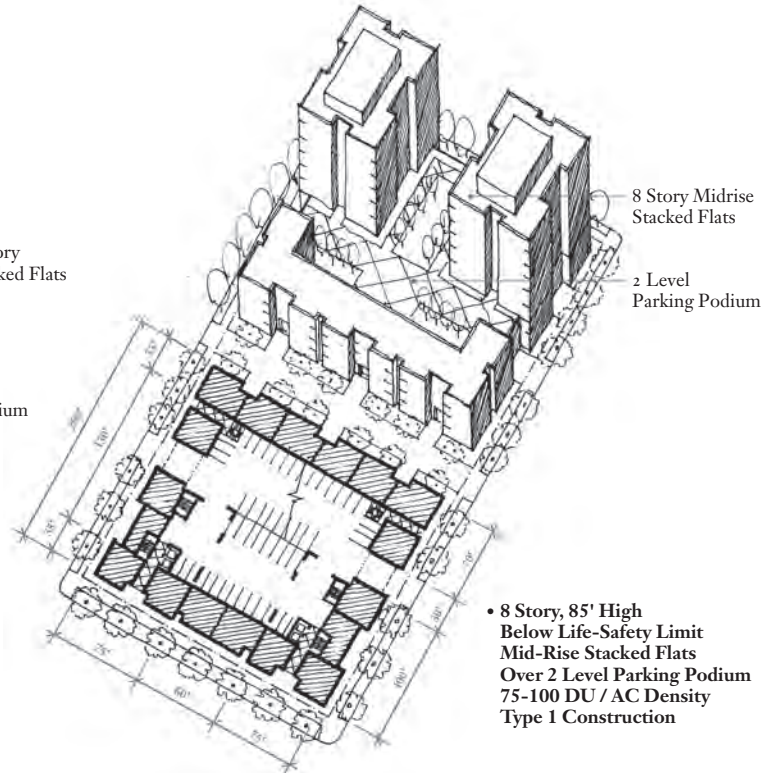
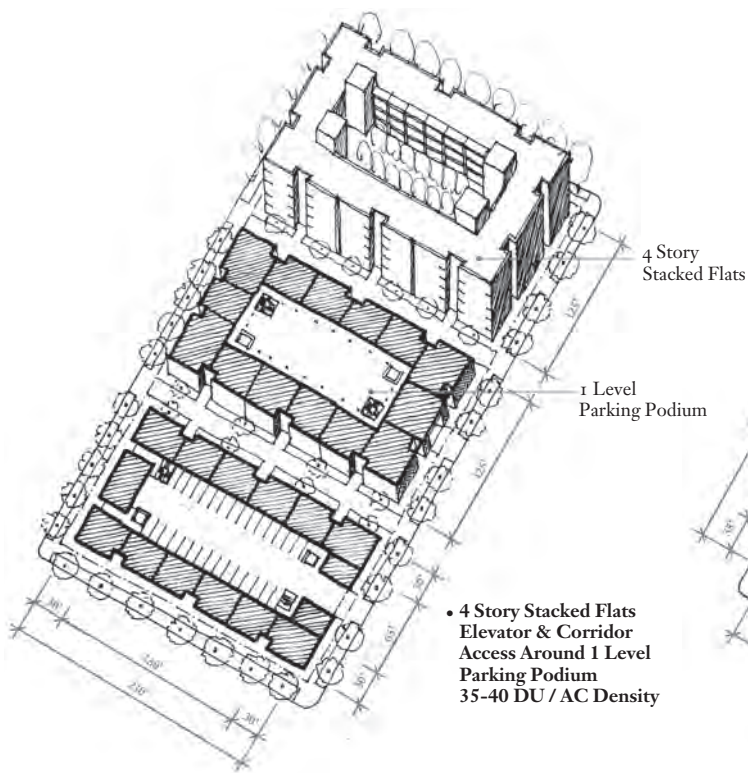
Mid- and highrise construction can achieve densities far greater than 75 dwellings per acre. However, life-safety requirements require such special building features as pressurized stair shafts and places of safe refuge in buildings with floors above the reach of a fire-truck ladder (75 feet above the street). Midrise buildings built to just below this life-safety level are typically eight stories high, with a roof level of up to 85 feet.

Mid- and highrise construction always requires one or more elevators and two stairs. But building-code requirements vary from city to city in terms of how these may be provided. For example, in New York, Chicago and



Above: Examples of medium-density housing in San Jose, California.

Right: Medium- and high-density residential typologies.



Vancouver, “scissor stairs” are permitted, where two straight-flight stairs interlock in a single concrete-framed shaft. This enables the stair shaft to be located behind the elevators in a compact core, enabling construction of a small floor plate and a slender tower. Vancouver’s residential towers have floor plates as small as 4,000 sq.ft. in area.

In California, the building code requires a minimum 30-ft. separation between the two stair shafts, and on any floor the travel distance between the doors to the stairs must be half the maximum diagonal dimension of the floor plate. The result is a much bigger core and a larger floor plate. In San Francisco floor plates as large as 10,000 sq.ft. are currently being proposed for highrise towers in new downtown residential districts on Rincon Hill and around the Transbay Terminal.

Cost Comparisons

With the help of several contractors, we were able to develop a cost-comparison index to show the differences between various construction types. The costs are for building construction only and exclude the cost of land. They are presented here in the form of ratios so that comparisons can be made easily between the different types. The cost comparisons are shown at the bottom of the residential density chart.

If the cost of a single-family dwelling is rated as 1.00, a semi-detached dwelling is 0.95, because of the savings provided by a shared party wall. The cost of a row house is further reduced to 0.9 because of party walls and reduced frontage. Stacked walk-up units increase in cost to a ratio of 1.20 because of additional stairs, while elevator-accessed corridor units over a parking podium increase to 1.25 units because of increased construction cost of elevators and shared circulation areas.

Midrise construction costs range up to 1.60 to 2.00, while highrise units increase in cost to up to 2.50 and more.

These comparisons are ratios, and, of course, should be considered in relation to many other factors, including civil-engineering costs and infrastructure and soil conditions. However, they are useful in helping make a preliminary assessment of the most appropriate density in relation to construction type and local market conditions. Most importantly, location affects land costs, and where these are high, higher densities — and therefore higher construction expense — can offset the overall cost of development, since the latter represents a smaller part of total costs.

Case Study

In a study Solomon E.T.C./WRT produced for the Greenbelt Alliance in 2003 for the proposed town of Coyote Valley south of San Jose, California, we used the density chart and diagrams similar to those here to illustrate how a variety of arrangements could be combined to create a mixed-use, compact, transit-oriented community. The last image shows a portion of this vision plan.

As a whole, the result of our work was a grid of streets and blocks that offered a multitude of opportunities for different types of housing and a range of densities, while at the same time creating a continuous urban fabric. The diagrams were especially valuable in helping form a consensus with the local community activists, since it was possible to give them a clear picture of the nature of housing and the character of the streets and neighborhoods being proposed. The diagrams were also helpful in determining the best overall density that could meet the requirements for 20 percent affordable units throughout the 50,000-dwelling-unit town.

Another effective tool for achieving agreement was to showing photographs of examples of local residential development in San Jose at various densities that people were familiar with. Understanding the cost and construction-type implications was also essential in order to be realistic about what could be achieved in terms of affordable housing on a “greenfield” site.

To advocate overall densities that were too high and required the widespread use of stacked concrete-framed multistory housing would have been an unrealistic proposition in the current San Jose market. At the same time, to propose densities that were too low would have meant the loss of open space, an inability to support transit service, and a lost opportunity to create a pedestrian-friendly, compact community.

For Coyote Valley we ended up proposing an overall average density of 28 dwellings per net acre. These dwellings went together to form neighborhoods that consisted of a wide range of building types, and which offered a variety of choices for future residents, but which was still in character with the surrounding environment of San Jose and its suburbs.

The proposed plan for the Coyote Valley development made use of the residential typologies described here.

All drawings and photographs accompanying this article are courtesy of Solomon, E.T.C., a WRT Company.



Multi-Sourcing

Kevin Keim

When Charles Moore wrote or spoke about influence, he often ended up quoting T.S. Eliot.

Immature poets imitate; mature poets steal; bad poets deface what they take, and good poets make it into something better, or at least something different. The good poet welds his theft into a whole of feeling which is unique, utterly different from that from which it was torn; the bad poet throws it into something which has no cohesion. A good poet will usually borrow from authors remote in time, or alien in language, or diverse in interest.

On October 31st, 2003, architects, artists, and musicians gathered for a symposium, “Multi-Sourcing,” at the Charles W. Moore Center for the Study of Place. (The date was especially apropos because Halloween was the anniversary of Moore’s 1925 birth, and a holiday when people absorb new, exotic identities.)

Multi-sourcing is about reaching out and learning from all kinds of images and ideas. “We want to make sense of the way our world now is,” the symposium’s chairman Donlyn Lyndon said, “with its plethora of images and ways of combining them.” Multi-sourcing is about drawing in ideas, images, impulses, observations from the world around us, and using them to enrich work — to let us give buildings and places more opportunities to connect to people’s imaginations. Multi-sourcing creates potential, just as mathematical multiplying does for numbers. It expands thought. It sparks creative opportunity.

But the symposium was not just about talk, about merely the act of being absorptive. It was actually about the next, more important step: making real things, real places. How does one take all those images, and confidently make them into something tangible.

A Venue for Inspiration

The symposium was held in a hotspot of multi-sourcing, the Moore/Andersson Compound in Austin, Texas. Moore and Andersson designed the compound to be a synthesis of antipodal images of Texas architecture: the Hispanic vernacular (and its Law of the Indies origins), and the more casual, bucolic German vernacular of the countryside and open range. The Spanish model, thick-walled and defensive, focuses inward into the courtyard; the German model, thin-walled and porched, opens to the wide-open land.

They then layered onto this fundamental base (that sets it in its place) many “stolen” or “borrowed” sources. These are just a few: the wagon entrance from Sherwood Ranch in Salinas (“to celebrate act of arrival”); a Turkish opium den (with luxurious seats for napping); a Borromini window frame (rendered in economical Styrofoam instead of costly travertine); columns from the Catalan School of Music (painted sono tubes instead of meticulous

mosaic); a Maybeckian arbor (covered with Texas trumpet creeper); a staircase from the Bantry House (to climb and pause upward); and a pool from Lunuganga (to cool the courtyard and hint at Islamic memories). All of these exotic sources are nestled in the engaging whole, and an immense collection of folk art adds yet more layers. Despite (or because of!) this multitude of images, the house is not awash in confusion, but awash in mystery. Nuances are continually discovered. It is multi-sourcing at its best, emblematic of Moore’s distinguishing catholicity.

In fact, Charles Moore’s life epitomized multi-sourcing, in that he refused to be bound by a single, canonical mode of thought. In others words, it all mattered. In this setting, symposium participants spoke about the multiple sources in their diverse works of architecture, music and art.

Hugh Hardy’s recurring theme was “Old and New,” of the multi-sources of time and context. Context, Hardy pointed out, is possible because architecture is a language, and continuity makes language possible. “You can’t talk about new without context,” Hardy said. “And the end-result is that we now have a new eclecticism that is full of optimism. The universe is indeed expanding!”

One of Hardy Holzman Pfeiffer’s special interests is to rejuvenate unused and forlorn buildings, giving them new life, both in their structures and their uses. Theaters, for instance, literally come alive with Hugh Hardy’s touch. Where the Brooklyn Academy of Music, the Majestic Theater, and Radio City Music Hall had suffered the indignities of old age, Hardy “restored” their structures and interiors — allowing new life, new multi-sources of music, dance, and theater to once again fill their auditoriums.

Likewise, “Bridgemarket,” under New York’s 59th Street Bridge, borrowed from the sources of its own history when it provided for the connection to and marketing of goods from Queens. Here, Guastavino vaulting, the architecture of Henry Hornbostle, and the dramatic upward sweep of the bridge’s structure all fed into the design for the new retail and restaurant spaces beneath the bridge.

And for the abandoned St. Anne’s Church (designed by James Renwick), Hardy filled the soaring spaces and choir lofts with classrooms for new life as a school. (The rafters, gargoyles, stained glass, and Gothic tracery pleased students, since it now became a realm similar to those encountered in Harry Potter.) “One should embrace the opportunities of the vast resources available to us now.”

From Architecture to Music and Sculpture

David Harington, violinist and one of the founders of the Kronos Quartet, presented a “D-J” session, narrating layers of sounds, samples from his constant, compulsive



probing into global music. “Hearing something that might be possible,” he said, “is often the starting point for a new direction.”

Where many musicians and composers limit themselves to a school of thought, Kronos does just the opposite. All of music is their domain. All sounds, all music traditions, all performance modes — and now even projected images — are potential sources. (In fact, the act of commissioning new work is as integral to Kronos’ identity as its performances.) Some of the multi-sources Harrington referenced were Inuit throat singing, recordings of Panamanian street scenes, Indian vocalists on racy film soundtracks, and even the incessant, rhythmic drones of frogs and crickets from a nature documentary.

“Restoration,” Harrington realized after hearing Hugh Hardy’s presentation, is just what the Kronos Quartet does. Each of their performances is a restoration of a piece of music into audible reality. Later that evening, in fact, Harrington was joined by his three colleagues for an extraordinary concert in the Hanzlik House in Austin.

Architect Arthur Andersson spoke about the cues his firm, Andersson Wise, borrows from when it undertakes the making of a new place. The Washington State History Museum in Tacoma, for instance, was designed by Moore and Arthur Andersson to multi-source the grandiose Beaux-Arts train station, centrally planned and domed, an adjacent landmark familiar to everyone in the reemerging industrial city. The History Museum became an extension of the venerable structure so that it seems to be a late extension of the building, as a row of grand arches confidently marches along Pacific Avenue, adding to its sense of place. Or in Austin, a new classroom building for the campus of St. Edward’s University borrows from various sources proffered by earlier structures. An imaginative concrete wall is cast with shapes that echo its nineteenth-century neighbors. It stakes its own claim on campus, but helps the whole become a more recognizable, coherent — but interesting — place.

Sculptor and installation artist Margo Sawyer spoke about the multi-sources of her own work, absorbed during her extensive travels. She spoke of Indian temple

complexes that influenced her perceptions of space and hierarchy; spice vendors in Bombay who arrange piles of vivid color on white sheets spread out on sidewalks; and classical gardens that create sacred space on earth. With these sources, Sawyer abstracted the images of India into sculpture. In spare rooms, she would arrange shiny, powder-coated metal boxes to create a quilt of color, referencing city plans, clusters of buildings, or even the layouts of computer parts that are now the invisible network of our lives.

When Sawyer was working in Tokyo on fellowship, she multi-sourced high and low cultures: Japanese stone gardens and pachinko parlors. Borrowing from the contemplative stillness and frenetic gambling energy of each, she created extraordinary installations in which tens of thousands of stainless-steel ball bearings were carefully arranged in astonishing patterns on gallery floors. Side by side, the ball bearings were pushed into perfect geometric patterns, or allowed to randomly expose rifts and fissures reminiscent of streams. Blocks then floated on this shimmering carpet, creating a reverie of color and form.

“The overstimulation, the abundance of our world, makes us more multi-resourceful. How do you convert them, make a new alchemy?” asked architect Carlos Jimenez. In Columbus, Indiana, Jimenez drew from its celebrated architecture pedigree and sources for a new child development center. Lessons of Aldo van Eyck and Federico Garcia Lorca helped him to create a protective but stimulating world for children.

Jimenez also wondered how one could draw on sources in Houston, a city where context is, in reality, utterly random. For a new archive at Rice University (to be built on a remote site, not on its oasis-like campus) Jimenez nonetheless drew from the sources of campus, but also the industrial, commercial “vernacular” of the larger city, including freeways, concrete culverts, and thin metal skins. With a limited budget, and a task to house a million fragile volumes, Jimenez took advantage of the multiple fragments of context in Houston to make a place connected to campus and city.

Previous page: The Moore/Andersson compound in Austin, Texas, a synthesis of antipodal images and borrowed sources. Photo by Jacob Termanen.

Facing page

Left: Moore/Andersson compound. Decorated sono tubes and folk art.

Photo by Jacob Termanen.

Right: Playlist from the Kronos Quartet’s David Harrington.

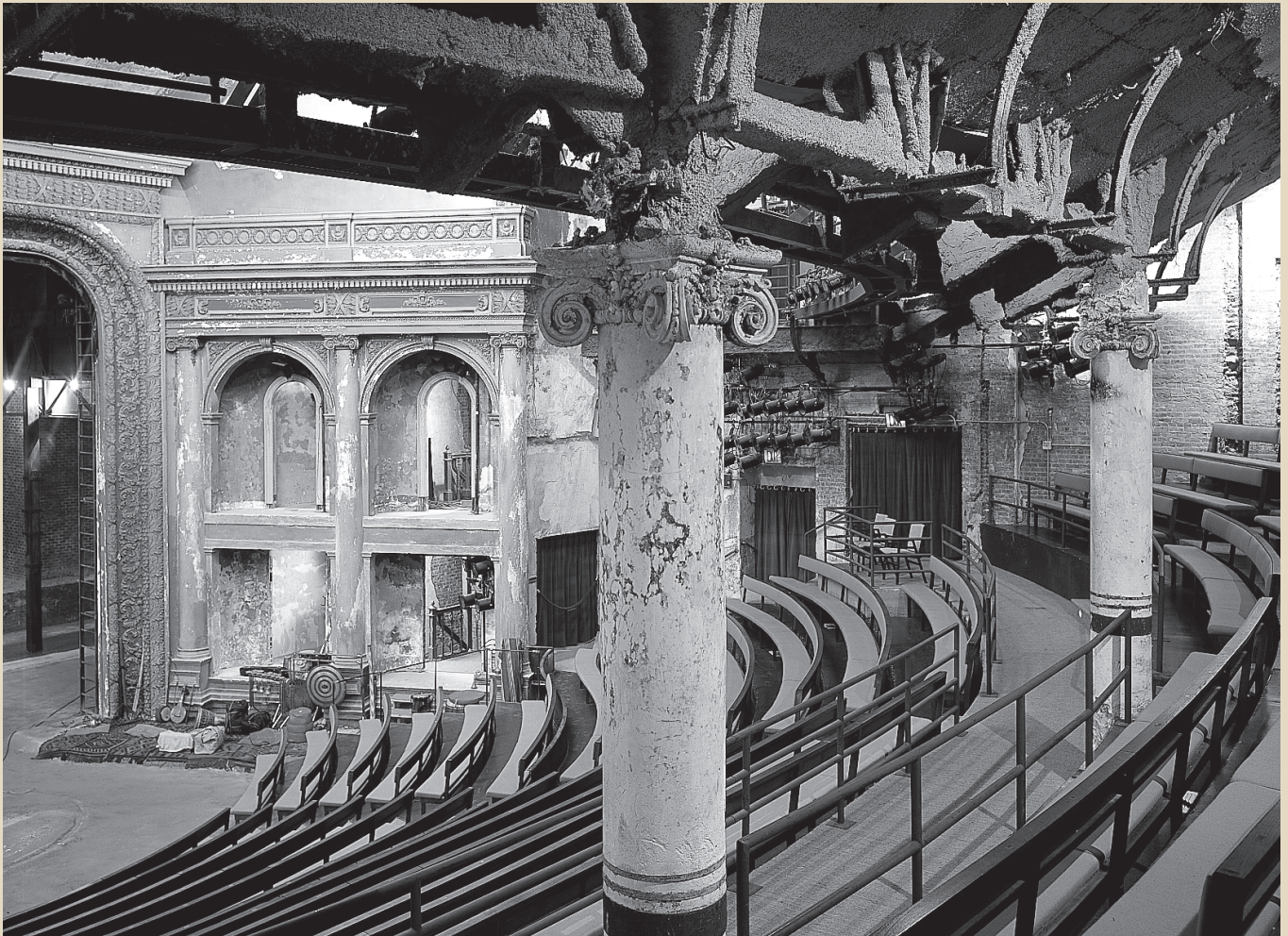
Bottom: Restoration of the BAM Harvey Theater (formerly BAM Majestic).

Photo courtesy of Hardy Holzman Pfeiffer Associates.



David Harrington Playlist

1. Street Music of Panama: track 6: an old man and a ten-year-old boy bowling in the night (Original Music - OMCD 008).
2. Getatchew Makurya: track 3: "Aha Gedawo" (Ethiopian Battle Music for Saxophone).
3. Mickey Katz, *Greatest Shticks*: track 10: "Sixteen Tons" (Koch 059) [klezmerized American folk music].
4. Kalama's Quartet: track 6: "Wahine Ui" ("Beautiful Young Woman") (Arhoolie Folklyric 7028) [incredibly beautiful Hawaiian Male, 1930s quartet].
5. Tanya Tagag: untitled, unreleased: Inuit throat singing [Jimi Hendrix of throat singers].
6. Tajra (Music of Sardinia): track 26: "Lamentu di Maria" (Lara 001) [amazingly beautiful choir].
7. Animal Music: track 3: Team of Jeremy Roht (Suppose) [dogs singing in the Yukon Territory].
8. The Tradition of Kantele, Vol. 3, The New Era Ritra Koistinen Performs: Aro Part "Pari Intervalllo" [The Finnish National Instrument].
9. Bandy-kid America and the Action 2 of Figures: track 3: "Muffinman" (Plug Records) [distorted kids music].
10. Suba: Sao Paulo Confessions: track 5: "Antropofagos" (Six Degree Records) [Brazilian electronica].
11. Sounds of North American Frogs: tracks 1-3 (Smithsonian Folkways).



To Rally Discussion: Rethinking Urban Parks

The summer 2003 issue of *Places* (15.3) revealed the vitality remaining in the enduring aspect of urban parks, “as green and unencumbered, nature pictorialized and furnished, places of both refuge and assembly.” This is the separate and apart, public-estate notion of park. But in the last quarter century, the idea of park has been moving beyond its manmade boundary to take on a unifying and encompassing, place-saving role in the urban environment.

The origins of park as an urban definer and organizing element go back to Olmsted, who envisioned park systems, including parkways, as an organizing element for cities, steering the flow of development. Historian David Schuyler, author of *The New Urban Landscape*, found that the Prospect Park assignment led Olmsted, “to a full realization that no single park, no matter how large and how well designed, would provide the citizens with the beneficial influences of nature.” Later, Louis Mumford would also declare, “Park planning cannot possibly stop at the edges of the parks. The park system is thus the spearhead of comprehensive urban planning.”

Yet this dynamic dimension of parks was dormant for many decades in the twentieth century. Indeed, urban park historian Galen Cranz has pointed out that park administrators drew back, and were marginalized by urban planners, who viewed urban parks as “one, but only one, of the physical elements that a planner could use to help give identifiable shape to a community.”

That began to change in 1960s as part of what Cranz calls the open-space, or fourth, era of urban parks. She declared, “There was a fluidity at their perimeters, so that park flowed into city and city into park. This went with the characterization of the park as an epitome, or ideal reflection, of the city and with the use of parks for experiences of the pattern and flow of urban life — for the contemplation of the city itself as a work of art.”

In the nineteenth-century industrial city of Lowell, Massachusetts, notions of parks and historic preservation were joined in what the local organizers called an “urban cultural park,” or, in effect, the city as the park. The name captured several civic aspirations: “urban” referred to a settled area; “cultural” to man’s attainments, which in the case of Lowell was the story of America’s first industrial planned community; and “park” meant a sense of coherence and traditional park elements, like public use for recreation and park-like activities like canal boat rides. In Lowell, the park plan was the urban plan, used to turn a gritty city where everything was perceived as dull, into an interesting place.

After Lowell received national recognition (which came, in part, at the cost of having to adopt the name “National

Historical Park” preferred by Congress), the urban cultural park idea took hold in New York State, first with six neighboring cities, towns and villages at the confluence of the Hudson and Mohawk rivers (today known as Riverspark), and then with what is now a seventeen-unit State Heritage Area System. But again the name “urban cultural park” did not last. In both New York and nationally, the expanded notion of park as definer and organizer lost out to a more benign rubric, “heritage area.”

In a developed world where urban places look increasingly alike and where we face the sameness of cities and suburbs, the enlarged notion of park that highlights overall cultural and natural themes, fosters linkages, and manages through an integration of conservation, education, recreation and sustainable development offers our best bet to establish overall qualities of place. I have to wonder why it seems so difficult to cast our attention not only on the singular-space or refuge park, and not on how a park can be the definer and organizing force for a whole urban setting — or for a region, as has been the case with New York’s six-million-acre Adirondack Park.

On the regional level of nature parks, Italian urban and national park planner Roberto Gambino has even advanced the provocative notion that nature parks are obsolete.

[Nature parks] can’t be any longer considered as nature sanctuaries, different and separate from their territorial context, since they are nodes of broader ecological networks needing to involve the whole territory. They can’t any longer be considered as special areas conceived essentially for public enjoyment, since they are always (at least in the Italian and European experience) inhabited territories and cultural landscapes, where the public enjoyment must be admitted or permitted only when and if it can improve and doesn’t trouble ecological, cultural and economic local balance.

Gambino is saying that European nature parks should no longer be treated as island fortresses, but rather as part of larger regional environmental, social and economic systems or networks.

I suggest something along the same line be considered in the case of urban parks — that we reserve the use of the word “park” as the term urban cultural park has been used — that is, to define coherent settled areas including whole cities and groupings of neighboring cities sharing overarching natural and cultural histories. Let us come up with a new name for the civic spaces, or public realm, we now call urban parks.

The intent is not to diminish traditional park landmarks like Central Park or the creativity of designers like Walter Hood who are bringing out the meaning and natural quality of hybrid landscapes. Olmsted and Hood parks, for

example, have pulled their weight as place markers and makers for their larger urban environments. But, environmentally and culturally, it is time for an inclusive and holistic level of park thinking, design, and management that takes into account the whole cultural narrative and built environment of urban settings or landscapes.

Look around the world and one sees forces at work in this direction. The Council of Europe has designated the whole of Europe as a cultural landscape. It seeks “to achieve sustainable development based on a balanced and harmonious relationship between individuals, society and economic activity and the environment.” Ordinary or everyday landscapes, no less than outstanding ones, are covered, “since they all decisively influence the quality of the surroundings in which the Europe’s population live.”

UNESCO has also taken an all-encompassing approach in the Istanbul Declaration of Intangible Cultural Heritage (Sept. 18, 2002). It recognizes the dynamic link between tangible and intangible heritage, and their deep interdependence.

Notwithstanding the failure of the U.S. to participate in international efforts to curb global warming, the Kyoto climate-change agreement and other international environmental protocols are increasingly drawing our lives and communities into a regime of stewardship more traditionally associated with parks. Stewardship is now a global necessity for us all, wherever we may live.

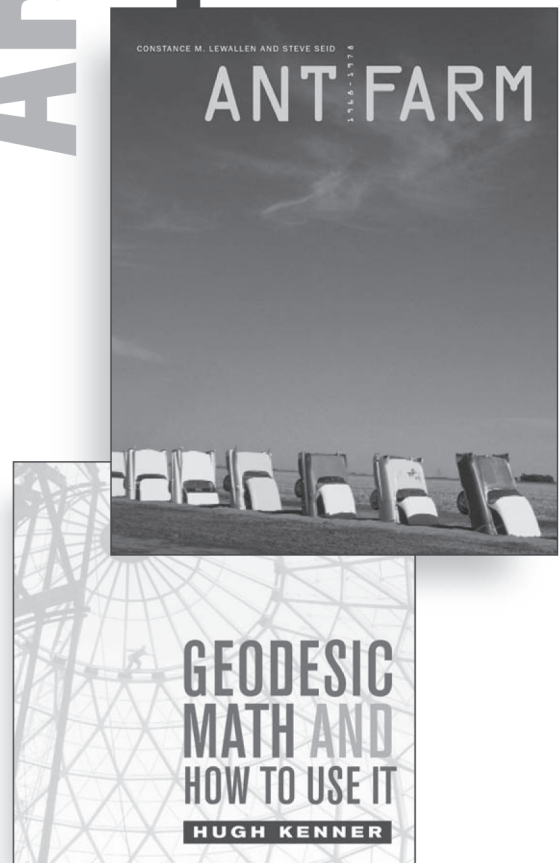
For more than a quarter century I have argued for the expansion of the notion of parks to include the city and region as a park. Needless to say, it has been a challenge. The aforementioned Adirondack Park, with both 130,000 residents and almost three million acres of constitutionally protected wild forest land, is more than one hundred years old, and yet it is still in the painful process of becoming a park. Likewise, urban cultural parks, a.k.a. heritage areas, continue with generally little public awareness beyond their individual elements or sites.

These examples of the expanded notion of park, or what Thoreau might call “castles in the air,” have failed to realize their potential, largely because we have failed to take the time, or summon the will, to rethink traditional and accepted notions of urban parks, and so put a foundation under them.

The *Places* issue on Parks was all about parks as refuge. It offered fine examples of creativity and imagination and realization of social values. Yet, it didn’t acknowledge or advance the rethinking of an expanded concept of urban park. Hopefully, this commentary, in a small way, can advance that goal.

—Paul M. Bray

ART Spaces



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The Rincon Hill Projects

Allan Jacobs

Hill Plan. The decision is now in: they got their “grandfathered birth.”

This unfortunate and contradictory metaphor should give the game away: who could argue that grandfathered births are not some freak of nature? While they have different developers, the two projects have been designed by the same firm, aggressively promoted as a single project, and accompanied by a flashy website and public-relations campaign.

Despite slightly different corporate parentage, the two projects are siblings; two sets of dumpy fraternal twins, to put it bluntly. Vancouver has learned the hard way that if the quality of architecture is not good at the beginning, it never gets better. The architecture here is uninspired at best, and will set a standard of mediocrity that will prevail for years.

Do us one better, San Francisco. Demand better architecture and more enlightened urbanism. Do it now!

The approval of the two Rincon Hill-Folsom Street behemoths by the San Francisco Board of Supervisors is a standout example of non-planning, ad-hoc, project decision-making at its worst.

Initially planned as speculative large-floor-plate office developments of the late 1990s (themselves totally out of keeping with San Francisco’s finely scaled development pattern), they were quickly reconstituted as housing proposals when the dot-com market dried up.

The proposals, to start, were far out of scale with the 200-ft. height limit of the area and the requirement that there be 150 ft. between towers. San Francisco City Planning Department staff were then working on a Rincon Hill Plan that was looking to a 250 to 300-ft. height limit, not the proposal for 400-ft. heights and only 82 ft. between towers the developers’ architects were offering. So why not go for broke? My understanding is that the developers and their architects decided to try their own zoning proposal, and that they did a great job of railroading their rezoning through the city and around concerned neighborhoods. Loads of people spoke out against the proposals and the conditional use — to no avail. In the end, only one supervisor, Tom Amiano, voted against the project.

This project will have a floor area ratio of close to 2.1. There will be 800 dwelling units in each of the two buildings, and the density will be about 460 units per acre.

To say that this development follows the Vancouver Model, as some of its proponents do, where the highest floor area ratio in the downtown housing areas is about 5 is an insult to Vancouver and to sane, knowing people’s credulity.

I am advised that as the hearings were coming to a close, one of the

supervisors asked for one hundred additional affordable housing units, and got them speedily, presumably as the price for his vote. One of the local city planners estimates that the developers made about \$100 million as a result of what the city gave them.

There is an old, old lesson of city planning here that few seem to be able to learn. When design-development decisions are made one by one, case by case, and there are either no plans or community requirements, or those that exist are easily up for grabs, then the side with the most power will usually win. And in our society, in large development matters, the side with the most power is the side with the most money. That side is never the city planners or urban designers working for the public.

This is not a case study of making place. It is a study of ruining place. The place is San Francisco.

Left: The Vancouver model combines highrise towers with continuous townhouses to create an active, pedestrian-oriented streetscape. Photo courtesy of the City of Vancouver, Planning Department.

Middle: Heller-Manus Architects’ project for 300 Spear Street. Birds-eye rendering from submittal to the San Francisco Planning Commission. Courtesy of the City of San Francisco, Planning Department.

Right: Heller-Manus Architects’ project for 201 Folsom Street. Street-level rendering from submittal to the San Francisco Planning Commission. Courtesy of the City of San Francisco, Planning Department.

Form and Territory

Forms trace our presence across the landscape in many ways: paths of travel, areas of clearing and cultivation, channels of irrigation, delineations of property, patterns of commerce and dwelling. The density and complexity of those traces generally reflect the economic and technical means available at the time of their creation. The single-minded directness of a rail line or highway slicing through the landscape speaks not only of speed and mechanical strength, but of the accumulation of political and economic power necessary to trump all other claims. The fine-grain adjustments of traditional neighborhoods record the incremental investment and close attention of local inhabitants exercised over time.

This issue opens by describing the process by which the historic village of Colletta di Castelbianco was restored. This small place, encompassed by its larger landscape, sets us to thinking immediately of the relations between form and territory: relations which are seldom so direct, but which underlie all settlement activities. The various forms which current development bring are often very different; nevertheless, we must learn to make them serve human purposes. We next explore how capitalized processes have a tendency to bring their own ordering/marketing tools to a site, rather than finding them within it. In a pair of articles, Trevor Boddy examines how the originally Hong Kong-inspired towers of Vancouver are finding their way around the world as an important new urban housing model — with varying success. Such forms posit a wholly different figure in the landscape, as do the range of subtler, more varied forms of residential space whose assembly is explicated in an article on “Residential Densities” by John Ellis. Whatever the form, Robert Fishman’s carefully documented review of American public housing reminds us that there must be adequate economic and social support to make any form of building sustainable.

The territory we now inhabit, has itself been fundamentally modified by successive generations of settlement, as evidenced in a Portfolio of aerial views assembled by geographer Barry Haack. That those forces are no longer operating in organic symbiosis, as they often did in the naturally adjusting landscapes of the past, is shown provocatively in a review of *The Delta Primer*; an unusual publishing venture that combines a book with a deck of playing cards. Examining the context of one of the world’s most noted monuments, Amita Sinha and Terence Harkness propose a plan for bringing together traces of past and present in a comprehensive park along the Agra riverbank. Paul Bray responds to our earlier issue on “Parks” (Vol. 15, No. 3) with a call for a more inclusive understanding of the structure and development of parks.

Finally, two Dispatches report on recent events that examined two faces of our present prospects. The readjustment of patterns of development over large territories based on the idea of a “transect” is the purpose of the Congress for the New Urbanism’s SmartCode Seminars. Ways to reach out widely for subtly nuanced and inventive processes are discussed in the Study of Place.

As Giancarlo De Carlo implies, we could do better at building if we had time to reflect, and wit to absorb (not just pass on), the multiple factors that can enter into the making of places... if we had the time (read, “demanded the time”) to build with an eye to the landscape and its people as a creative resource, to be cared for and nurtured, not just wasted in the name of profit, power and dictates of the moment. — *Donlyn Lyndon*

Delta Primer: A Field Guide to the California Delta

by Jane Wolff

Review by Mark Anderson

In the suit of gardens, the number two card draws a section through the asparagus plant. At once the simplest and most elegantly drawn card in the deck, it offers a lesson in botany and asparagus farming and plants a host of questions in the mind of the card player. Such small lessons, broaching large questions and difficult choices, are the objective of Jane Wolff's carefully drawn and simply annotated deck of Delta Primer playing cards and their accompanying book, *Delta Primer: A Field Guide to the California Delta*.

With a brief preface by Kevin Starr and the author's nine-page history of the California Delta, the bulk of the book is given over to single-image-per-page reproductions of the hand-drawn playing cards, matched on facing pages with closely cropped reproductions of USGS maps depicting related sections of the delta landscape. Running along the margins of each page are pithy annotations, epigrammatic and almost *haiku*-like in their staccato rhythms and provocative demands on readers to use their imaginations to bridge the topical leaps and seeming disconnects.

A Game of Chance

Chance juxtaposition of irreconcilable elements is the logical thread that ties the idea of playing cards to an examination of the process by which the human hand has dealt out complex interventions in this vast natural and constructed area. The delta itself gathers waters from half the state of California before emptying through the funnel-like Carquinez Strait into San Francisco Bay and the Pacific Ocean. But the systems here are so complex, the knowledge so incomplete, and the players often so disconnected from the big picture that the chance readings and incomplete vignettes dealt out in a game of cards are perhaps more effective than any comprehensive explanatory text. In particular, the motif of a card game offers both small, intense insights and illustrates the chance interconnectivity of individual and civic works, natural flows, and catastrophic acts of god. To organize this game, in place of hearts, diamonds, spades and clubs, Wolff gives us the garden suit, the machine suit, the wilderness suit, and the suit of toys — and all the possibilities of jokers wild.

"The flooding of the fields masks the difference between the river and the island. When that happens, the levee is the only visible souvenir of reclamation" (page 135, king of wilderness). "The levees were an attempt to create stasis in the landscape: their purpose was to stop seasonal flooding. Instead they just redirected the flux of the river system. Their effects, combined with subsidence, have created a dilemma that cannot be resolved" (page 115, three of wilderness). "The water turned brown with mud. Fish choked

and died from lack of oxygen. Stream channels filled with silt. Boat traffic became impossible. Flooding grew worse and worse. The landscape was devastated" (page 129, ten of wilderness).

"All of these interventions are made so that the landscape will be easier to use. Water channels can't move; their banks don't overflow; distances are shorter; navigation is simpler; ownership is clear. The flux of the rivers is arrested, at least for the moment" (page 93, five of machines). "The side draft clamshell dredger was first used in the region in 1879. It won out over competing machines: the dipper dredge, the hydraulic pipeline dredge, and the bucket-ladder dredge. Clamshell dredgers are still used for routine maintenance in the Delta. They do emergency service when a levee breach occurs" (page 91, four of machines). It is not enough to simply marvel at the natural processes; the machines are beautiful, and poetic, too.

"The figures in the map are conjunctions between natural form and human intervention: slips for boats are carved out of small islands, for instance, or the bends in a river are cut by a shipping channel. Finding them is inventing meaning in a series of accidental, uncoded shapes. The products of utility become raw material for daydreams (page 139, two of toys). "Made of off-the-shelf parts and easy to pilot, the Boxie Boat was a houseboat for Everyman" (page 143, four of toys). "The names in the Delta have to do with different things: ownership, location, physical character, use, experience, memory, and wishes. Naming is a way of ordering the world. It makes the landscape into a mirror of experience; sometimes it makes places into poetry" (page 161, king of toys).

"The delta is interesting because it is complicated. The water users are its most powerful constituency. If the landscape remains a blank in their minds, how will they understand the value of other people's demands? The greatest threat to the Delta is its invisibility" (page 169, wild card).

A Beautiful Layering

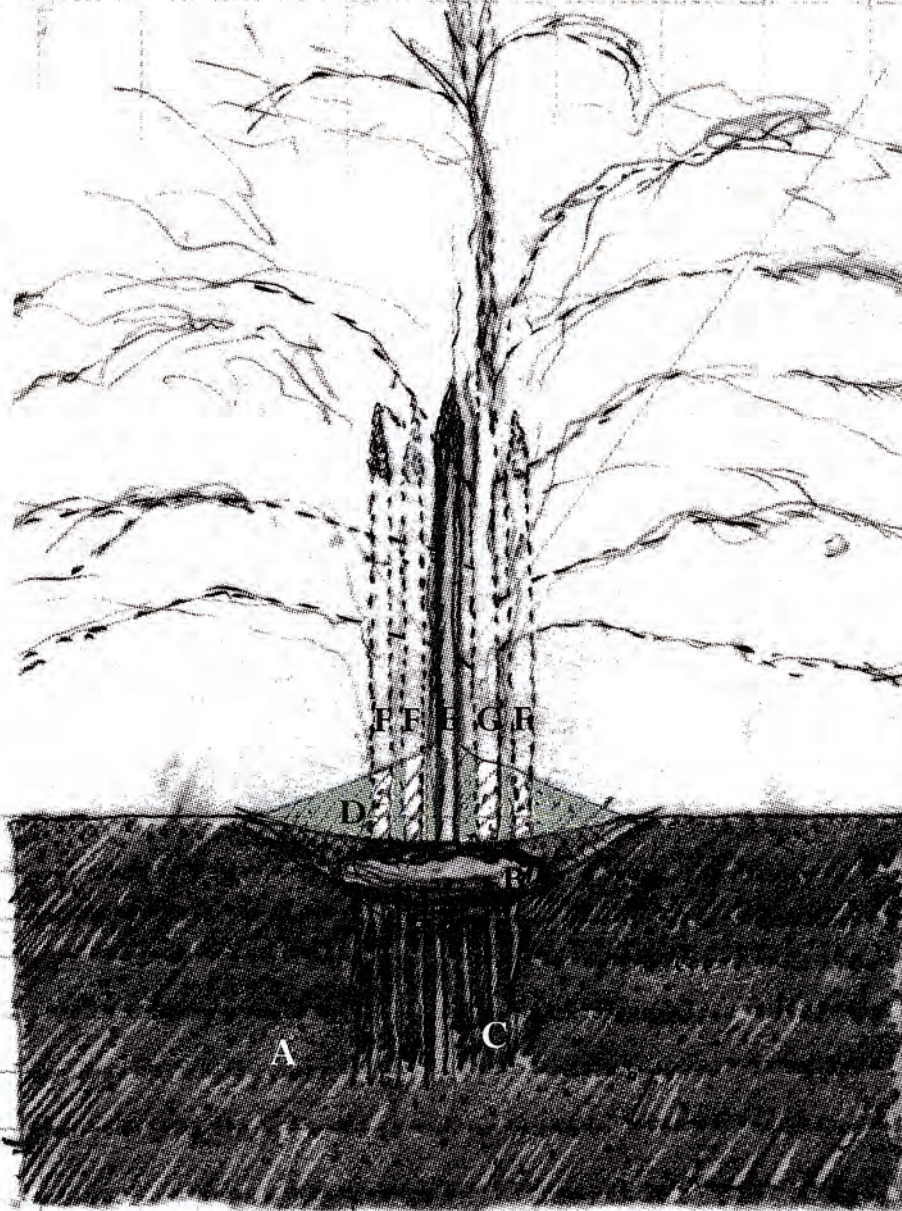
Just as we learn that harvesting the first shoot of an asparagus plant sends out a second shoot, and the cycle continues through the season, a Delta Primer card game will continue to send up small shoots of information as the cards are reshuffled and the play unfolds. Of course, with the asparagus plant you may always expect another asparagus shoot, while this game deals out an endless series of contradictory, yet systemically intertwined, surprises.

The asparagus card reveals a sectional relationship of plant and earth, and a time cycle relationship between nature and human cultivation: "A. The peat soils of the

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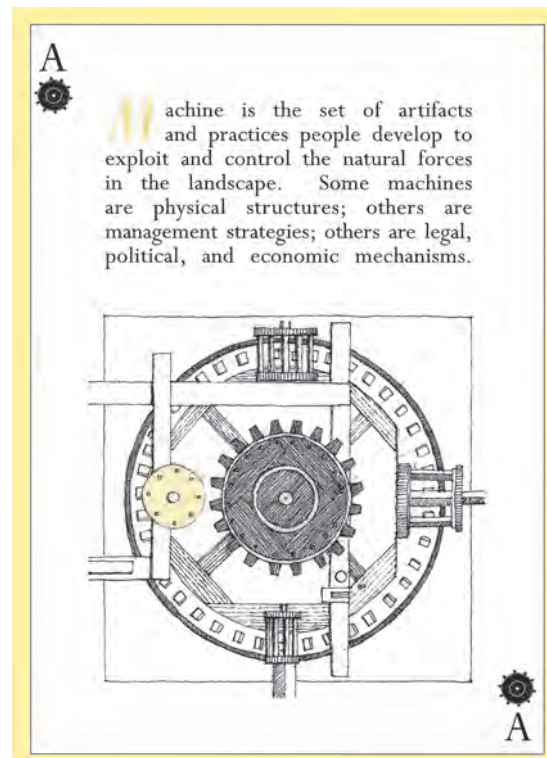
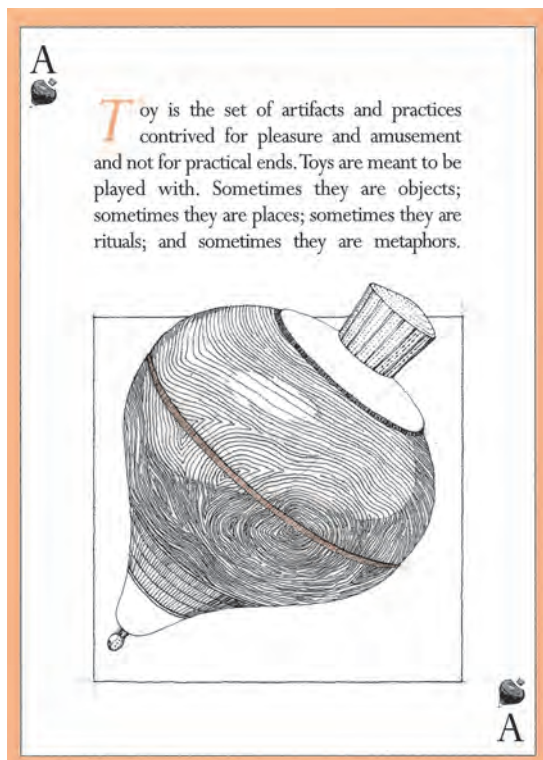
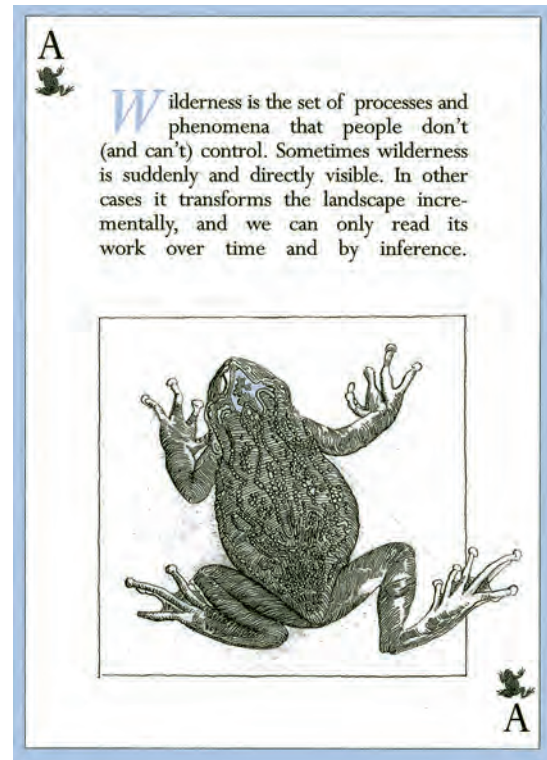
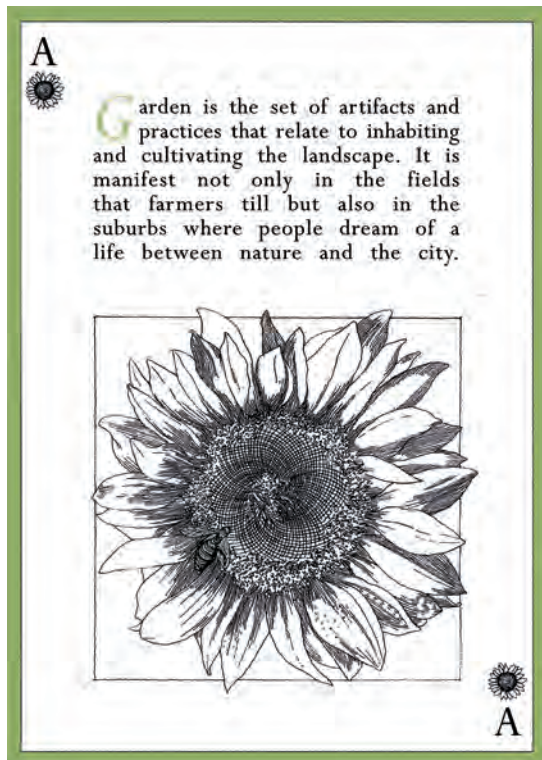
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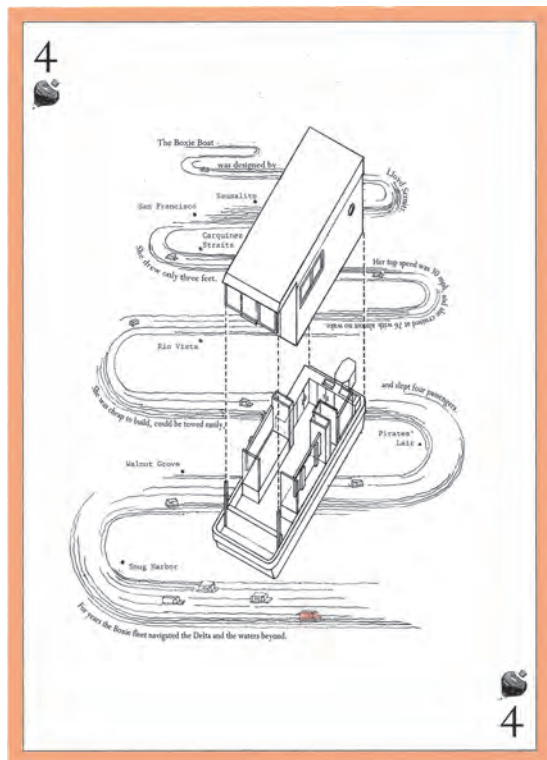
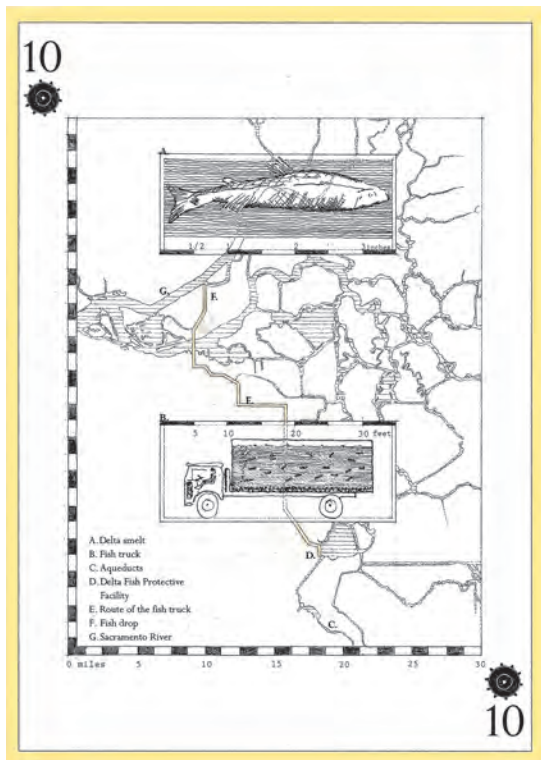
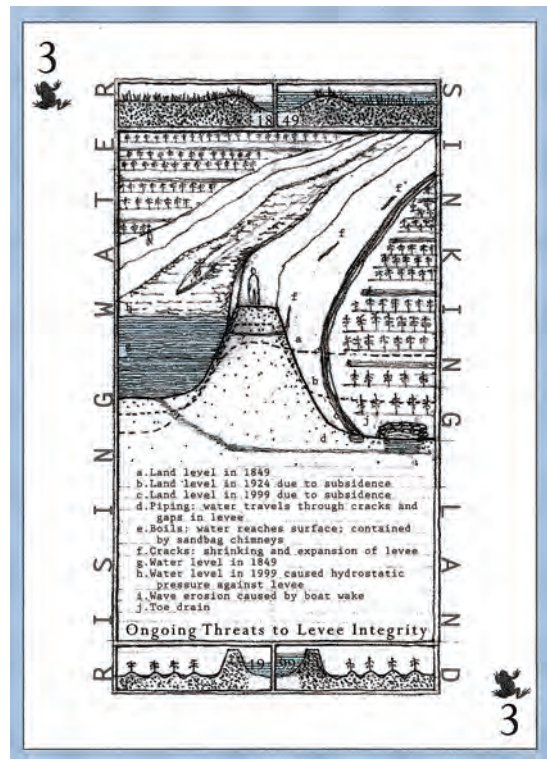
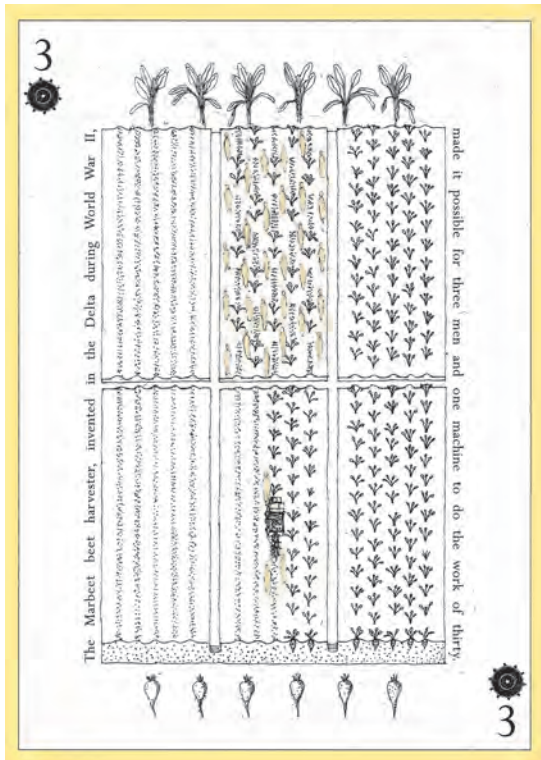
- A The peat soils of the Delta are suited to asparagus.
- B Root stock has a productive life of up to 20 years.
- C Roots are buried in a shallow trench.
- D Soil is mounded against the growing shoots.
- E One stalk emerges from the root at a time.
- F When a stalk is harvested the root sends up another.
- G The last stalk of the season is allowed to mature.



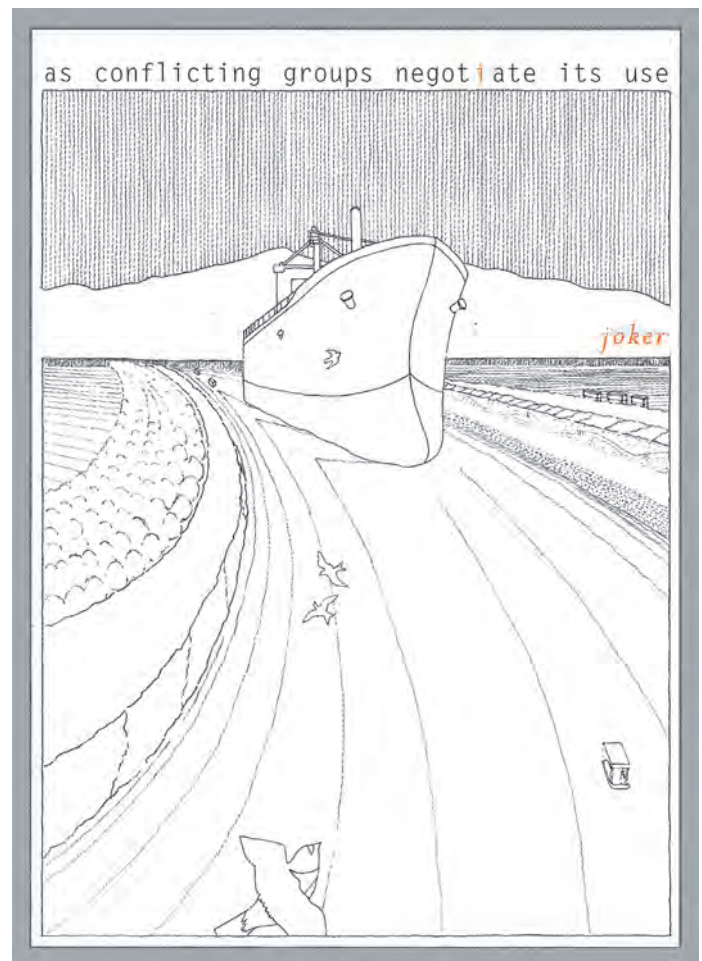
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Each card describes an artifact, a practice, or a process that supports its suit's idea about the landscape.



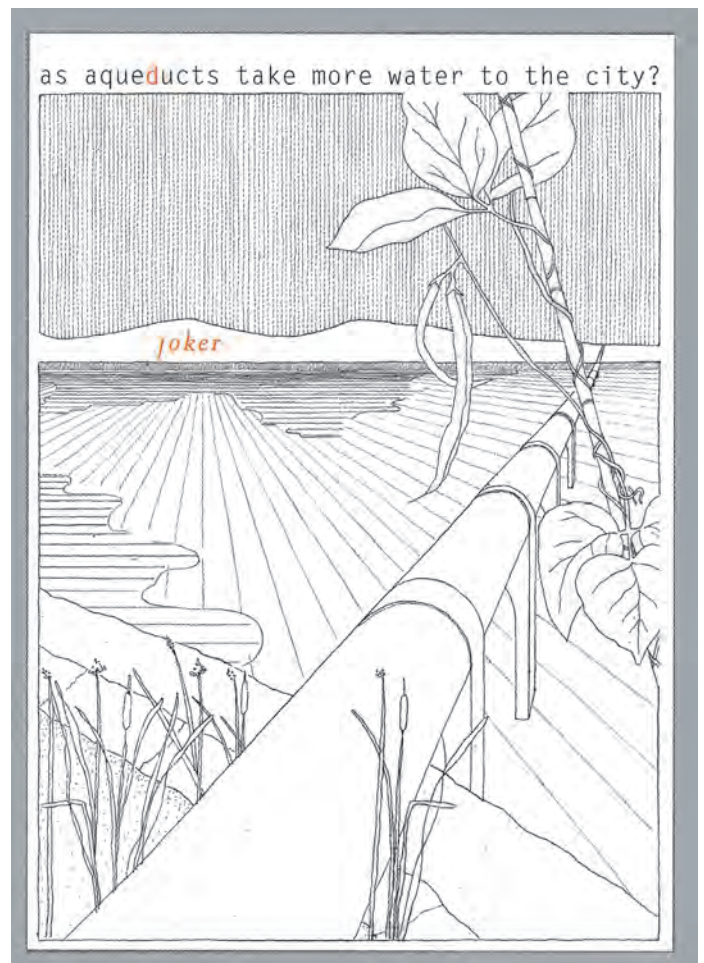
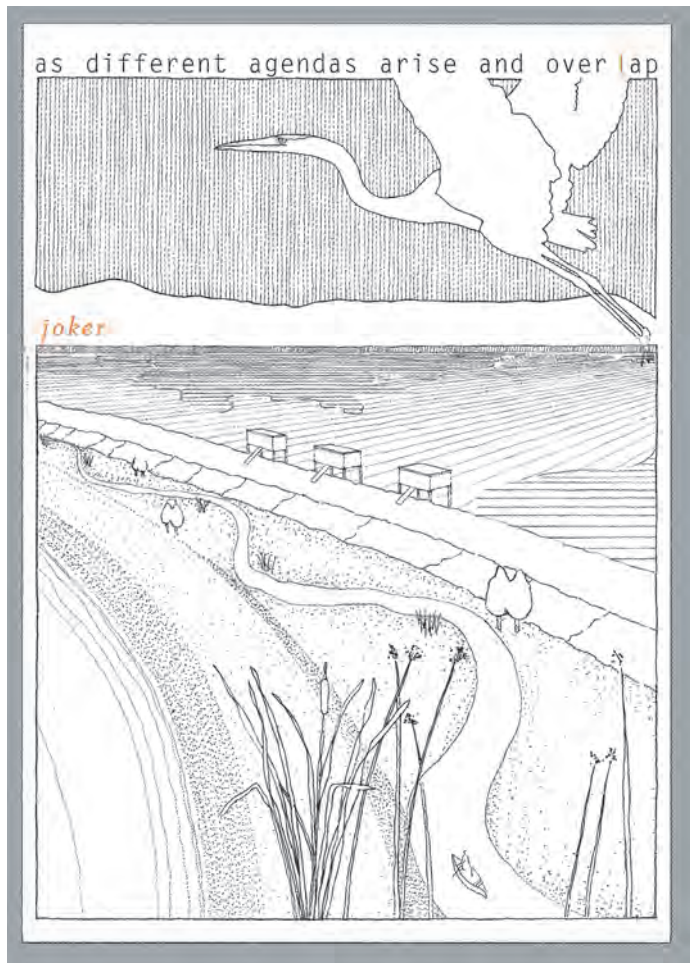
There are four jokers, or wild cards. Together they make their own picture of what the Delta might be.



Delta are suited to asparagus. B. Root stock has a productive life of up to 20 years. C. Roots are buried in a shallow trench. D. Soil is mounded against the growing shoots. E. One stalk emerges from the root at a time. F. When a stalk is harvested the root sends up another. G. The last stalk of the season is allowed to mature” (page 61, two of gardens). The best drawings on the cards maintain this rich relationship of multilayered drawing and text, and the side notes in the book offer a little dessert: “Asparagus is harvested by hand. The shoots are cut from below the ground with a special knife, tied into bundles, and collected in small carts.” None of this would make it into a conventional exposition on a great river system with immense economic and environmental consequence. The knowledge and idea bits

offered in the cards may add up to a more complex reading of a complicated landscape involving not just the abstract forces of nature and machines, but also of the intertwining beauty of chance collisions, benign and catastrophic.

Flying over the delta, one reads the beautiful layering of natural flows and human ordering, construction and cultivation. At this height, the landscape becomes a fantastic painting projecting the complementary accomplishments of nature and civilization. Closer to the ground, the wonders of nature still exist, yet one also finds oneself caught by a wary attraction to the ingenious machinery of farming, mud-dragging, mining and transportation. But much ugliness, and greed, and thoughtlessness become evident as well, and there are vague insinuations of larger

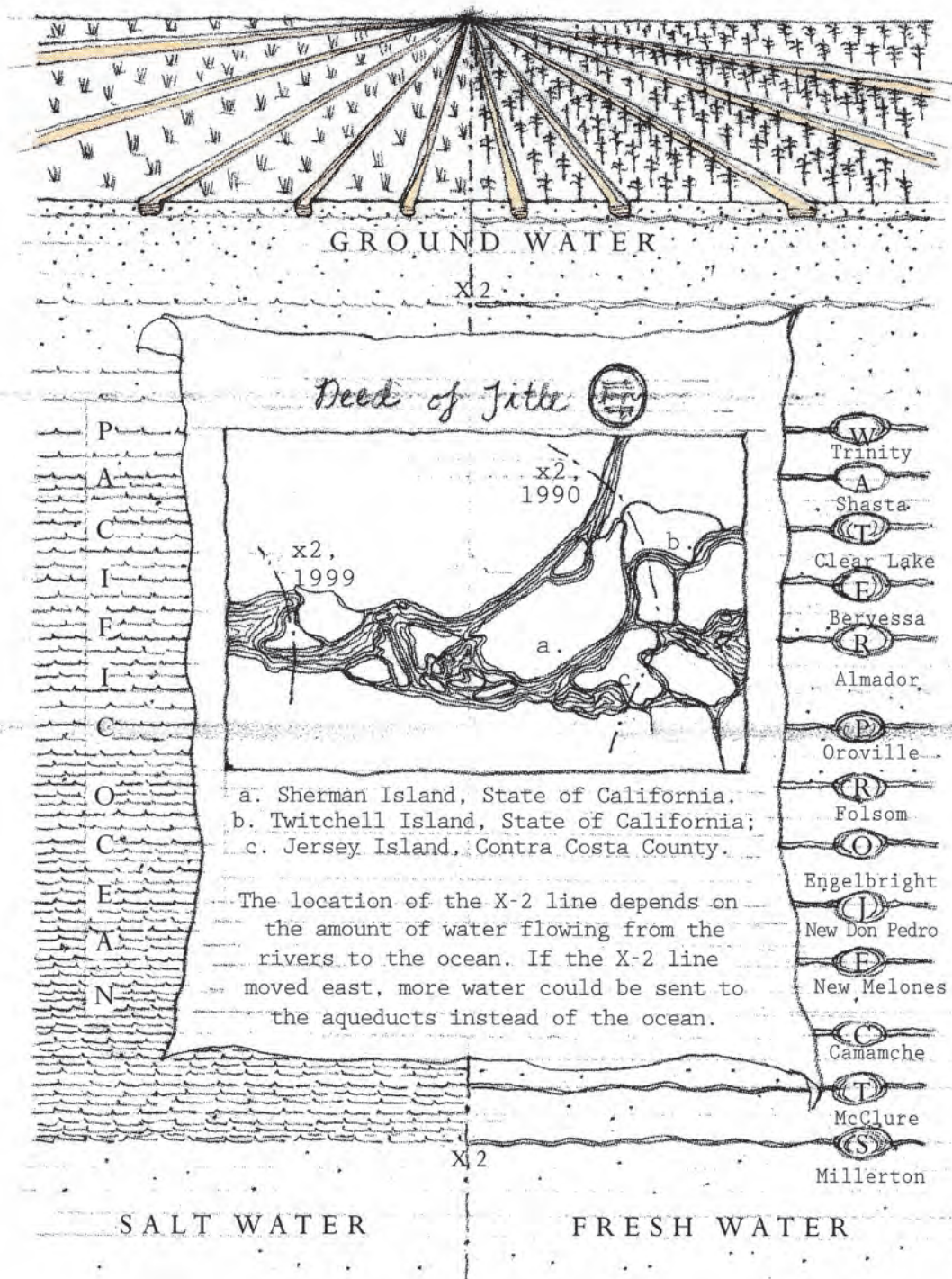


calamities that lie in wait. Jane Wolff's book and deck of cards deal out all of these sensations and understandings, and package them in a realistically unsettling context of chance and uncertainty.

If there is one problematic aspect to this production it is that the reproductions of drawings and maps in the book are too small to provide a generous reading beyond the more dynamic experience and logic of the cards. While the best drawings offer the greater power of richly layered and integrated drawing and text, in some cases the drawings become mere illustrations, and the text becomes mere caption. Despite these few reservations, one appreciates the wide-ranging insights and ideas, and their deceptively simple presentation. But the experience is most powerful

after one has spent a little time shuffling the cards, and dipping erratically through the pages of the book. This is an unexpectedly subtle, sympathetic and approachable introduction to a complex and beguiling landscape that holds terrifying implications for a complicated and populous state.

A pretty deck of playing cards offering a good time and a painless education may be an ingenious way for Jane Wolff to make the delta visible to its enormous public constituency: "The greatest threat to the delta is its invisibility" (page 169 again, wild card).





California Delta, Paddock, Onion Island, 1997. Photo by Jane Wolff.

Colletta di Castelbianco

Giancarlo De Carlo

In this project we set out to redesign and give life to an old village that was abandoned two hundred years ago.

The village of Colletta in the commune of Castelbianco stretches for about 300 meters along the top of a hill just at the base of the Apennine Mountains about 75 km. west of Genoa. It lies along an old road which departs from Albenga on the coast, follows the Pennavaira valley inland, and then crosses the mountains to Ormea in Piedmont. The village was born, I believe, because the country people around there had commercial exchanges with travelers crossing between Liguria and Piedmont. But when a new system of roads was built two hundred years ago, bypassing it, the inhabitants apparently decided to abandon the village and move to another place.

A small developer from Alessandria had the idea that it would be possible to rehabilitate this village, and so he started to buy pieces of it. In his mind, the village had little potential as a place for ordinary vacations, because it is twenty kilometers from the sea. The surrounding nature was also very harsh, and he thought perhaps tourists wouldn't like that. But this was a place of solitude, and so he invented the idea that people he called "white eagles" would go there.

White eagles are people who work by themselves and are looking for isolation, but who also use computers and information electronics to remain in touch with what's happening. Not only are they in touch, but they may direct operations in other, more crowded places. These people usually can take long periods of isolation, and they may want to live in places which are completely quiet. "White eagles" were not very numerous in Italy at the time this project began. But there were some, and there are also other people who are completely tired of towns, and who want to go to very simple places where they can live a life in connection with nature and at the same time be in touch with what is happening around Italy.

The idea was fantastic. It was also immediately attractive to the mass media, because the mass media are curious about strange people, like white eagles. Financially, the formula also worked. This didn't mean the place could be sold immediately. On the contrary, the process was very slow. But its prospects were promising enough for the developer to invest the little money he had to begin the rehabilitation.

Facing page: The Italian village of Colletta di Castelbianco as it appeared after restoration.

Inset left: Crustacean form.

Inset right: The maison domino was modernism's famous distillation of vertebrate form. Images courtesy of Studio De Carlo.

Reading the Fabric

When I started to study this place of course I was not completely confident, because it was isolated, and because I am an urbanite and do not immediately understand places which do not have life inside them. But what interested me was the fabric. It is something which is absolutely woven together, and it had a series of qualities which I'm looking for in other situations. One of the remarkable situations I found here is that the open spaces are of the same size and quality as the built spaces. There is no discontinuity. You move out of the built space into the open space, and it is the same. The difference, of course, is that it is open; but the size, the way it makes an enclosure around you, is exactly the same — you have exactly the same feeling. You can hardly separate what is given to movement and what is given to stasis — the streets and the built spaces are again the same; they enter each other and produce situations which are incredibly intense.

I also found it very interesting that there was a consistency between the technology used to build this village and the system of its forms. The material used was stone, found in the fields. To grow olive trees, the villagers had to level the earth, and they had to pile the stones in order to leave the earth free. But in this case the same stone which was used to make walls for the olive terraces was also used to make their houses. The stone is not particularly strong, and the pieces are small. But they assembled and interlocked all those pieces in such a way that they became vaults. The technique was not sophisticated, but it affected very much the size of the space. You cannot find spaces which are larger than four meters wide. They are either square or they are rectangular, but the span between the walls is determined by the vault.

So all the spaces are vaulted, and they enter each other. And above the vault, the roof is flat because the villagers needed a place in the open air where they could dry the materials they got from the earth, the agricultural materials. If they were making wine, they could put the grapes out there; and the same with olives, and everything else. On the ground floor, which was perhaps the most humid area (and the most difficult to rehabilitate, of course) they had simple animals, donkeys.

Crustaceans

I began my research by making drawings to understand the texture of the place. At the beginning I was very hesitant because my generation, and also the generation before me and after me, were trained in the idea that a building can be flexible and adaptable if it is vertebrate. This means that it has bones and then muscles and then





skin — but the three are separated in such a way that everything is adaptable.

But when I met this village I understood that the crustacean form is as flexible as the vertebrate. And I tried to look at that idea of the crustacean in a completely different way. That is, the crustacean looks very strong and compact, like a unit in itself, but this is not true. It has an incredible number of joints and possibility of moving around and being flexible. Crustaceans are very capable of adapting themselves to the environment. This is what I discovered. And as soon as the metaphor came to my mind, my attitude toward the village changed completely. Strange what can happen to an architect! Sometimes you need a metaphor to glorify your ideas. And then you follow the matter for — not forever, I recommend you — just for a moment.

You remember perhaps a famous article by Le Corbusier. He was a great architect, but he also made some mistakes. And one of these was to believe that the crustacean was out of date — a bit stupid, heavy, etc. — whereas the vertebrate was flexible, slender, elegant, intelligent and nice. This is not true actually, because it depends on how you relate to the environment, to the general conditions. There is no possibility to establish a rule once and forever. In architecture you meet so many different conditions that you need an adaptable mind.

Yes, the vertebrate has that flexibility, but it is also very dogmatic. I mean, it has a lot of possibilities, but not an adaptability which is as complete as the crustacean.

When the idea of vertebration has been followed dogmatically — taking the *maison domino* by Corbu and making a model out of it (or, better, a type) — it has been repeated and repeated and repeated in a dull way without understanding. Our coasts in Europe were destroyed because that inflexible element was put all over.

Of course, some areas escaped because this construction system didn't have the capacity to understand the place

and adapt to it — whereas the crustacean has that capacity. And this is what I learned at Colletta. Going through this idea, I found how beautiful were, for instance, the connections, how complete was the intersection, the capacity of intertwining. You see it immediately in the stairs, which are full of imagination because they have to do unpredictable things in order to get to one point from the other. And many times in the crustacean those things have to be invented; they are not established once and forever. So in this village you find connections which are invented continuously. This was the wisdom of the people — they didn't have architects, of course.

The Code in Place

What I started to look for was the genetic code. It became clear to me there was a code, and that I had to discover it to change the place. Anything I could have done out of this genetic code would have been a mistake.

To enter the nature of this place I began to look at it through sections. This allows you to see how spaces are put together. And if you make them negative, other things become immediately important. It's a way of turning the problem on all sides and trying to understand its internal rules. At Colletta I found that the connections penetrated the volumes. Or, one may say, the volumes penetrated the connections. It is exactly the same.

And when I started to design apartments out of this congregation of spaces, I discovered that connections were possible in all directions. I discovered I could connect everything if I gave up some of the dogmas normally related to the composition of a plan. I found it was possible

Above: Even as an abandoned shell, the village contained elements that spoke of a tremendous vitality. Photos courtesy of Studio de Carlo.

Opposite: Section drawings were crucial to understanding the nature of the place. Drawing courtesy of Studio de Carlo.



to enter a space from many different directions, and also to give it different, but interchangeable uses. Why does the toilet have to be small and the living room large? Who decided that? In this context, it actually didn't matter.

It depended on levels of reasoning and use. So it was possible to cut and to isolate spaces and serve them in such a way they could become apartments for those people, the white eagles.

What was more astonishing was the way the section could be used. Because in this case it was not only a question of going horizontally to connect existing space. In this case the dance became very exciting because it was also possible to go vertically, or to go horizontally and then vertically. Or to go in an oblique way and to connect things in such a way that the houses could be served from the ground floor, or the top, or the middle. So it was possible to have a composition which was completely flexible and absolutely new to me.

When the apartments started to take form, they were of different sizes. But as soon as the first possible buyers arrived, the action of adjustment started. It was very easy to adjust the spaces if they expected a particular way of living.

In some cases there were built volumes on top which had been destroyed by time and weather, and we rebuilt them following the same pattern. But in other areas we were required to add parapets. Originally, there were no parapets or handrails. And the historic documents did not say that people died falling down. Nevertheless, the building organizations imagined that everybody would kill

themselves this way. They maintained especially that kids would fall down the stairs.

It was not my wish to make parapets. But I did, and it became a problem. Since the whole thing was made with unconscious skill, as soon as you add something, you find a problem. So I had to make many tries to get it to work. But sometimes, as in the homeopathic cure, by touching a poor point, you could also touch another point that would establish equilibrium. Perhaps what you were making was no longer a parapet, but a stair, or a piece of the street — because this is the way you have to proceed in order to establish equilibriums.

Windows

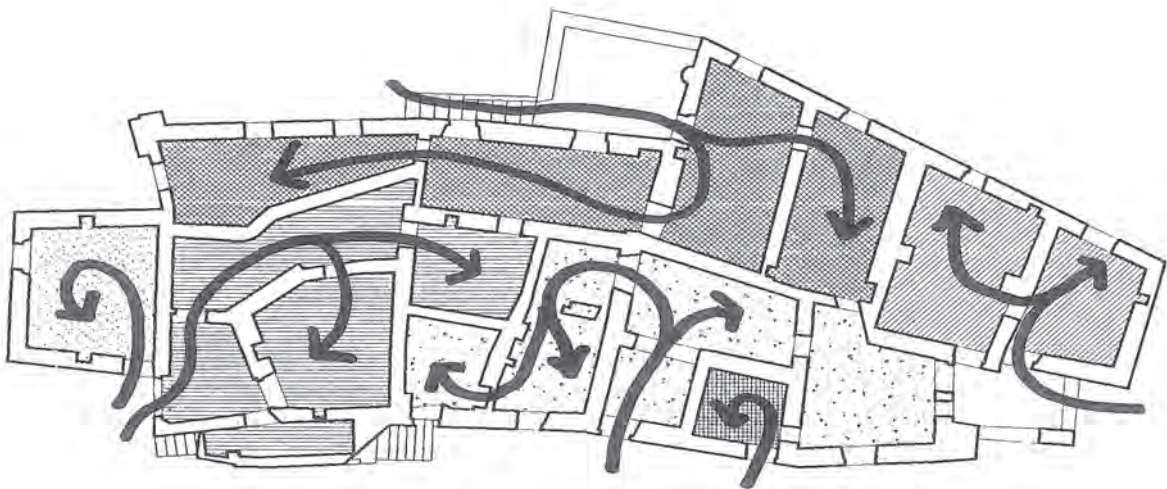
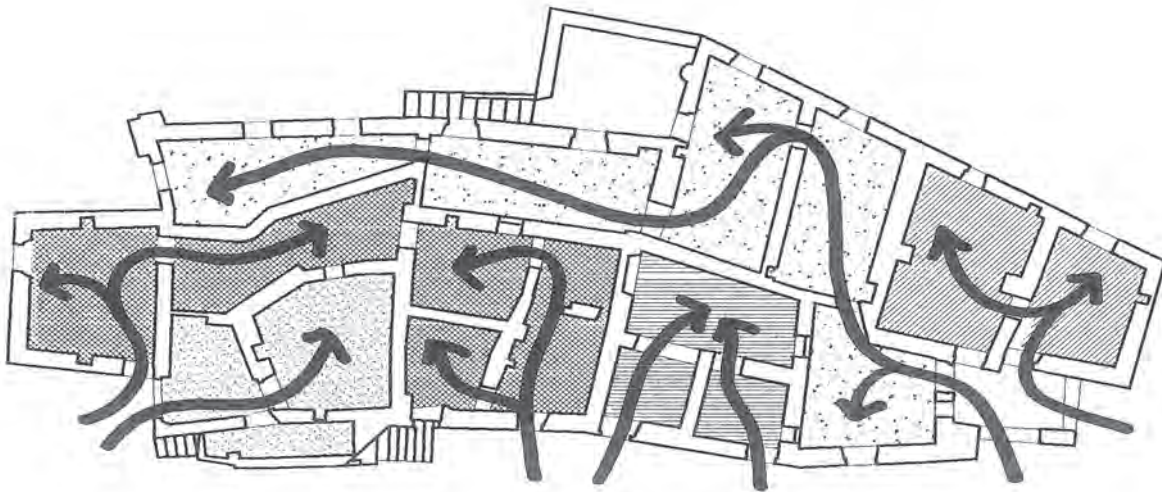
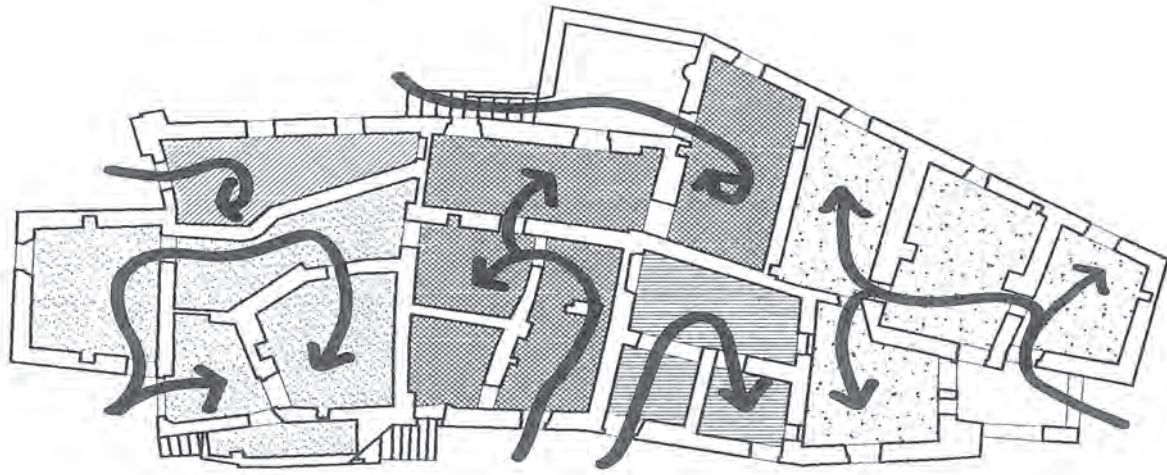
Studies in search of genetic codes were also made on the various components of the buildings. One thing which was shocking and very interesting was that all the windows in all the houses were framed with plaster and white paint. Of course, there was a functional reason for that. If you have to put a wood window in a wall you have to have a regular surface. So they used some plaster there.

But this was certainly not the only reason. A window is also a very delicate point in a house. It is a place where you have a transition from internal space to external. It is a dramatic point — something which gives you pleasure, and also fear, depending on the circumstances. So it has to be underlined as important. They didn't have smooth stone surfaces for framing openings. They just had the possibility to paint the plaster. But the painting was not only for

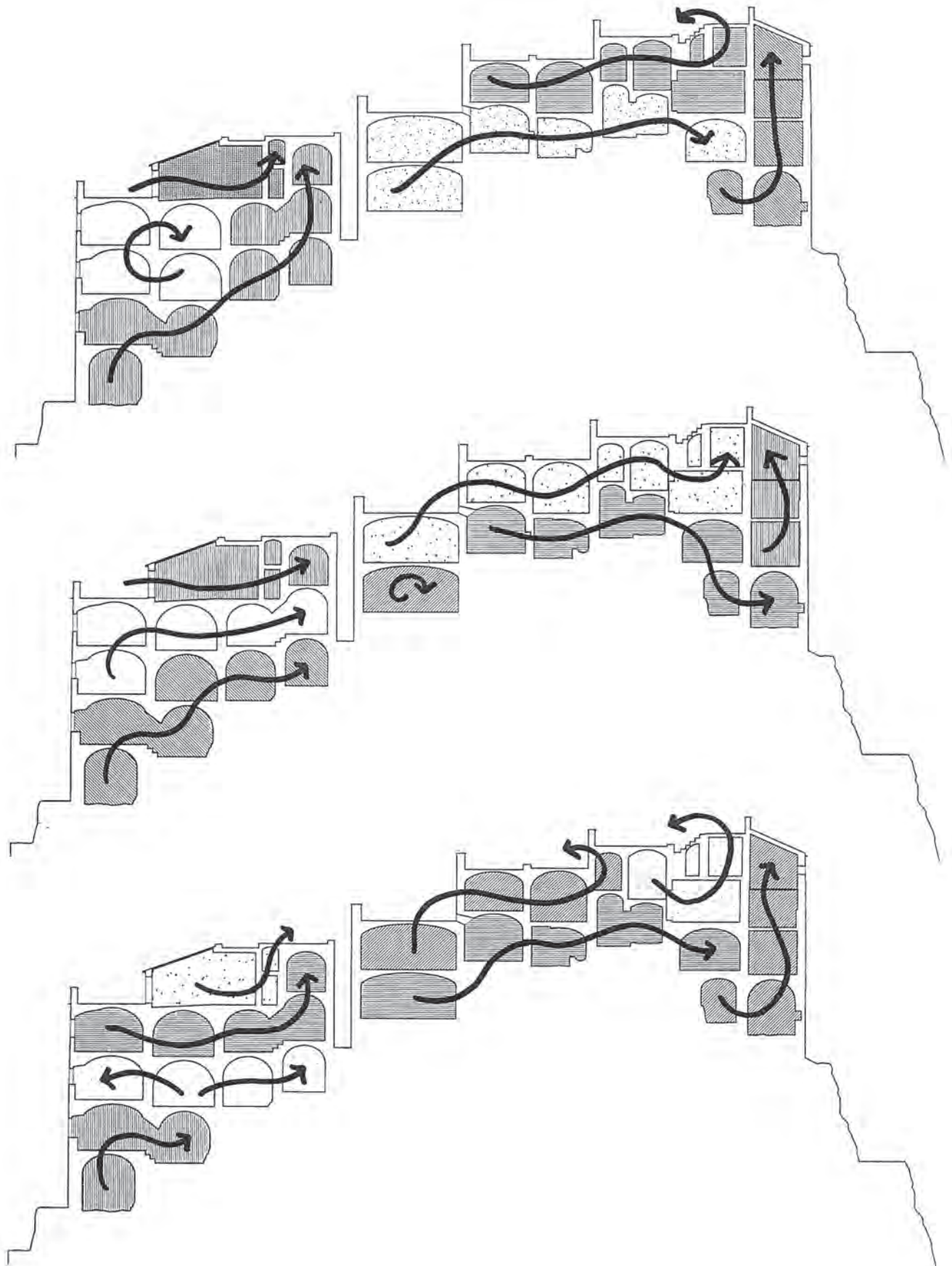


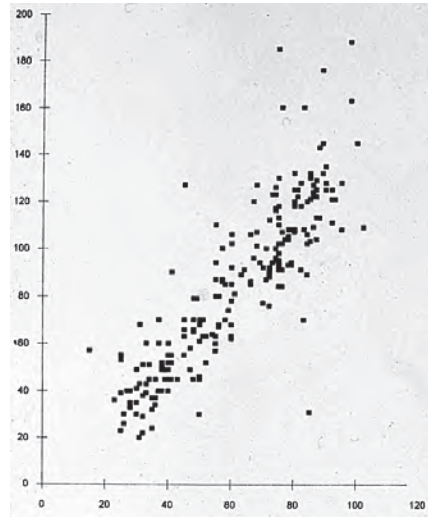
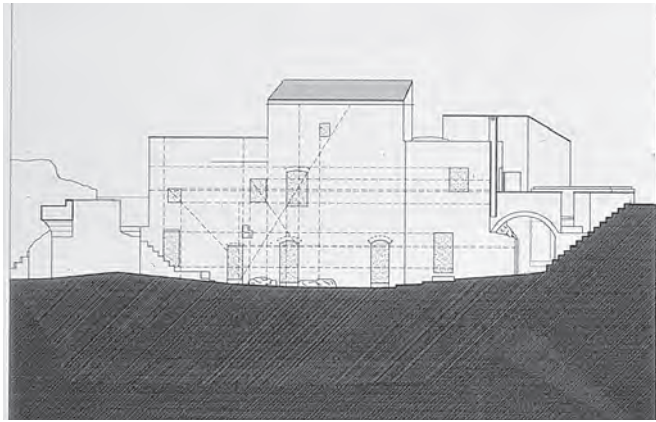
Above and facing page: The village today. Photos by Donlyn Lyndon.





Above and opposite: In the design of new apartments, connections were possible in all directions. Drawings showing three possible ways to connect the same rooms courtesy of Studio de Carlo.





functional reasons; it was done for reasons of expression, for self-representation.

For example, one man may perhaps have been richer — richer in terms of the general level of poverty in which they all lived. Or perhaps he had more imagination, or wanted to say that he was more sensitive. In any case, he wanted to declare his individuality and identity. So he painted his window in a very special way so that you could immediately recognize it in the general panorama of the village.

This is something you have to be careful about in the rebuilding. Because if you change it, or if you repeat it, redundancy is not accepted as simplification. So you have to find the right point, and it is again related to genetic codes.

Then in many cases I found myself needing to add some windows, because internally there was not enough light for present-day life. People are accustomed to having more natural light than in the past. So how to now open a new hole in those walls? It was necessary to understand precisely what the windows were. What was their design? What were the relationships between windows? The cadence, the rhythm, the size of openings?

When we began to study the height and width of the openings, we discovered that all the windows could be mapped according to a diagram which determined not that they have the same dimensions, but that they have very similar proportions. You have to stay within that diagram if you want to do something which doesn't break the system. Or, if you wanted to make a break — and this might happen if there was a need to show a change in organization — you had to calculate your break very carefully. It cannot be a break made by chance — or by distraction, which is worse. It had to be something which is really in

agreement with the system, the solids and voids which characterize the village.

When another exercise was made to understand how the walls were made, there was another discovery. It was that there are correspondences. In this case, if you trace the correspondences, one up over the other, etc. etc., you always have something which is precise enough to give you instructions about what to do. You can project the internal spaces on the wall to understand how the holes could be put — not only in relation of the internal space but also in relation to the facade and to the other voids.

Much of the village has now been renovated and inhabited, and the work is still going on. Of course, what was added that was completely new was the mechanics, because they need heating and electric light — and also, especially, the wires and plugs of information technology which don't affect so much the architecture, since they can be buried behind plaster and other finishes.

It goes very slowly because you cannot go very fast in this case. You have to work on each piece and put together things and stop and understand and start again, etc. It takes a lot of time to make the design of such a humble place.

Above: Diagrammatic analysis of window proportions and “regulating lines” helped reveal aspects of the village’s “genetic code.” Drawings courtesy of Studio De Carlo.

Facing page: The restored village. Great care was needed to understand such a humble place. Photo courtesy of Studio De Carlo.



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**Giancarlo De Carlo**

In this issue we present the third in a series of *Speaking of Places* articles dedicated to the work of the Italian architect Giancarlo De Carlo. We have developed this series to profile the works of a designer who has been a persistent, dedicated and passionate advocate for modern architecture that is rooted in both place and time; an architecture that is measured in terms of its contribution to the qualities of place and to the lives of the people who encounter it. The half-century span of De Carlo's career has been highlighted this spring in a show at the Pompidou Center in Paris, a retrospective that will be on display until June 15.

In our series, the first, "Once in a Blue Moon" (*Places*, Vol. 15, No. 3), consisted of reflections on the ways one of De Carlo's most recent projects embodies an "architecture of participation." In this case, the structuring of a public beach pavilion and gathering platform on the Lido in Venice was seen as an exposition of the ways buildings can be made to address multiple options for movement and imagination, allowing their inhabitants to participate in forming an experience of place. The second article, "Il Magistero: De Carlo's Dialogue with Historical Forms" (*Places*, Vol. 16, No. 1) was an account by John McKean of the transformation, twenty years ago, of a convent in the town of Urbino into a university building that leverages vigorous new life into the city, while respecting the essential character of its historic urban fabric. The article also placed this project in the context of De Carlo's long-term and creative stewardship of the evolution of Urbino's urban form.

The third article, included here, concerns a comparatively recent and provocative restoration project — this time described in De Carlo's own words, edited from the transcript of a lecture. It accounts for the character of the project, its conformance with the existing fabric of the place and the morphological possibilities it evokes. To be sure, few of us will ever be involved with the rehabilitation of a fourteenth-century Italian village like Colletta di Castelbianco, but that is not the point. Through his work on this humble place that is seeking a role in contemporary culture, De Carlo reveals the fundamental correspondences between form, use, topography and material, showing how attention to the ways of a place can encourage the emergence of an environment of great beauty and profundity. Colletta is a complex that can bring us into touch with the core of our interest in being in place — with its subtleties of enclosure and release, human engagement, imagination and accommodation, all embraced within a larger order. Such qualities can form the surroundings of our lives once they are freed from the strictures of size, movement and hermetic enclosure imposed by the dominant constraints of our current development patterns, which so often involve an insistence on intimacy with the automobile, bureaucratic regulation, and the imaging chaos induced by product salesmanship — or their opposite face, alienated abstractions fearful of touching their toes in the particulars of place.—DL

The View Downward: Cultural Landscapes of North America

Barry Haack

Landscapes seen from the air largely appear as geometric patterns that reflect human activities, and those patterns, the subject of this collection of aerial photographs, are generally determined by the division of land for ownership or agricultural practices.

In the United States there are four or five distinctly different land-division or property systems. These were established either at different historic times or by different peoples. They can generally be classified as early and unsystematic patterns, or later and more systematic ones.

In the originally colonized portions of the eastern and southern United States, generally areas of English settlement, the landownership patterns were haphazard, producing irregular parcels both in size and orientation. The early settlers used physical features such as large trees, streams, rocks or ridges, and occasionally cultural features like roads, to describe their property in a system called “metes and bounds.” Most of the original thirteen colonies, some additional areas just west of the Appalachian Mountains, and parts of some southern states have this unsystematic pattern (Figure 2., Figure 3.). An advantage of the metes-and-bounds system was that it frequently followed natural divisions in the landscape such as ridgelines or streams. A disadvantage was that surveying these irregular features and establishing legal ownership was very complicated.

Early French settlers introduced a different system for property division primarily in Louisiana and parts of Canada. This system, called “long-lot” or “French long-lot,” was established along rivers, such as the Mississippi and St. Lawrence, to provide each property access to the river for transportation. The parcels were oriented at right angles to the rivers and were normally four or more times long than wide. Typically, homes in these areas were built close to the river, where slightly elevated natural levees lessened the likelihood of flooding (Figure 4.). The long-lot system was probably brought to the United States from northwestern France. But it is further likely the system was brought there from Spain, where it may have been introduced during the Moorish invasion.

In North America long lots were also created in the Southwest by the Spanish. In these arid landscapes, the concern was not transportation but access to water for crops. Irrigation canals were established parallel to rivers on the upper slopes of floodplains, and narrow property lines were then run between the irrigation canal and the river. These lots were typically 300 feet in width, and they could extend beyond the floodplain to one mile in length. Unlike the French system, houses here were generally located on the upper elevations of the floodplain, away from the river and near the irrigation canals (Figure 5.).

In the U.S. today, variations of long lots are also evident in other regions, such as California and New England. In these places, they were either established to provide similar access to water, or by settlers from countries familiar with long-lot systems.

After the Revolutionary War, the areas of the newly established United States to the west of the original colonies were opened up for sale and settlement. In 1785 Congress passed an act for disposing of these lands based upon a systematic rectangular grid called the United States Public Land Survey. This system is very evident today from Ohio to the West Coast. Often called the “township-and-range” system, it divided the land surface into square-mile blocks called sections, each consisting of 640 acres. A township was thirty-six sections, or square miles. Roads were often established on the section lines, one mile apart, allowing ownership to be divided into very systematic square or rectangular parcels (Figure 1.). Typically, a farm would be one-quarter of a section, a square 160 acres, or some multiple or portion of that unit.

A minor variation of the township-and-range scheme was introduced by Mormon settlers in the western states. This employed the same square and rectangular land divisions, but because of the strong sense of community in Mormon society, farmers lived together in villages and traveled to their farms. The result was more of a European pattern (Figure 7.).

The appearance of the American landscape from the air today has largely been determined by the confluence of these patterns of land ownership and variations in land cover and agricultural practice. One such striking and widespread agricultural practice is contour farming, where the fields are plowed at right angles to the slope to reduce soil erosion. This practice creates curving fields, often highlighted by the strip farming practice of alternating field and row crops along the slope — also to reduce soil erosion (Figure 8.). In the more arid parts of the country, particularly the Great Plains and Intermountain West, farming practices may employ a central irrigation point and a pivoting water delivery system. This typically establishes circular cropping patterns for each section or quarter-section field (Figure 6.).

A diversity of cultures and peoples has always been one of the strong, positive aspects of North American society. This collection of photographs illustrates how that diversity, to some degree, is reflected in spatial landscape patterns.

Photographs courtesy of U.S. Geological Survey (USGS) and United States Department of Agriculture (USDA).

Figure 1. Cedarville, Indiana (USGS)





Figure 2. Bernstadt, Kentucky (USDA)

Figure 3. Bellfonte, Pennsylvania (USGS)



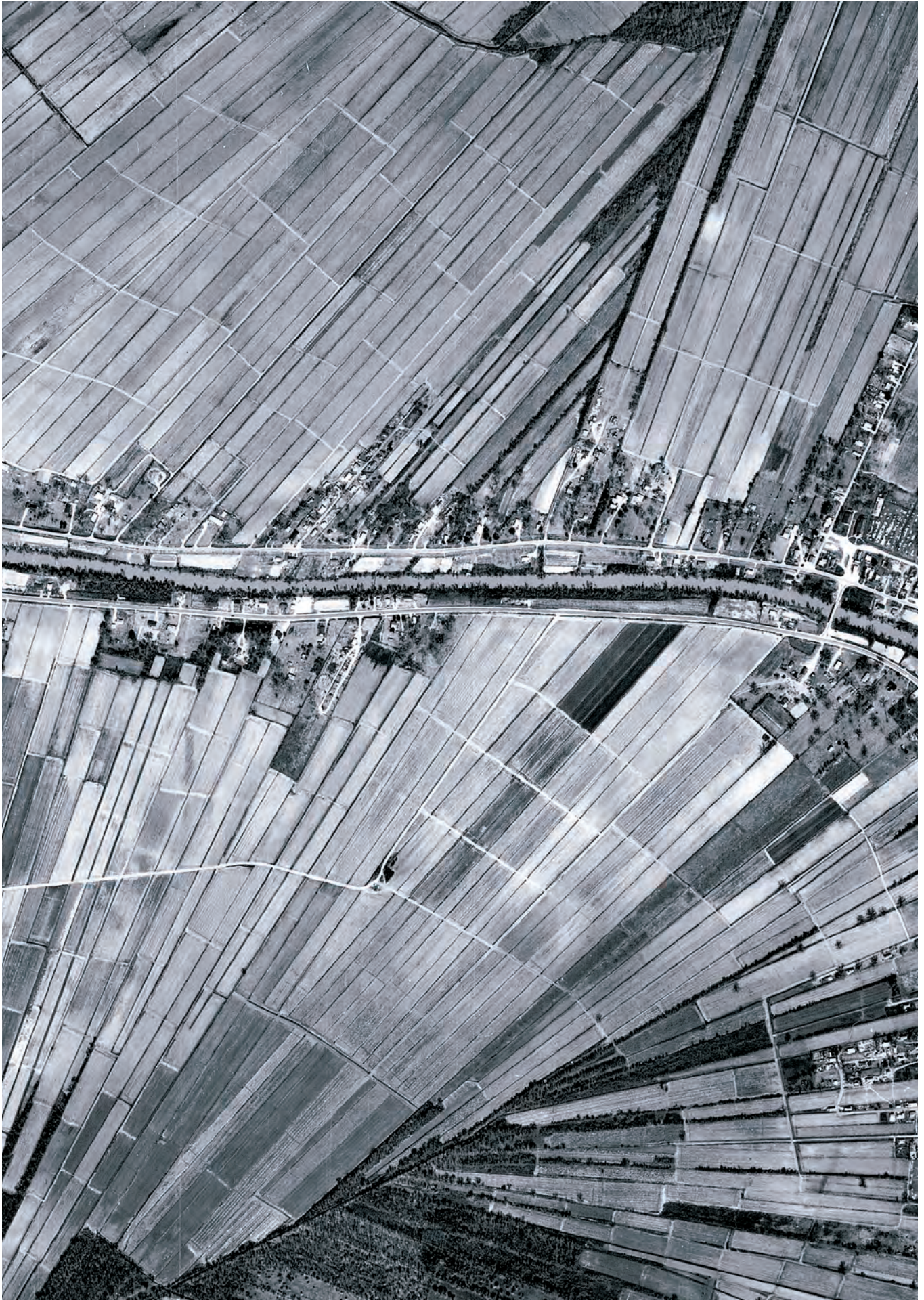


Figure 4. Napoleonville, Louisiana (USDA) **Opposite:** Figure 5. San Juan Pueblo, New Mexico (USDA)









Previous Spread: Figure 6. Oakley, Kansas (USGS) Figure 7. Providence, Utah (USDA)

Figure 8. Cambridge, Ohio (USGS)





Folsom Street Blues

Trevor Boddy

As visiting critic “in wolf’s clothing,” here are some of the propositions I overheard spectators and speakers make at the December 4, 2003, meeting of the San Francisco Planning Commission, where the Rincon Hill and Transbay Plans were discussed in the context of an application by Heller-Manus Architects for four massive residential towers on high podia along two blocks on Folsom Street.

- Vancouverites have always preferred smaller, higher apartments than close-to-the-ground, ever-sprawling, gas-guzzling, free-marketeering San Franciscans.
- Vancouver city planners have more sweeping powers than those in San Francisco. Combined with a passive populace that likes being told what to build, their regulations have helped shape innovative architecture downtown.
- Regarding its skyline, Vancouver has a Marine-style “flat-top” hairdo,

while San Francisco prefers a sculpted “big-hair” look that amplifies the curves of her hills.

- The soon-to-be-approved plans by Heller-Manus for \$600 million worth of housing in four towers represent a direct application of Vancouver innovations to San Francisco.
- Immediately approving projects like these, which do not conform with the city’s pending urban design policies, will make it harder to bring in Vancouver-style innovations later.
- San Francisco needs lower buildings along the Bay Bridge ramps in Rincon Hill to provide a “buffer” and “transition” to Vancouver-style high-rise blocks.
- The requirement that developers pay a tiny percentage of construction costs in Vancouver-style development levies for public-realm improvements will be so onerous it will kill future housing in Transbay/Rincon.
- Bulkier buildings than Vancouver’s are mandated by San Francisco’s

building codes, which ban scissor stairs. (Vancouver and virtually all other cities in the same seismic danger class as San Francisco have long permitted them.) And even though everyone knows San Francisco’s codes derive from 1950s engineering, they can’t be changed “because of public safety paranoia after 9/11.”

- The current developers in Transbay/Rincon are the only ones who will build there. If the city does not make them happy by scuttling most of the principles of the Rincon Hill Plan, the area will be forced to endure further empty, bleak decades.

Previous spread: Downtown Vancouver from the south, with False Creek in the foreground. Image by Waite Air Photos.

Above: Rincon Hill, south of San Francisco’s Financial District, is seen by some as an ideal location for a new highrise residential district similar to those in Vancouver. Image from the Rincon Hill Plan, San Francisco Planning Department, November 2003.

The housing crisis necessitates okaying anything big and apartment-y, right now.

Here is the bad news: from my Vancouver viewpoint, almost every statement on this list is wrong, or at least partially wrong. The good news is that the misunderstanding is almost evenly spread among developers, their architects, urban planners, public-interest lobbying organizations, and the concerned citizenry at large.

Pretzel Logic

Rather than elucidate a comparative theory of urban design practice in our sister cities, I will pass right to the crux of things.

The physical center of the problem is Folsom Street. For many years Folsom carried traffic on raised ramps as part of the Embarcadero Freeway — one of the most hated segments of the U.S. Interstate system. But with the demolition of the Embarcadero Freeway in the wake of 1989's Loma Prieta earthquake (Seattleites pray for a similarly non-life-threatening catastrophe to compel demolition of their analogous waterfront-walling Alaskan Way/Highway 99), what was once a barrier is now widely seen as a link bringing together the Transbay and Rincon Hill mini-neighborhoods immediately south of the Financial District.

Yet, despite being the “zipper” for this reviving portion of the city, Folsom Street is also the somewhat strange dividing line between two urban plans awaiting approval and implementation. Folsom's north side is covered by the October 2003 “Transbay Redevelopment Project Area Design for Development,” produced by the local franchise of Skidmore Owings and Merrill, along with specialist consultants to the San Francisco Redevelopment Agency and city Planning Department. The

future of the south side is the subject of a somewhat more timid document authored by the city's own staff planners. This study came out just a month later, and is entitled “The Rincon Hill Plan: Draft for Public Discussion.”

One street, a different urban design plan on each side — what gives? While architects at SOM and city planners have recognized this contradiction and invested a lot of time in talking to each other, it has been difficult to surmount the facts of provenance: the two plans are essentially adjacent and competing documents.

Further complicating this dialogue has been the preexistence of two large double-tower housing proposals by different developers — but the same local architecture firm (Heller-Manus) — for sites on two adjacent blocks on the south side of Folsom. Over the last half decade, these schemes have evolved in tandem — but not in agreement — with the city's planning thinking for the area. Naturally, the developers and designers have also sought to exert political influence behind the scenes to get their projects built before the urban design rules are changed.

To an outsider it was immediately apparent at the Dec. 4 meeting that this situation has led to is an unfortunate cross-contamination between what should be two separate activities: urban planning and the design and construction of individual buildings. Indeed, a close reading of the Rincon Hill Plan today reveals how the pair of double-tower projects are the source of some of its weakest ideas, especially those dealing with built form, public space, and sunlight on public spaces.

Here is my own Cliff's Notes version of events: weak development proposals by two firms using the same architect are improved somewhat in dialogue with city urban designers,

but at the expense of the Rincon Hill Plan which has now been bent to accommodate flaws in the architectural schemes. Unfortunately, this pretzel logic of planners trading urban design principles for political success is the dirty secret of a once-idealistic profession.

You Can't Have It Both Ways

Having given such a reading of the political landscape, I should now back it up with specific analysis of why the approved Heller-Manus designs (and the flawed plan which tries to accommodate them) are pastiches — not exemplars — of the “Vancouver model.”

The first approved Heller-Manus design is Union Property Capital's 300 Spear Street (at Folsom). This would include up to 820 units of market-rate housing averaging 1,150 sq.ft., and up to 139 units of family-oriented affordable housing averaging 1,400 sq.ft. It is worth noting, to start, that average housing unit sizes here are very large compared with comparable projects in Vancouver, Chicago or San Diego. This could either mean a very high-end target market or inefficient floor plans in need of redesign, or both. Most of this housing would be in one 400-foot tower and one 350-foot tower set only 83 feet apart at their east and west corners respectively.

Another portion of the housing would be located in an 80-foot base that rings the site. However, it is unclear if one of the most successful aspects of Vancouver's new downtown streetscapes — continuous townhouses with stoops and Jane Jacobsian “eyes on the street” — will be incorporated here. My suspicion is that without a specific commitment up front it is unlikely this will happen.

Downtown Vancouver developers also resisted mandated townhouse



configured housing on streets at first, largely because these corporations had built concrete and steel high-rises downtown, and had limited exposure to this scale of building. But ten years later these same Vancouver developers can hardly imagine building any other model, especially since zoning amendments permit live-work arrangements in many of the townhouses.

Be forewarned: this is something that will happen increasingly in San Francisco, no matter what official land use policies say. The absence of discussion of live-work possibilities is a weakness of both plans, the result of stifled debate on how most of us actually live these days.

The second approved Heller-Manus design is located one block west at 201 Folsom, on what is currently a U.S. Postal Service parking lot. Here the powerful international developer Tishman Speyer is proposing what — in urban design terms — is a virtual clone of the previous project, except that it is even bulkier at its base. The reason is an underground Post Office facility will remain, making the base of the new project an 80-foot-high platform covering almost the entire site.

One should note that such podia are twice Vancouver's mandated height and will have unfortunate impacts on Folsom Street. City planners envision this widened and

tree-bedecked street as the key public way in the new neighborhood, and renderings show it heavily peopled and lined with cafes. But this is unlikely if it is in permanent darkness and buffeted by amplified wind gusts.

Only when the Heller-Manus schemes are compared at the same scale as the Vancouver projects they superficially resemble does it become apparent just how bulky they are. Their towers are too fat and too close together, and the four of them taken together would create an unfortunate wall. Indeed, both the Transbay and Rincon Hill plans demonstrate the unfortunate impact on views, light and streetscape of the bulky towers that already exist in the area.

There is a single, deadly, urban design confusion at work here. Both the Heller-Manus architects and the city planners who compiled the Rincon Hill Plan apparently believe that seven- to nine-story, European-style "perimeter blocks" can be combined to form a base for high-rise towers. Sorry, guys, it is either one or the other. I know of no project, anywhere, which has successfully combined the two typologies without compromising surrounding streets utterly. We all love the urban blocks of central Paris, but to stick a "Plan Voisin" tower in each compromises the strength of both. Planners and architects tend to know and love Paris, Barcelona or Berlin. But they know

Vancouver only superficially, and thus misapply its lessons.

Now for a solution that would apply the Vancouver experience. Starting, for argument's sake, at Vancouver's suggested podium datum of 40 feet above grade, there is no reason why the massing of both San Francisco projects could not be cut back along their northern ends. This would be made even easier if the city would apply its current parking reduction policy: a Dr. Atkins regime for sunlight-robbing bulk.

Once demanding more than one parking stall per unit, Vancouver developers now happily provide less than half this rate — in a city with a weaker public transportation system. The same developers now enthusiastically support shared car cooperatives as alternatives to extremely expensive (for everyone!) parking spaces, costing up to \$20,000 each for land and construction.

Unnatural Birth

There was not much argument at the Dec. 4 hearing that these two massive projects will set the tone for all subsequent developments in Transbay and Rincon Hill. There was, however, considerable discussion as to whether the current designs should be "grandfathered" into premature birth, or whether the city should require that they be amended to concur with the urban design principles of the Rincon

The Rincon Hill Projects

Allan Jacobs

Hill Plan. The decision is now in: they got their “grandfathered birth.”

This unfortunate and contradictory metaphor should give the game away: who could argue that grandfathered births are not some freak of nature? While they have different developers, the two projects have been designed by the same firm, aggressively promoted as a single project, and accompanied by a flashy website and public-relations campaign.

Despite slightly different corporate parentage, the two projects are siblings; two sets of dumpy fraternal twins, to put it bluntly. Vancouver has learned the hard way that if the quality of architecture is not good at the beginning, it never gets better. The architecture here is uninspired at best, and will set a standard of mediocrity that will prevail for years.

Do us one better, San Francisco. Demand better architecture and more enlightened urbanism. Do it now!

The approval of the two Rincon Hill-Folsom Street behemoths by the San Francisco Board of Supervisors is a standout example of non-planning, ad-hoc, project decision-making at its worst.

Initially planned as speculative large-floor-plate office developments of the late 1990s (themselves totally out of keeping with San Francisco’s finely scaled development pattern), they were quickly reconstituted as housing proposals when the dot-com market dried up.

The proposals, to start, were far out of scale with the 200-ft. height limit of the area and the requirement that there be 150 ft. between towers. San Francisco City Planning Department staff were then working on a Rincon Hill Plan that was looking to a 250 to 300-ft. height limit, not the proposal for 400-ft. heights and only 82 ft. between towers the developers’ architects were offering. So why not go for broke? My understanding is that the developers and their architects decided to try their own zoning proposal, and that they did a great job of railroading their rezoning through the city and around concerned neighborhoods. Loads of people spoke out against the proposals and the conditional use — to no avail. In the end, only one supervisor, Tom Amiano, voted against the project.

This project will have a floor area ratio of close to 2.1. There will be 800 dwelling units in each of the two buildings, and the density will be about 460 units per acre.

To say that this development follows the Vancouver Model, as some of its proponents do, where the highest floor area ratio in the downtown housing areas is about 5 is an insult to Vancouver and to sane, knowing people’s credulity.

I am advised that as the hearings were coming to a close, one of the

supervisors asked for one hundred additional affordable housing units, and got them speedily, presumably as the price for his vote. One of the local city planners estimates that the developers made about \$100 million as a result of what the city gave them.

There is an old, old lesson of city planning here that few seem to be able to learn. When design-development decisions are made one by one, case by case, and there are either no plans or community requirements, or those that exist are easily up for grabs, then the side with the most power will usually win. And in our society, in large development matters, the side with the most power is the side with the most money. That side is never the city planners or urban designers working for the public.

This is not a case study of making place. It is a study of ruining place. The place is San Francisco.

Left: The Vancouver model combines highrise towers with continuous townhouses to create an active, pedestrian-oriented streetscape. Photo courtesy of the City of Vancouver, Planning Department.

Middle: Heller-Manus Architects’ project for 300 Spear Street. Birds-eye rendering from submittal to the San Francisco Planning Commission. Courtesy of the City of San Francisco, Planning Department.

Right: Heller-Manus Architects’ project for 201 Folsom Street. Street-level rendering from submittal to the San Francisco Planning Commission. Courtesy of the City of San Francisco, Planning Department.

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New Urbanism: “The Vancouver Model”

Trevor Boddy

*[To pontificating jerk in movie line-up:]
“I just happen to be Marshall McLuhan, and
I heard what you said — you know nothing
of my work.” — Herbert Marshall McLuhan,
In Woody Allen’s Annie Hall, 1978*

While the San Francisco Planning Commission’s public hearings on December 4, 2003, had fewer one-liners than a Woody Allen movie, the meeting had — to my surprise — the same tone of angry ennui. At issue was the fate of four bulky highrise towers planned for the Rincon Hill and Transbay areas south of Market Street, near the western landing of the Bay Bridge.

As a visiting architecture critic from British Columbia, it seemed to me that all through that long afternoon, everyone who took to the podium had something to say about whether Vancouver-style, tall, skinny high-rise towers set on townhouse podiums were the best prototype for the city’s planned new high-density residential neighborhoods. And as each speaker rattled through their allotted three minutes, it occurred to me that landowners, developers, and the architects who work for them generally agreed the Vancouver direction would be a horrible mistake. Meanwhile, citizens, city planners, and San Francisco designers without pending commissions in the area all thought this direction just right, the bees’ knees.

After listening to a dozen citizens make both positive and negative comparisons between these proposals and recent housing in my own town, I just had to get up and say something. And as I got in the speaker’s lineup for my own three minutes, I flashed on the scene from *Annie Hall* in which Woody Allen casts my cultural hero, Marshall McLuhan, to play himself. Suitably rumpled and 1970s-mustachioed, McLuhan professorially corrects a pretentious pseudo-intellectual in a movie lineup, who is loudly spouting a Cliff’s Notes version of his communication theories.

McLuhan had developed his ideas on the power of contemporary media from the vantage point of Edmonton and Winnipeg — places of cultural consumption, not cultural production. As I considered how my Vancouver perspective might similarly contribute to the housing debate in San Francisco. Almost everything I heard San Franciscans say — on both sides of the issue — about Vancouver was wrong, or at least partially wrong. This, too, then, was to be the substance of my comments: “You, sirs, know nothing of our work.”

Shock value aside, my intent that day was not to discourage San Franciscans from applying the “Vancouver model” to their planned new near-downtown neighborhoods.



Truth be told, I believe our experience provides the best possible solution to many current issues of urban housing and livability there and elsewhere, and it would please me immensely if San Francisco could avoid some of our mistakes, and even do us one better to regain its traditional role as the West Coast’s most enlightened center of city-building.

The Vancouver Innovations

As anybody in attendance at the Planning Commission hearing that day could surely attest, the block typology of small-plate high-rise towers on townhouse podia is an extremely hot topic in planning and architecture circles these days. But this typology, which predominates on the downtown Vancouver peninsula, is the result of a particular inheritance that has yet to be adequately explained.¹

To understand Vancouver’s urban design revolution, one must first understand something of the general climate of Canada’s tax, transportation and housing policies. In the urban design realm many of these have to do with expenditures the Canadian government has not made — virtues of omission, not commission. Many Americans find it hard to understand how their public treasury provides extensive subsidies to urban sprawl, partly in the form of tax deductibility for mortgage payments, unknown in Canada and nearly every other nation. Similarly, immense public subsidy initiated through the Department of Defense built the Interstate highway system.

Lacking these defense-driven subsidies, Canadian cities built freeways only where required. In global terms, the wholesale destruction of inner-city neighborhoods for highways is an almost uniquely American phenomenon, prompted by specifically American politics and notions of the “public.” Yet — even by the standards of Canadian



cities — Vancouver is unusual. Because of a citizen's revolt in the late 1960s led by University of British Columbia architecture professors, ours is the only major city in North America without a single freeway within its boundaries.

Vancouver's history and geography have also imparted some unique legacies. The city is hemmed in by the Coast Range to the north and Canada's most productive agricultural zone — the Fraser River delta — to the south (an area protected by enlightened legislation). Like San Francisco, it was also an "instant city," invented as part of a lucrative land development scheme by the Canadian Pacific Railroad when it located its western terminus there in the early 1880s.

What came to be downtown Vancouver was, at first, an island, but the salt flats connecting it to the rest of Canada were filled in (the reclaimed land becoming the focus of my nation's first zoning laws — mandating that "orientals and celestials" live there, and only there). More positively, the Presidio-like former military reserve of Stanley Park was

dedicated to public use shortly after the city was founded. By contrast, it took San Francisco 150 years to bring true public benefit to its own edge-of-town military zone.

Since its founding, the morphology of Vancouver has been shaped by three important land deals: the amalgamation of municipalities to the south in the 1920s, which required a new city hall to be constructed south of False Creek; the construction of the Lion's Gate Bridge as a private initiative by Britain's Guinness brewing family to bring value to what is now called "The British Properties" in West Vancouver; and finally, the sale of 240 acres flanking the north shores of False Creek (originally assembled for "EXPO 86") to Hong Kong industrialist Li Ka Shing.

Other important local influences have come as a result of the fact that Canadian urban planning ideas proceed out of our constitutional need for "peace, order and good government" rather than the American "freedom, and the pursuit of happiness." The first influential urban design ideas in Vancouver were those of itinerant British City Beautiful planner Francis Mawson Rattenbury, who proposed a civic center at the entrance of Stanley Park just before World War I. This went almost entirely unbuilt, however, and between the wars the Bartholomew Plan rationalized land use and urban structure, and positively shaped the city to the present day.

In the 1960s a reform urban council initiated mixed-use, medium-density redevelopment of the south shore of False Creek. Nearby, the federal government also turned formerly industrial Granville Island into a cultural and shopping pleasure zone. These initiatives helped clear the way for then-planning director Ray Spaxman to apply to Central Vancouver some of the ideas of built-form control and mandated mixed-use development he had learned in his native England. Such an interventionist, prescriptive approach to planning and urban design only intensified under current Central Area Planning Director Larry Beasley.

Architecturally, the powers exerted by Spaxman and Beasley in the name of enlightened urbanism may have come at the expense of great individual building designs. The singular exception may be the late 1970s Robson Square development by Arthur Erickson. But while home to little "capital 'A' architecture," the near-downtown neighborhood of the West End did see the construction of many innovative medium- and highrise towers during the 1960s and 70s. Patterns of land assembly and local construction and development conditions also meant many of these had much smaller floor plates than residential towers in eastern Canada or the United States.

Above: The Downtown Vancouver peninsula. In addition to the older West End residential neighborhood, new highrise residential districts are being created along both shores of False Creek. Drawing courtesy of the City of Vancouver, Planning Department.

Facing page: Marshall McLuhan and Woody Allen, *Annie Hall*, 1978

The result today is that Vancouver is different from every other major city in North America outside the Northeast, in that high-density apartment living has been established and popular for an entire generation. Amazingly, Vancouver is both the youngest and highest-density major city on the continent, confounding the pattern of such siblings as Calgary, Phoenix, Tampa or Seattle. The fear of highrise buildings and high residential densities that I heard in San Francisco in December is almost unknown in Vancouver, a city whose residents routinely get by without private automobiles.

By 1973 Vancouver's West End had become Canada's highest-density neighborhood (denser than any in California, and soon to surpass Manhattan). With amenities like the oceanfront and Stanley Park (the largest downtown garden and natural reserve on the continent), it first attracted divorcées and early retirees fleeing the harsher climates of the rest of Canada. Later, it became the epicenter of Canada's loudest and proudest gay community, which in turn fostered a stream of successful politicians who fought for urban amenity and a tolerant social climate.

More recently, the West End has become home to 1990s waves of Eastern European immigrant families. These ex-Sarajevo, ex-Belgrade, ex-Moscow new citizens knew and liked downtown high-rise living — and in the process saved the area's faltering public schools, which were scheduled to close for lack of enrollment.

The downside to such a pattern of development, however, has been the loss of the city's Victorian and Edwardian heritage (an Arts and Crafts house by Pasadena's Greene Brothers was even demolished in the 1960s with scarcely a murmur of protest). Ironically, British Columbia's gutless historical preservation legislation may have paved the way for the high-density "miracle" that is downtown Vancouver.

The Hong Kong Connection

There is another important parentage for the Vancouver downtown revolution. This comes from Asia — Hong Kong in particular. With the influx of refugees from China after the 1949 Communist Revolution, Hong Kong created urban living densities unprecedented in human history. One of these was the notorious Hunghom housing project near the former Kai Tak airport. Hunghom was demolished in the 1980s, but not before Rem Koolhaas and others seized upon it as an example of the hyper-dense

urban condition. One of the most interesting of these writings is Vittorio Lampugnani's 1993 essay "Hong Kong: The Aesthetics of Density."² Meanwhile, architectural culture (books, magazines and academe) took a Eurocentric turn toward classicism, and it is only recently that it has started to investigate urban forms and architectural patterns off the tired L.A.-New York-London-Paris-Berlin-Rome ant rail.

Hong Kong's building regulations evolved precisely to avoid the packing of inhabitants in the block-long high-rises found at Hunghom and other areas. To accomplish this, the British-controlled government evolved a building code that traded the discretionary urban planning controls common in Europe for a quasi-mathematical formula that would be common knowledge among landowners, developers and architects. In some ways the progeny of the 1916 New York building regulations that created the wedding-cake massing of Art Deco towers, the Hong Kong rules created tall, thin towers.

These built-form controls also enforced existing cultural biases. After the "Mid-Levels" of Hong Kong's harbor-side Central sprouted tall, thin residential towers, these were soon copied all over the Crown Colony. To succeed in this market, every new development desired at least a piece of a harbor view. There were no urban design view controls, just a building code. But even a slice of a view to water was thought to be good luck according to still-powerful Cantonese superstitions. Thus, an interest in variety of light and view are the simple human realities behind Hong Kong's, now Vancouver's, preference for tall, thin towers.

The Hong Kong building code of the 1960s may yet prove to be the most influential building regulation in human history, shaping how hundreds of millions of people live on many continents. Yet it is almost totally ignored by urban and architectural historians and critics, who would rather go on writing about Savannah, Bath, Barcelona and Rome.

In Hong Kong, entire architectural firms, like Wong and Ouyang, have built their business out of their ability to extract maximum density out of their city's building codes. Indeed, partner Leslie Ouyang is forthright in describing building code interpretation as the fundamental skill he brought to the firm founded by ambitious modernist designer Jackson Wong, the first Chinese graduate in architecture at Hong Kong University.

The Portal City

With the return of Hong Kong to China planned for 1997, the late 1980s and early 1990s saw competition

Right: Hyper-dense housing on Hong Kong's Kowloon Peninsula. **Below:** Tall, thin apartment towers became the norm after passage of the new Hong Kong building code. Photos by Bill Hocker.



around the Pacific Rim for the city which would receive the bulk of immigrants and investment fleeing the prospect of what was then (at least nominally) a Communist regime. Sydney and Brisbane in Australia, and Honolulu, Los Angeles, San Francisco and Seattle in the United States, all saw new arrivals in this period — but nothing like Vancouver. Since the late 1980s, Vancouver and Toronto have received 200,000 immigrants from Hong Kong and Taiwan between them (nearly as many as all six non-Canadian cities listed above, combined). Just as important, they received \$15 billion in real estate investment. Vancouver is to the Overseas Chinese exactly as Miami is to Latin Americans, a new global phenomenon I have labeled the “portal city.”

Leading this push was industrialist Li Ka Shing. Typical of Hong Kong’s elite in the 1960s and 1970s, Li had his children educated in Canada and take out citizenship here — safety hatches for family and fortunes both. In 1988, Li bought the 240 waterfront acres of Vancouver railway lands that had been used for the Class “B” transportation-themed World’s Fair “EXPO 86.” At the time, the provincial government insisted on selling the entire site as one piece, effectively excluding Canadian and American developers who did not think the site was worth the risk. However, the high cost of environmental cleanup — paid by provincial taxpayers — meant that Li Ka Shing got this spectacular waterside site essentially for free.

Li named the company he formed to develop this package Concord Pacific Developments. Since, the company has built tall, thin towers there that are homes to nearly 30,000 residents. It is these tall, thin towers on Vancouver’s False Creek that are documented in the San Francisco Planning Department’s Transbay and Rincon Hill plans as the appropriate model for that city’s new downtown residences.

Fortuitously, the Concord Pacific developments came on the market at the same time as a huge surge of well-educated Hong-Kongers arrived to live in Vancouver. This Hong Kong cohort knew and liked small apartments in small-plate high rises, and the Concord Pacific prototype was an instant market success. However, Vancouver shares San Francisco’s questionable distinction of having among the highest housing costs on the continent, and soon the condos were being sold to new residents of many backgrounds. In the past few years a large swath of industrial and office-zoned land in adjoining Downtown South and Yaletown was also redesignated for optional highrise residential use.

As a result of these changes, the early 1990s city council, which included Gordon Price, and Central Area Planning



Director Beasley have come under increasing criticism for their decision to re-zone much of the downtown peninsula as “housing optional.” Because higher yields can be extracted from buildings for living than for working, this has led to a situation that might better be described as “housing obligatory,” critics say. Disturbingly, Beasley recently confirmed there is no downtown Vancouver office building under construction or at any stage of planning review or negotiation.

It is worth noting that developers originally resisted new design guidelines for Central Vancouver, marshaling arguments almost identical to those I heard in San Francisco. But today the area has become one of the world’s most desirable residential districts, its neighborhoods developing-out fast into forests of residential towers. Indeed, many now worry the downtown peninsula has become a splendid “resort” in danger of losing conventional business and commercial functions to competing suburbs and other cities — a worry many American cities with empty cores would love to have.

“Very False Creek”

The Vancouver prototype is now spreading rapidly around the world. In the United States, Vancouver developers and their architects using the Hong Kong/Concord Pacific prototype now lead the highrise housing market in Seattle, Bellevue (WA), and San Diego. A whole generation of Vancouver architects, planners and developers (myself included) is exporting our expertise around the Pacific Rim and to such more distant locales as Tehran and Bombay.

A full-scale replica of Vancouver’s False Creek is today even being carved out of the desert sands outside of Dubai in the United Arab Emirates. Having walked the seawall on visits to British Columbia, the Sultan of Dubai and senior hereditary princes adopted Concord Pacific as a model for a massive development near their Burj Al-Arabe,



the world's most expensive hotel — the famous high-tech tower in the shape of a Persian Gulf dhow. Today, the first of a planned \$2 billion worth of housing has been completed here, a series of thin towers on podium bases set beside an artificial body of water shaped to evoke Vancouver's inner harbor. The whole complex is a strange monument to globalism: "Vancouver al-Arabe."

San Franciscans are only slightly behind the Sultan of Dubai in their current obsession with Vancouver. San Francisco Chronicle urban design reporter John King has written of his city's "Cult of Vancouver," with Vancouver solutions currently on offer for every urban need. In North America the popularity of the Vancouver model has recently been given a tremendous boost by the promotional efforts of former City Councilor Price and planner Beasley.

Meanwhile, the small-plate Hong Kong prototype has spread all over Southeast Asia, where Overseas Chinese communities have embraced it enthusiastically. Thus, the hills surrounding Georgetown in Penang, Malaysia, are sprouting a new layer of high rises, like mushrooms after a tropical rain. A simplified version of all this is also the

urban housing prototype of choice in China, where one hundred cities of five million people will be needed in the next decade to attain the same rate of urbanization as Europe. Already, Shanghai has seen an astonishing building boom of tall, thin towers, which owe their forms to the Hong Kong codes.

A good argument can be made that the Hong Kong/Vancouver high-density revolution is the true "New Urbanism." It is already shaping the way more people live than any variation on early-twentieth-century American suburbia. Of course, the Vancouver model lacks the keen public relations touch of the other, more media-centric New Urbanism. But that may come. Within a matter of years, the Vancouver urban prototype will save more energy, house more people, and make finer urban neighborhoods than all the overhyped neo-nineteenth-century projects combined. Vancouver is the portal through which the twenty-first-century city is being conceived, for good, and sometimes, for ill.

Notes

1. On the academic front, 2003 did see the first book to document Vancouver's policy (if not architectural and urban design) innovations. This is John Punter's excellent introduction, *The Vancouver Achievement* (UBC Press).
2. In Vittorio Lampugnani, *The Aesthetics of Density* (Munich: Prestel Verlag, 1993), based on an exhibition of the same name at the Deutsches Architektur Museum.

Left: Vancouver's False Creek North residential area. Photo courtesy of the City of Vancouver, Planning Department.

Above: "False False Creek": The Vancouver model, re-created in the United Arab Emirates. Photo courtesy of author.





Taj Heritage Corridor: Intersections between History and Culture on the Yamuna Riverfront

Terence Harkness and Amita Sinha

Present-day Agra's fame rests entirely upon the presence of the Taj Mahal. However, the city is also home to a rich collection of lesser-known and seldom-visited Mughal monuments, many of which are situated on the Yamuna riverfront within a relatively short distance of each other. How this riverfront landscape became the locus of such an astounding cultural heritage is a story that is rarely presented to those who visit the area to see the magnificent Taj. Yet, given the high volume of international and domestic tourism focused on the Taj and the Indian government's interest in expanding this to include other nearby heritage sites, close examination of this landscape and the dynamics of its contemporary use is essential to future preservation efforts.

Historically, the sixteenth- and seventeenth-century Yamuna riverfront in Agra was the private landscape of royalty and nobility, constituted by pleasure, palace, and tomb gardens lining both banks. Vision and movement within the gardens were carefully controlled for an orchestrated experience of the river. However, over the next four hundred years, as the Mughal dynasty declined and was replaced by British colonial rule and the modern Indian state, the historic riverfront gardens gave way to a vernacular landscape of farm fields, orchards and nurseries, with shrines and temples at the river's edge. Today, of the forty-four gardens shown on an eighteenth-century map in Sawai Jai Singh Museum in Jaipur, only five remain. These are the modified gardens of the Taj Mahal, Agra Fort, Itmad-ud-daulah's tomb, Chini Ka Rauza, and Ram Bagh. In addition, Mahtab Bagh, the pleasure garden opposite the Taj Mahal, was excavated in 1996 by the Smithsonian Institution and the Archaeological Survey of India, and efforts are underway to restore it.

Amid growing concern that environmental pollution from the modern town of Agra had the potential of harming the world's most beautiful mausoleum, in 1994 the Supreme Court of India ordered the shutdown of polluting industries there, regulated development within 500 meters of heritage structures (including a 100-m. no-build zone), and asked the Ministry of Environment and Forests to plant a greenbelt around the Taj Mahal. In its Agra Heritage Project report in the same year, the U.S. National Park Service also outlined the concept of a Taj National Park on the eastern bank of the Yamuna river, across from the Taj, which would encompass the remains of Mahtab Bagh and farmland occupied by three hamlets.

More recently, in 2003, the state government of Uttar Pradesh began implementing its own plans for a Taj Heritage Corridor, which it envisaged as reclaiming land from the river between the Taj Mahal and Agra Fort for

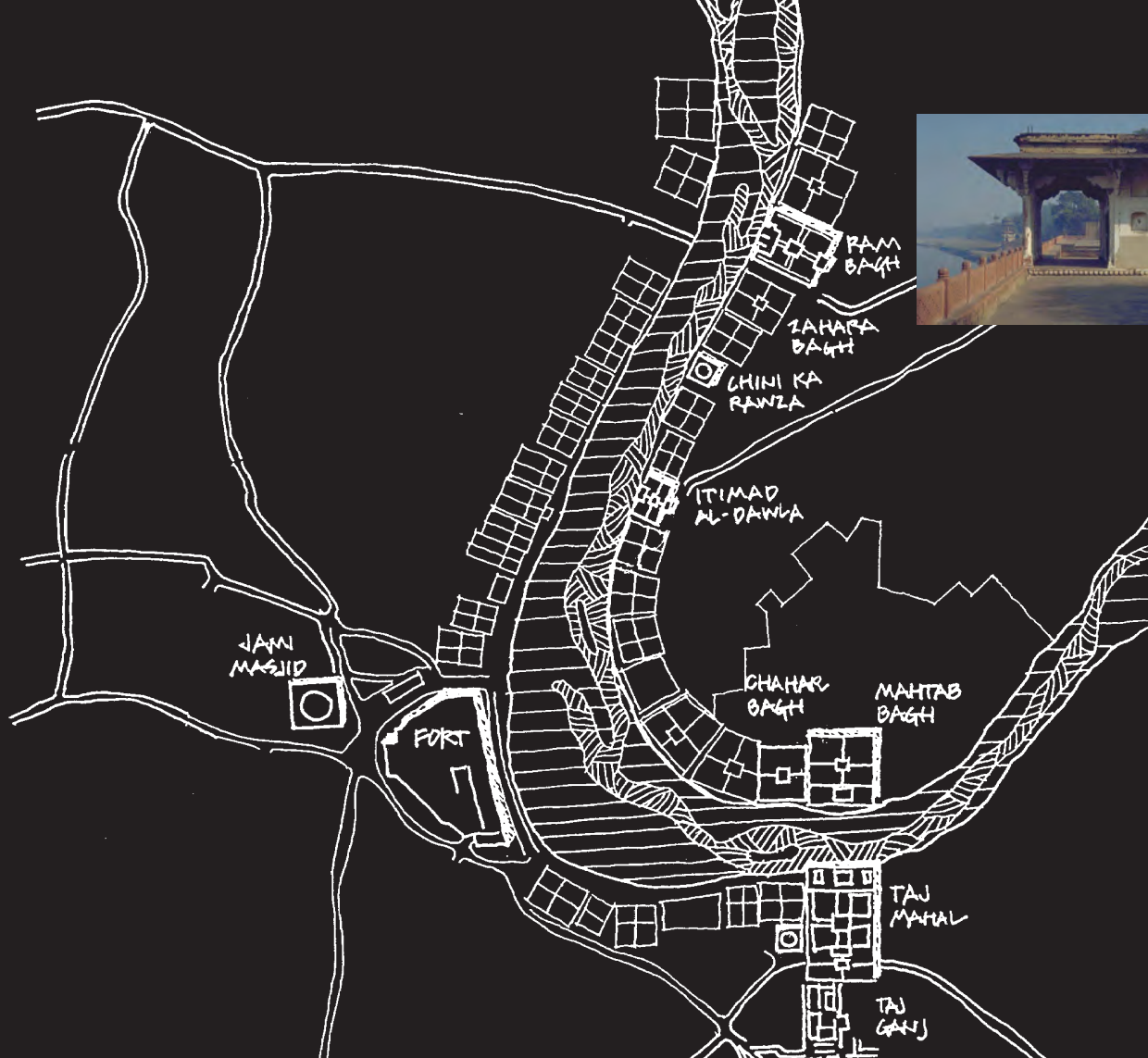
new shops and an amusement complex. However, this was done without conducting an environmental assessment or making the plan public, and the media raised a massive hue and cry, causing the project to be stalled and an inquiry ordered.¹ This project eventually proved extremely controversial, raising fears of excessive commercialization, blocked views of the Taj from Agra Fort, and flooding of Mahtab Bagh.

Though the extensive media coverage of that debacle has succeeded in raising public awareness, it has not included constructive debate on the possible course of action that would make the riverfront accessible to both citizens of Agra and tourists and create an appropriate greenbelt around the Taj.

The Historic Yamuna Riverfront

The Yamuna riverfront in Agra was first described in the memoirs of the founder of the Mughal dynasty on the Indian subcontinent, Babur, who had spent his life in Central Asia and Afghanistan before conquering Northern India in 1526 CE. Disliking the heat and dust of the plains of North India, he created garden enclaves for himself that were a refuge from the chaos and disorder of the surrounding landscape. His nostalgia for Kabul and the many gardens he had built there to enjoy a prospect, take advantage of a running stream, and sloping terrain, was a powerful enough reminder for him to search for sites in Hindustan where he could retreat from a culture and populace he did not understand or appreciate and a climate he found intolerable.² Residing in Agra, he chose to build gardens on the eastern bank of the Yamuna river, across from the Lodhi citadel on the opposite bank.

Though there are no extant gardens or buildings of his time in Agra, Ram Bagh gives us a clue to what a pleasure garden of Babur would have been like — terraced four-square garden plots, rising in levels to an elevated waterfront. Channels and tanks with island platforms brought water into the garden, while the river views and cooling breezes were enjoyed from the waterfront terrace. Vegetation and water were both tamed into rich formal patterns, creating an ordered landscape that Babur felt home in. His favorite was Bagh-I-Zar-Afshan, named after a river in Ferghana, Uzbekistan, where he had spent his childhood. More than one garden was built by Babur and his noblemen on the east bank, causing it to be popularly known as "Kabul," which pleased him, pining as he was for the delicious fruits, salubrious climate, and mountainous terrain of Afghanistan. Babur was temporarily buried in one of the gardens before his remains were transferred to a garden site in Kabul nearly a decade after his death.



Babur's garden legacy was well cultivated by his descendants, who continued to build on the Yamuna riverfront in Agra. His son Humayun possessed the imagination to build a garden on barges floating in the river. A garden with astrological connotations with octagonal halls and a two-storied stepwell was built on the eastern bank.³ The fort, constructed on the ruins of the earlier Lodhi fort on the west bank by his grandson Akbar, contained palace gardens. His great-grandson Jahangir's wife, the formidable Nurjahan, rebuilt Ram Bagh and constructed the tomb garden for her father, Itmad-ud-daulah, on the east bank. The riverfront garden tradition evolved over a century and culminated in the incomparable Taj Mahal, built by the great-great-grandson of Babur, Shahjahan. The gardens represented a mix — from suburban retreat, to palace grounds, to settings for monumental tombs. They were associated with a variety of functions, yet in their design treatment they showed remarkably faithful adherence to the riverfront garden prototype established by Babur.⁴

The Mughal riverfront garden in Agra (as in Lahore and Delhi) responded to its context both in its siting within the landscape and in its internal layout and architecture. The traditional *charbagh*, with its quadripartite design scheme, was oriented toward the river instead of a cardinal directions. At its far end, above the floodplain, was built a

terrace overlooking the flowing river and capturing its cooling breezes. Deep wells were dug for water, which was lifted by the Persian wheel system into overhead cisterns and supplied to the tanks and channels. Proximity to the river was thus essential to ensure the water supply. But one suspects that equally if not more important was the pleasing prospect afforded by the curving river lined by sandstone and marble pavilions and mausoleums.

Of the visual relationships established by the siting of waterfront gardens, perhaps the most important was the system of visual axes that linked Taj Mahal and Mahtab Bagh with each other and with the river. Located strategically across the river where it bends sharply southward, the two gardens mirrored each other, situating the Taj Mahal in the midst of a vast *charbagh* complex, through which the river ran.⁵ The visions of the Taj multiplied in its many reflections in the river, and in the fountains and tanks of its garden and those of Mahtab Bagh. Eventually, sightlines to the Taj were also a solace to the Emperor Shahjahan as he lay dying, imprisoned by his son within the confines of the Agra Fort. And by the seventeenth century the riverfront visual corridor would have been punctuated by an

Above: Diagram of Yamuna river with Mughal monuments.

Inset: Ram Bagh pavilion on the terrace overlooking the Yamuna river.



these structures acquired enormous symbolic significance by virtue of their synonymy with the personhood of a royal figure — for example, the Taj Mahal was perceived as an embodiment of Mumtaz Mahal. The royal balcony (Jharoka-I-Darshan) in the palace within the fort — Muthamman Burj — framed the emperor as he appeared thrice a day for *darshan* (viewing) by the general populace gathered below on the *maidan* (flat grounds) by the river.

The river was also a corridor of movement both at local and regional scale. Gardens were visited by the Mughal emperors and their families by boat, certainly a more pleasant experience than traversing the torturous urban lanes and entering from the landward side. Shahjahan took a boat from the Agra Fort to visit Mumtaz Mahal's tomb in an underground crypt in the Taj Mahal, entering through an arcade in the great terrace below the mausoleum. Pleasure gardens such as Zahara Bagh and Mahtab Bagh had flights of steps from their riverfront terraces leading down to the water.⁶

Garden design responded to the river in a manner significant enough for it to be shaped by the landscape setting. Vision and movement within the garden were carefully controlled to orchestrate an experience of water flowing in channels and gently cascading from one level to the next. Tanks brimming with water punctuated shaded walks which divided the garden into plots filled with fragrant flowers and sweetly blossoming fruit trees. The walled garden was a sensual retreat from the teeming streets, heat and aridity of the plains, and the dust storms of the neighboring desert in Rajasthan. The garden entry

and threshold were framed in an imposing gateway, which itself framed the main axis leading to a architectural feature — pavilion or tomb — placed at the center or at the far end. The river was framed by an elevated terrace, its sight the climax of longitudinal movement within the garden. Terrace pavilions and their projecting balconies provided panoramic vistas of not only the river but also distinct landmarks such as the Taj. Corner towers surmounted by *chattris* (domed kiosks) gave elevated views of the landscape.

The Yamuna riverfront in Agra was a private enclave of the Mughal royalty and nobility. The shape of its landscape originated in a nostalgic image of the gardens of Afghanistan and Central Asia, evolved under influence of the design aesthetic of the Persian court. Though it assimilated some design features of the native Hindu architecture, it projected an image alien to prevailing cultural landscapes of nearby Mathura and Vrindavan and the more distant Varanasi with their *ghats* and temple spires. The Yamuna riverfront and its splendid tombs, palaces, and gardens were a gift of Mughals to the land they conquered and finally adopted as their own. Built with the incessant toil of native workers and artisans, it at the same time excluded them from using the river as a common public good, and as a sacred landscape.

Above: Plan of a proposed Taj Mahal Cultural Heritage District. Agra Fort is at the top. The Taj and its gardens are towards the bottom left, with the Mahtab Bagh directly across the river. Other historic garden sites extend around the river bend, ending with the Ram Bagh at the right.

Facing page: Children playing on the floodplain below Taj Mahal.



Contemporary Yamuna Riverfront

Four centuries after the demise of the Mughal empire, its best known architectural legacy — the Taj Mahal — has become a symbol of India that tourists flock to.⁷ However, as a tourist destination, the Taj is cut off from the surrounding landscape and is physically disconnected from the surviving Mughal monuments on the riverfront. Of the pleasure gardens, only Ram Bagh remains to any significant extent. And the vegetation in the gardens of the Taj and Itmad-ud-daulah, and Agra Fort reflects the colonial aesthetic more than anything else, giving them a carefully manicured look. The famed moonlight garden or Mahtab Bagh from where the Taj could be viewed in all its glory has only recently been excavated. Other monuments such as Chini Ka Rauza and Humayun's mosque remain neglected and off the beaten track.

Over time, the historic riverfront of *charbagh* gardens gave way to the vernacular landscape of rural communities on the eastern bank and to a gritty urban edge north of Agra Fort on the western bank. Instead of delicate marble pavilions and red sandstone *chattris*, small shrines have sprung up, attesting to local faith and initiative. Some have *ghats* (steps) leading down to the river, but more often than not dirt tracks are used by animals and humans alike to get down to the water. Farming is done in stretches right up to

the river's edge and also seasonally on the floodplain, precluding any other use. The floodplain also acts as a *maidan*, a kind of commons for local communities, where children play cricket and fly kites.

On the western bank are signs of concerted efforts by a number of public organizations such as the Archaeological Survey of India, the Agra Development Authority, and the Forestry Department to create a public landscape of gardens, nature walks, nurseries, and parks. To the east of the Taj Mahal, nature trails lead to high points in a hilly landscape, from where direct views of the Taj can be obtained. Shahjahan Park was built as a famine-relief public-works undertaking in the late nineteenth century. In addition, a dilapidated linear park graces the river's edge along Agra Fort and to its north. Less used as a park and more as a means to get to the floodplain by the local residents, its edge is dotted with shrines and makeshift structures. In between the carefully maintained green areas surrounding the Taj are vernacular landscapes of a Hindu temple, cremation site, and nurseries.

Today, this entire public landscape is fragmented, with no means of getting from one park to another, and no deliberate connection with the river. Though the Taj nature trail is becoming popular for its free views of the Taj, Shahjahan Park lies deserted, fenced from the teeming



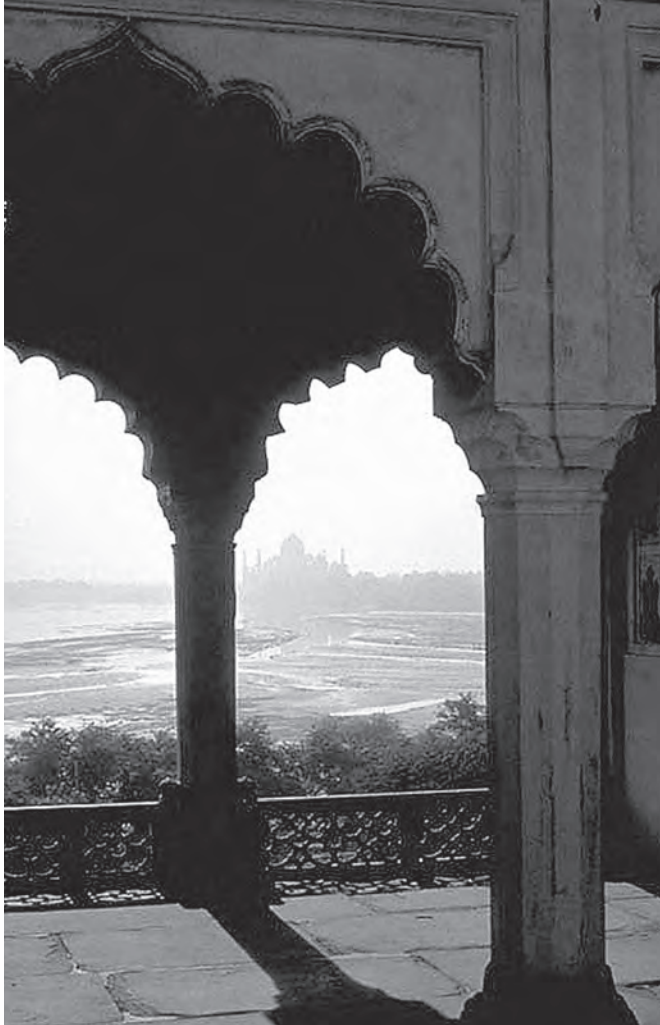
street life of the city. And neither opens onto the river, as does the cremation site and temple *ghats* next to the Taj.

The problem today, then, is that the Yamuna riverfront is open for local but not truly public use. Villagers and urban residents may get to the riverbank and floodplain for their myriad activities, none of which involve the protected heritage sites. But visitors to the monuments are afforded little experience of the surrounding landscape. The *nalas* (stormwater drains) from the city emptying into the river, private farm landholdings, and lack of accessway on the uneven topography make it difficult, if not impossible, to traverse the riverfront corridor, as the Mughals once did in their boats. The historic monuments have thus become islands, representing vestiges of history cut off from the urban life around them. Restricted movement leads to restricted views and isolated experiences of the Taj, Agra Fort, and Itmad-ud-daulah's tomb. The immediacy of the river is lost until one elevates to a viewpoint over the river, or goes down onto its floodway. The Yamuna is no longer used as a public or recreational corridor of movement. And perhaps the greatest loss of all has been in views of Taj: as it is reflected in the waters of the Yamuna and in the fountains of Mahtab Bagh; as it appears in diagonal perspectives that reveal its perfect composition of volumetric masses; and as it changes colors with times of day and the seasons.

A Design for the Future

The Yamuna riverfront is home to two World Heritage Monuments — the Taj Mahal and Agra Fort. As mentioned already, growing concern about environmental pollution and public-interest litigation led the Indian Supreme Court to direct that the marble mausoleum be surrounded with a greenbelt. The state tourism department has also sought design direction for a future Taj National Park. This would be located across the Yamuna from the Taj, surrounding the recently excavated Mahtab Bagh. Since the historic gardens have vanished completely, the 360-acre site is mostly farmland and some orchards also occupied by three hamlets supporting a population of 12,000. Nevertheless, some of the loveliest views of the Taj can be seen from here — the rectilinear geometry of the monumental mausoleum and the vernacular farmland complementing each other.

However, a future Taj National Park could be only one segment of a larger riverfront landscape, one that might serve a common public good, accessible to all, rather than one that is taken over by private hotels selling Taj views to the affluent. But should such a public landscape be a recreation of the past, or a transformed version necessitated by contemporary realities? And, even if the historic landscape could be successfully re-created (which is doubtful



given that historic garden sites are now inhabited), how can it be made open and inviting to the public at large, to recapture the sense of the historic past and the potential of its future?

This very issue was studied in 2000 by a team of faculty and students from the Department of Landscape Architecture, University of Illinois at Urbana Champaign, at the invitation of Uttar Pradesh Tourism Department. Among other things, members of that team prepared a design report outlining plans for a Taj Mahal Cultural Heritage District that would link the area's two World Heritage Sites — the Taj and Agra Fort — as well as other heritage structures on the banks of Yamuna within a green landscape of parks, orchards, and gardens. The premises of this plan remain relevant today, since it drew both on what we know about the historical gardens and on site readings of the present-day landscape.

Management of World Heritage sites entails visitor accessibility as well as conservation. In this regard, while attention has been paid recently to the impact of pollution on the Taj, accessibility and viewshed protection have not received equal attention. This is one reason why the work

by the University of Illinois espoused a model of conservation based on an acknowledgement of the heritage value of the present-day cultural landscape. Such a view expands beyond the “monument-centered” approach followed by the Archaeological Survey of India, itself a legacy of the colonial era, that confines preservation and restoration to historic buildings. One legacy of this older approach has been to neglect and ultimately destroy significant relationships between the buildings and landscape, indoors and outdoors. Thus, even though the Taj and other monuments in historic Agra were walled from the city, they were open to the river and commanded viewsheds that added greatly to their experience. Shorn of their dialogue with each other and the river, today much of their significance has been lost.

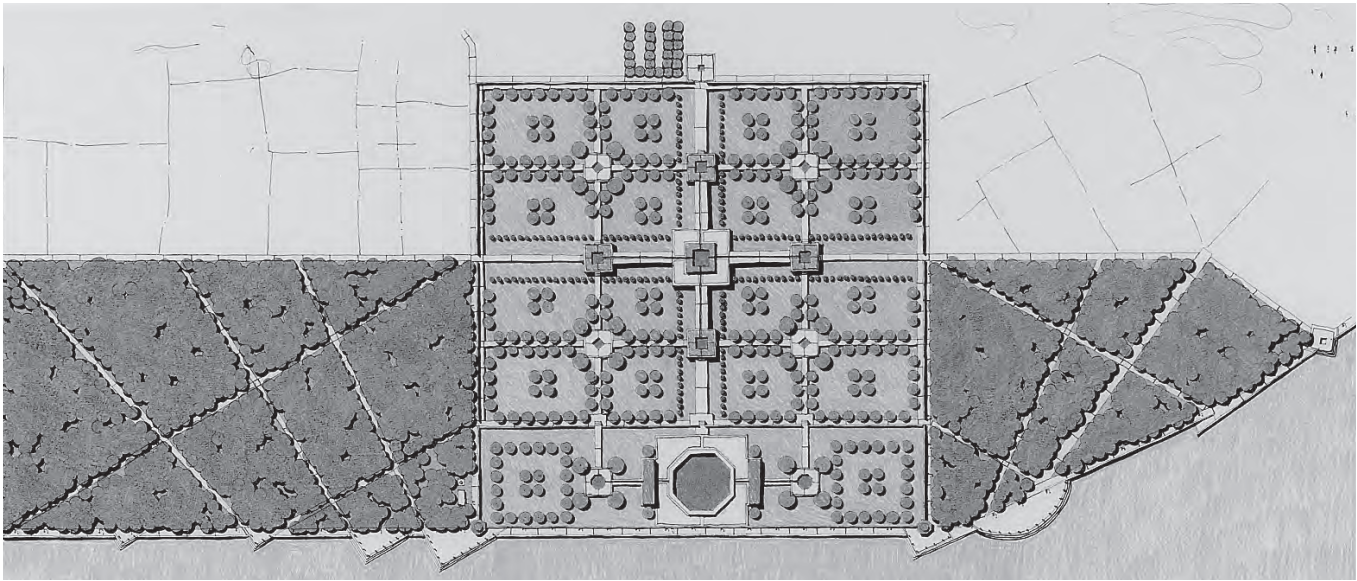
The Taj Mahal is one of the most visited buildings in the world, with most tourists (50 percent international and 64 percent domestic) arriving in Agra in the morning and departing by nightfall. In 1994, 2.1 million people visited the Taj, whereas Itmad-ud-daulah's tomb received fewer than 39,000 visitors. The undervisitation of other nearby historic sites stems from a lack of knowledge of their existence and whereabouts, compounded by accessibility problems. The University of Illinois study estimated that visiting the Taj Mahal alone can take a minimum of two hours — or four hours, if combined with Agra Fort. But this visitation could be stretched to twelve hours if other riverfront monuments were on the visitor's itinerary.

While protection of the World Heritage sites are a paramount concern, our proposal therefore aimed to extend the visitor's experience to include the area's rich context. Its main feature would be a movement promenade that would link the remaining historic sites and bring the riverfront landscape into the civic realm. The promenade would be the central spine of a Taj Cultural Heritage District ensuring legal and administrative protection and public access.⁸ This district would not only encompass all the heritage sites on the riverbank, but also green spaces between and around them — including parks, nature trails, nurseries, and protected farmland. A pedestrian way along the riverfront would connect the multiple heritage sites and extend visitor movement through the careful use of edge and floodway. It would link the city's existing circulation system (which is confusing and tortuous to navigate if one wishes to visit the heritage sites) with the path of the visitor arriving at the edge of the historic district, thus diversifying, reorienting, and distributing access in more congenial surroundings.

Our investigations concluded that the location of this new primary path should be determined by the riverside

Facing page: The Taj Mahal from Mahtab Bagh site.

Above: The Taj Mahal from Muthamman Burj in Agra Fort.



land forms. Indeed, it could largely be built on the well-trodden path along the river embankment. Here it would give access to the river below and heritage sites above, and would also connect the existing public open-space system to the river. This path would allow an extended perceptual experience of the landscape in time, which would provide a meaningful experience for the visitor, allowing for richer and deeper associations to be made. These might include the composition of a compelling cultural narrative about the relationship of historic buildings to the river; the contemporary vernacular landscape of farms, orchards, and nurseries; and the enduring cultural practices of worship and daily use of the river. It would allow the river corridor, until now a void for the Agra citizen and the tourist alike, to become a civic landscape of participation.

This corridor would also provide the same landscape frame developed for the sixteenth- and seventeenth-century city of riverfront gardens. Views of mausoleums and palace pavilions would thus be restored and unfold in a dynamic experience in time. At least sixteen unique and spectacular views of the Taj would entice visitors along the path of movement, each revealing a different facet of the world-famous building. Different from the views one is conditioned to see from picture postcards, these might reveal the mystery and the grandeur of Taj against a changing sky, floating above the waters, and silhouetted against the fields.

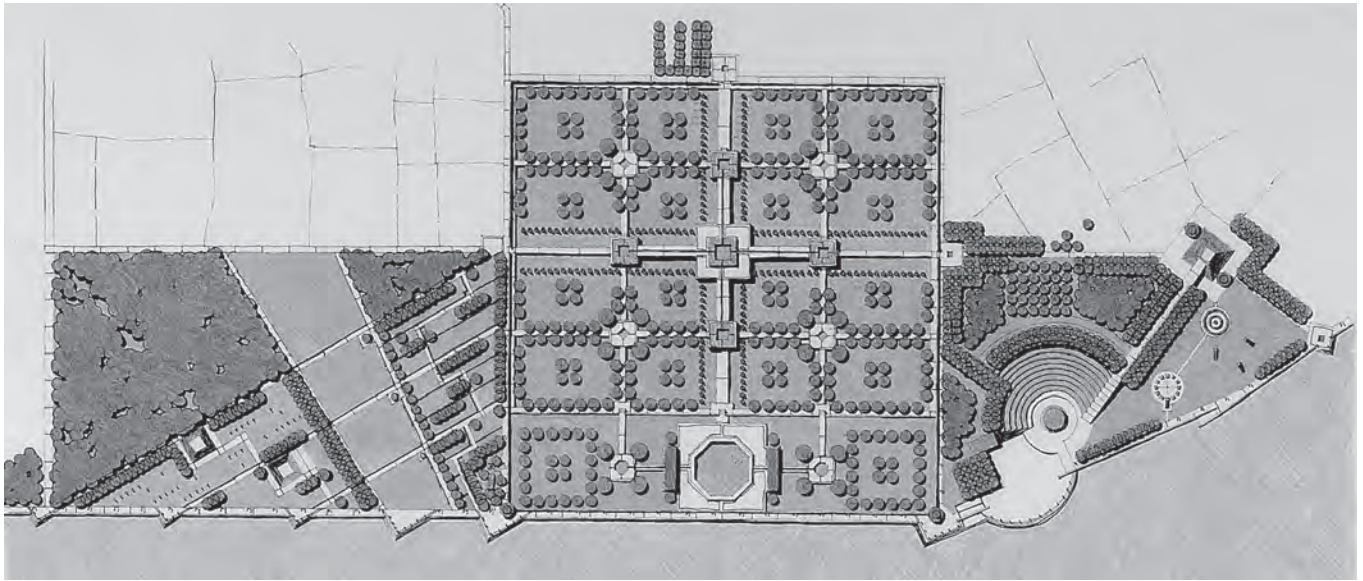
We believe present-day local use of the river and the future of those living in the hamlets and small urban

communities on the eastern bank will not be jeopardized by such a Cultural Heritage District. The promenade, located below the adjacent private land and above the floodplain, with its ramps (for animals) and ghats would create actually improve access to the river for the villagers. And they would have an opportunity to participate in the tourist economy (if they so desire) as boatmen, caretakers of orchards and public gardens, and makers of arts and crafts displayed in the arrival centers.

The design response of linking both within and without and beyond to the larger riverfront setting was also a siting strategy used by the Mughals. This has inspired our proposed open-space system of walkways, plazas, gardens, and parks, and the location of three arrival centers along the promenade, from which arresting views of the Taj would bring a new dimension to the visitor's experience. In the minimum development proposal, paths oriented to the view of the Taj would be designed through mango and guava groves east and west of the restored Mahtab Bagh. In the maximum development scenario, a *charbagh* water garden would be designed west of Mahtab Bagh. Its channels and pools would fill with water during the monsoons, when the river rises and floods. And a second garden, east of Mahtab Bagh, would be designed as a place for gathering and include an earth-mound amphitheater offering a breathtaking Taj backdrop for performances.

Left: Plan of Mahtab Bagh gardens showing minimum development alternative.

Right: Plan of Mahtab Bagh gardens showing maximum development alternative.



This plan provides an opportunity to knit the existing and proposed open space system for a magnificent presence of Mughal heritage in the contemporary landscape without ignoring the present site realities. It would refocus public attention on the historic river corridor, bringing to attention issues of degraded water quality and sewage runoff from the city and the urgent need for enhanced public sanitation. From being a truck farm, buffalo wander, and open sewer, the river might once again be cleaned and become navigable, as it was historically.

The visitor could walk along the river in a shaded promenade, from where she could visit heritage sites, go off on a trail through orchards, take a boat to cross the river, and make use of rest facilities in the strategically placed arrival centers. The visual experience as one moves from the city to the riverfront promenade culminates in the restored Mahtab Bagh or the moonlight garden, where the glowing marble mausoleum can be seen at nighttime, shimmering in the dark waters of the Yamuna.

Acknowledgements

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Notes

1. The work was undertaken by National Project Construction Corporation, New Delhi, without getting clearance from Archaeological Survey of India, Central Pol-

lution Control Board, Central Water Commission, or the Ministry of Environments and Forests. It was stopped by the Central Government on grounds of violation of Ancient Monuments and Archaeological and Remains Act and World Heritage Monuments protection and conservation norms as reported in *The Times of India*, New Delhi reports from June 15 to July 9.

2. James Wescoat, Jr., "Landscapes of Conquest and Transformation: Lessons from the Earliest Mughal Gardens in India, 1526-1530," in *Landscape Journal*, Vol. 10, No. 2, (Fall 1991) pp. 105-13.

3. James Wescoat, Jr., "Gardens of Invention and Exile: The Precarious Context of Mughal Garden Design During the Reign of Humayun (1530-1556)," in *Journal of Garden History*, Vol. 10, No. 2 (1990), pp. 106-16.

4. Ebba Koch, "The Mughal Waterfront Garden," in Attilio Petruccioli, ed., *Gardens in the Time of Great Muslim Empires* (Brill, 1997) pp. 140-60.

5. Elizabeth Moynihan, ed., *The Moonlight Garden—New Discoveries at the Taj Mahal* (Seattle: University of Washington Press, 2000).

6. Ebba Koch, "The Zahara Bagh (Bagh-I-Jahanara) at Agra," *Environmental Design—The Garden as a City, The City as a Garden*, Vol. 2., 1986, pp. 30-37.

7. Pratapaditya Pal et al., *Romance of the Taj Mahal* (Thames and Hudson, 1997).

8. Taj Mahal Cultural Heritage District: Development Plan, Department of Landscape Architecture, University of Illinois at Urbana Champaign, 2000.

All illustrations are by the authors.

Rethinking Public Housing

Robert Fishman

In the history of urban design as it is currently taught, the story of the American low-rent public housing program can be neatly encompassed in a pair of images. On the left we would see, rising up, Le Corbusier's 1925 Plan Voisin for Paris — that great shock image of twentieth-century urbanism, the ultimate urban-renewal project. The Plan Voisin not only called for the demolition of the historic core of Paris and its replacement by highrise towers-in-the-park, but it announced modernism's ruthless attitude toward the past and its demand for a revolutionary redesign of the city.¹

On the right, we would see, crashing down, one of Minoru Yamasaki's Pruitt-Igoe highrise public-housing towers in St. Louis, demolished in 1972 after they had become uninhabitable. With brute finality, the Pruitt-Igoe demolition seemed to mark both the bankruptcy of an important program of social transformation through modernist design, and, by implication, the return to traditional patterns of urbanism. Charles Jencks used the precise hour of the first explosion to announce that "modern architecture died in St. Louis, Missouri, on July 15, 1972, at 9:32 p.m. ..."²

The contrast between the two images seems overpoweringly convincing — but so too, in their day, did the contrast between the dark, claustrophobic slum and Le Corbusier's light-filled Radiant City. Any such rhetoric of images can be dangerous, however, and one need only consider how the current narrative of public housing's demise is rarely complicated by images that might undermine or contradict it. Nevertheless, one does not have to look far to see, for example, how many modernist-era housing projects were, in fact, modest, lowrise "garden-apartments."

Below: Le Corbusier, Plan Voisin (1925).

Right: Destruction of Pruitt-Igoe Houses, St. Louis. Images from Peter Blake, *Form Follows Fiasco*. See note 3.



Despite their human scale, these lowrise projects have often suffered as much abandonment as the guilty highrises — although, with their superblocks covering the old urban grid, they could be dismissed as milder versions of modernist anti-urbanism.

More disturbing to conventional wisdom is "when bad things happen to good neighborhoods," i.e., the fate of those core neighborhoods that embodied many of the principles either of Jane Jacobs's work or the New Urbanism, but which suffered abandonment as devastating as the highrise projects. I think especially of neighborhoods in Camden, New Jersey, where I used to teach. These once boasted a varied housing stock (much of good quality), a



mix of uses, pedestrian scale and local shopping districts, good mass-transit links, gridded streets and alleyways, and even porches! Such neighborhoods could indeed have served as models for New Urbanist developments today — if they had survived. Too often, however, such areas are so devastated that it is difficult to remember a neighborhood once thrived there. Sometimes these abandoned neighborhood sites even merge with partially demolished public housing sites to form a kind of common graveyard of urbanisms.

The Incomes Crisis

In this article, I do not wish to challenge the conventional wisdom that the public-housing towers were bad design, still less to deny that the traditional neighborhoods often embodied a far superior urbanism. But I do wish to challenge the presumed central responsibility of modernist design for the failure of low-rent public housing.³ Clearly, if the towers and the neighborhoods were suffering a similar fate, there were massive destructive forces at work that overwhelmed what might ordinarily have been significant design differences. To employ a metaphor: ordinarily, it makes a great deal of difference whether a swimmer venturing out into the surf is a novice or an Olympic medalist. But if both are unlucky enough to be caught in a rip tide, both will be equally and inevitably carried out to sea.

As I will argue, a tide of destruction ripped through our inner cities, devastating good, bad, and indifferent urban design. However different the rowhouse neighborhood and the highrise tower might have been in design and ownership, they wound up falling victim to essentially similar causes. Indeed, I would argue further that, insofar as design issues mattered, they were not the great issues of modernism versus traditional urbanism, but such factors as the differing maintenance costs for towers versus lowrise, and the availability of units with more than two bedrooms.

What then was this rip tide of urban destruction? As usual, the beginning of wisdom on this, and perhaps all urban topics, can be found in Jane Jacobs's *Death and Life of Great American Cities* (1961) — in particular, her prophetic chapter "Subsidizing Dwellings." Here she asserts that the "housing crisis" was in reality an "incomes crisis." Where housing reformers had asserted that the problem was a housing industry so mired in profiteering, inefficient building methods, and obsolete design that it could never produce decent housing for a significant proportion of city dwellers, Jacobs states that "ordinary housing needs can be provided for almost anybody by private enterprise." What is peculiar about those who lack decent housing is "merely that they cannot pay for it."⁴

Jacobs went on to suggest a radical change in housing policy which I will discuss below. But, however prophetic her policy prescriptions would prove to be, she was in 1961 less aware that, in the 1950s and 1960s, this category of "those who cannot pay" was rising steeply in the urban centers. Poverty, to be sure, was nothing new; what was new was the increasing isolation of the black urban poor from the prosperity that was lifting the rest of society. This latter development was well outlined in an important document less frequently cited in academic circles than Jacobs's book: the "Moynihan Report" of 1965. Daniel Patrick Moynihan and his colleagues in the Labor Department documented the "incomes crisis" in the inner city, emphasizing the way black male unemployment and underemployment were separating the black experience from the rest of the prospering metropolis. As their report asserted, "the fundamental, overwhelming fact is that Negro unemployment, with the exception of a few years during World War II and the Korean War, has continued at disaster levels for 35 years."⁵ These levels (which sadly have continued to our time), consistently two to three times that of white unemployment, were steadily undermining the black family and leading to family breakup and female-headed households dependent on welfare. The report further observed,

*... our study has produced some clear indications that the situation may indeed have begun to feed on itself. It may be noted, for example, that for most of the post-war period male Negro unemployment and the number of new AFDC [welfare] cases rose and fell together as if connected by a chain . . . In 1962, however, for the first time, unemployment declined, but the number of new AFDC cases rose. In 1963 this happened a second time. In 1964 a third. The possible implications of these and other data are serious . . ."*⁶

"Terms of Trade"

One such "implication" surely involved housing. Economists speak of the shifting "terms of trade" among nations — the relative buying power of, say, a developing country to purchase with its local commodities the manufactured products of the West. By analogy, one might state that the "terms of trade" for purchasing housing shifted decisively against the inner city in the 1950s and 1960s. Ironically, it was the upgrading of even the worst urban housing so that it now included indoor plumbing, hot water, central heating, gas and electric appliances that rendered the situation critical. Families in the inner city had to purchase with their uncertain and diminishing income the increasingly expensive services provided by the skilled workers who were now indispensable to housing



Top: Abandoned garden-apartment public housing, Claremont Homes, Baltimore, 2003. Photo by author.

Middle: Abandoned mixed-use housing, Camden, New Jersey. Photo by author.

Bottom: Brownfields neighborhood, Camden, New Jersey. Photo by author.

maintenance — whether in the private or public sector.

One can easily see how this “income crisis” would devastate private rental housing directly dependent on residents’ ability to pay “economic” rents, i.e., rents that at least cover basic costs. (I will return to private rental housing later.) What is not obvious at all is why public housing was equally vulnerable to this crisis. After all, public housing was heavily subsidized, precisely to compensate for the low income of its tenants. Here, one might believe, the failures were due to design rather than economics.

In fact, low-rent public housing had from its inception what I would argue was a fatal flaw. As specified in the 1937 Wagner-Steagall Housing Act and reaffirmed in the landmark 1949 Housing Act, the federal government met all the capital costs of low-rent housing projects, including land acquisition and construction. But the local housing authority, which owned and administered each project, was responsible for meeting all the day-to-day maintenance costs out of the rents paid by the tenants.⁷

This division of responsibility made good sense in 1937, and even as late as 1949. As Michael Katz has shown, twentieth-century welfare programs tended to preserve the nineteenth-century distinction between the “deserving” and “undeserving” poor, and public housing was initially aimed directly at the former.⁸ The target tenants were working families with steady incomes and few children. The inefficiencies and profiteering of the private sector, it was believed, had deprived many of these families of the opportunity for decent housing; but the nonprofit public sector, utilizing better planning and building techniques, could provide affordable housing that would be a shining example to the private sector. Since these families would earn incomes more or less comparable to the workers who built and maintained public housing, the “terms of trade” would be equitable: there would be no question of a growing gap between expenses and the tenants’ ability to pay a rent that would cover those expenses.

This strategy, unfortunately, proved less and less appropriate during the course of the 1950s and 1960s. Increasingly, public-housing tenants were stranded in the low-wage, intermittent-employment or welfare sectors of the economy, while construction workers and even the lowest-paid employees of a housing authority enjoyed steady work at rising pay. The generous federal subsidies for land acquisition and construction induced a “cost-plus” mentality that both failed to achieve the efficient construction techniques and also paid little heed to long-term maintenance expenses. Although the federal government set cost-per-room limits, in practice these meant exorbitant construction costs that nevertheless

skipped on room size and finish quality and burdened especially the highrise projects with a multitude of complex maintenance requirements.⁹

Eugene Meehan, whose careful study of the St. Louis Housing Authority is exemplary in its thoughtfulness and thoroughness, found that between 1948 and 1963 the tenants increased their income by 26 percent (unadjusted for inflation), but salaries for maintenance men rose three times as fast, to twice the average income of the tenants. From 1948 to 1953 rents collected by the authority increased 10 percent, but operating expenses increased 101 percent; from 1954 to 1963 rents rose 50 percent, but operating expenses increased 300 percent.¹⁰ As Meehan observed:

*Given a housing authority almost totally dependent upon rent from its tenants and a tenant population with very low incomes, too low to pay economic rents, either the housing authority must go bankrupt or the tenants must pay a very large share of their income for rent ...; in St. Louis the worst of both worlds was achieved, for the tenants paid out a very large share of their income for rent and the housing authority went broke anyway.*¹¹

Going broke, moreover, meant increasingly poor tenant services: elevators constantly out of service, heat and hot water lacking, windows broken, and trash accumulating in the lobbies and public spaces. Yet maintenance was constantly being cut back. Thus, during 1969 at Pruitt-Igoe in St. Louis, an 84-person crew was called upon, among other things, to replace 7,000 light bulbs, 16,000 window shades, and 20,000 panes of glass. It did not help that, in that year, an estimated 40 percent of all maintenance labor costs were due to vandalism.¹²

Although the local housing authorities have received ample criticism for their inefficiency and sometimes

outright corruption, we should recognize that they were caught in a vicious circle that negated the efforts of even the most gifted administrators. As with urban mass transit, a captive population was forced to endure ever-higher costs (especially as a percentage of income) for ever-worse service.

The worst abuses of this system came to an end in 1969 with the “Brooke Amendment” that limited rents to 25 percent of the tenants’ income. This theoretically made the federal government responsible for the difference between a housing authority’s rental income and its legitimate maintenance costs. But by 1969 the projects were already being written off as failures. And federal reimbursement contributions of the 1970s and 1980s tended to freeze maintenance allowances at the grossly inadequate level of the previous decades, so that the projects continued to deteriorate. As Camilo Vergara, the Lewis Hines of the contemporary inner city, has documented in his photographs, many highrise towers that were not intentionally destroyed like Pruitt-Igoe were gradually abandoned from the bottom and from the top. The lowest floors were vulnerable to crime and vandalism, whereas the highest suffered most from constant elevator, heat, and water failures.¹³

The Role of Design

One might argue abstractly about the fundamental deficiencies of the tower-in-the-park as a form urban housing and urban design: the lack of public space and street life; the lack of connection between mothers in the tower and children playing fifteen floors below; the inhuman scale and isolation from the fabric of the city that this design produced. All these are true but, I would maintain, largely irrelevant to the real crisis of public housing. Families might have adapted to these design problems; indeed, they might have discovered ways to make even the highrises work socially. But public-housing tenants could not adapt

Below left: Chicago housing project. Photo by Camilo Vergara.

Below right: Children in Chicago housing project. Photo by Camilo Vergara.





Top: Abandoned row houses, Camden, New Jersey, 1980s. Photo by author.

Bottom: Henry Horner Houses, Chicago, prior to demolition for HOPE VI program. Photo by Camilo Vergara.

to an environment of constant breakdown caused by the inability of the typical housing authority to budget even the most minimal standards of maintenance raised from rents these tenants could afford to pay.¹⁴

Sadly, this collapse of public housing was occurring just when poor families desperately needed an alternative to the private market. Even in the worst years for the most poorly run housing authorities, not only were the projects largely occupied, but there were massive waiting lists for apartments. In 1979, for example, the Baltimore Housing Authority, which then managed some 16,000 units of public housing, had a waiting list of over 40,000 applicants.¹⁵

As George Sternlieb showed in his classic study of Newark in the 1960s, *The Tenement Landlord*, the same “incomes crisis” that was undermining public housing — the inability of tenants to pay an “economic” rent — was devastating private rental housing in the inner city.¹⁶ The era when the “slumlord” could wring profits from even the poorest families by overcrowding had given way to the steady depopulation of the inner city and a drastic decline in property values that remorselessly drained capital from investors and individual homeowners. Nevertheless, the private sector was not without some effective strategies in this period. Efficient property managers could take advantage of lower labor costs than housing authorities operating with civil-service or patronage workers; and they could better screen potential tenants, and in general utilize the flexibility of the older structures versus the projects.

But the private housing market also had a hidden vulnerability that exposed it to the full force of the incomes crisis. This, as Michael Stegman showed in his study of Baltimore in the early 1970s, was vacancies.¹⁷ With tenants constantly moving and with neighborhoods emptying out, vacancies were inevitable. And, under the conditions of the inner city, a vacant unit was very quickly a vandalized unit (either stripped for profit or trashed maliciously), and then frequently an abandoned unit. As in the projects, vandalism struck a powerful blow exactly where inner-city housing was most vulnerable — the gap between the high costs of maintenance and repair and what tenants could afford in rents. In Baltimore, for example, the number of abandoned units rose from approximately 7,000 in 1974 to more than 40,000 by 1990.¹⁸

In her “Subsidizing Dwellings” chapter in *The Death and Life of Great American Cities*, Jane Jacobs drew some logical and highly influential conclusions from her analysis of American public housing. If, as she recognized, the real housing crisis was an incomes crisis, then the appropriate public policy would be to provide families who could not

afford an economic rent a direct subsidy — a voucher, to use a later term — that made up the difference between what families could afford to pay and prevailing rents in their metropolitan area. With these vouchers they could seek out the best housing they could find — either in the private market, in the projects, or in newly constructed scattered-site housing.¹⁹ Daniel Patrick Moynihan took the concept even further when, as an advisor to President Nixon, he quixotically advocated transforming welfare into a guaranteed income for poor families.²⁰

In 1961, however, Jacobs still believed in the vitality of the urban economy, and she could not foresee the scale of intervention that would become necessary to implement her preferred system. Nor could she foresee the conservative turn in American politics that would win electoral victories by the implicit promise to keep the black urban poor in their place. Not surprisingly, her prized examples of “de-slumming” were invariably white ethnic neighborhoods like Boston’s North End, whose male wage-earners tended to be on the positive side of the shifting “terms of trade” for housing.

By the time vouchers were in fact introduced, tentatively as Section 23 of the 1965 Housing Act and definitively as Section 8 of the 1974 Housing Act, the budget provided for them was radically insufficient to either meet the needs of poor families or to reverse the abandonment of the inner cities. For example, it took twenty years after the 1974 act was passed for the number of vouchers available to low-income families in Baltimore to equal the number of units of conventional public housing that were available for occupancy. Ironically, this parity was reached in the mid-1990s only because HUD’s HOPE VI program reduced the number of project units by financing the demolition of the highrise towers that the Housing Authority of Baltimore City had constructed in the 1950s and 1960s.²¹

HOPE VI provided the arresting spectacle of the government spending billions to demolish the very towers it had constructed some forty years earlier: the final proof, it seemed, of Jencks’s “death of modern architecture” and of the “utopian” idea that architectural innovation might serve social progress. But as I’ve tried to indicate here, the lessons of postwar public housing are more subtle, disturbing, and difficult. Both the modernists and their critics have been too quick to assume that design issues were the root cause. I have instead tried to show how all inner-city housing, regardless of design, was subject to the destructive riptide of the black incomes crisis. Moreover, the degree of destruction often depended less on design per se and more on such specific factors as the vulnerability of vacant,

privately owned dwellings to vandalism or the way building janitors were paid (or not paid) in the highrise towers.

A New Vision

It would be much truer to assert that the design of affordable housing does matter — and it matters greatly — but only when it forms a consistent and integral part of a larger complex of social strategies and economic opportunities. After a half-century of urban crisis, there is now good evidence that the “riptide of destruction” has begun to recede, and that the economic underpinnings exist to support a well-designed “re-urbanization” of the inner cities that could mobilize and intensify the positive forces that are developing there.

The signs of this incipient recovery can be seen in a number of places: the revival of downtown economies in most regions which have again put inner cities in close proximity to good jobs; the surge of immigration which has reoccupied abandoned areas and revived inner-city economies; the decline in concentrated poverty in most central cities; and improvements in public safety.²² Although unemployment (especially black male unemployment) remains shockingly high, those households with a wage-earner now benefit from the Earned Income Tax Credit, which returns \$30 billion annually to poor families, who spend a third of that money on improved housing — making this tax credit a more important housing program than any single program administered by HUD. And households with this extra income now have improved access to credit, thanks to the Community Reinvestment Act and new Federal Housing Administration mortgage policies.²³

Already, once-devastated neighborhoods in the South Bronx, South Central Los Angeles, South Chicago, and Boston’s Roxbury and Dorchester have seen a welcome tide of private rehabilitation and infill, Jane Jacobs’s “de-slumming.” But these private, piecemeal efforts have not yet reached the households or the districts that need them most.

Ironically, the most powerful models for broader action have come from the HOPE VI program, which, in addition to demolishing the old projects, has also financed the partial replacement of affordable housing units on the cleared sites. HUD’s initiative and funding has brought together two key elements for successful affordable housing: (1) locally based community development corporations (CDCs), which since the 1970s have been financing and constructing small-scale affordable housing under very difficult circumstances, and thus possess a wealth of



Top: New HOPE VI housing on the site of the Horner Homes, Chicago.

Bottom: HOPEVI Project, Heritage Crossing, Baltimore. Photo by author.

practical experience;²⁴ and (2) architects and planners, mostly associated with the Congress for New Urbanism, who appreciate the ways in which older neighborhoods fostered a sense of community, and who have sought to use this knowledge to advance the goals of the CDCs.²⁵

In the resulting HOPE VI projects, the CDCs have promoted several positive new strategies: small-scale development funded from multiple private and public sources; low-maintenance design and construction that has mobilized residents' sense of pride and responsibility; and, above all, mixed-income projects that include subsidized rentals, market-rate rentals, and condominium ownership.²⁶ The architects have embodied these goals in designs that not only unify the different groups of tenants, but connect the development to the neighborhood around it. Wherever possible, the old street grid has been resurrected; new buildings have respected the older neighborhood typologies; and careful attention has been paid to the streetscape and to well-defined public spaces that foster neighborhood connections and the building of social capital.²⁷

These housing initiatives, moreover, have implied a wider transformation of the inner city that is perhaps best shown in Urban Design Associates' East Baltimore Comprehensive Redevelopment Plan. Where the world-renowned Johns Hopkins Medical Center in East Baltimore was once "Fort Hopkins," tensely confronting the poverty-stricken district around it, the development plan seeks to make the hospital the catalyst for economic development built around a new biotech center. Mixed-income housing should further encourage vital street life to complement the 24-hour activities of the hospital and the biotech center. And these facilities, in turn, should provide the key jobs to support the new affordable housing, parks and transit in the plan. The East Baltimore Plan points the way to the reurbanization of our most devastated inner-city area.²⁸

"There has never been an architect," sociologist Robert Gutman wrote in 1965, "who was not, in some sense, a student and a critic of society Many architects hold to a vision of some future social organization that comes closer to achieving goals of justice, humaneness, and order than the society we live in now."²⁹ The travails of public housing did much to undermine that vision of architecture and social justice. But, as affordable-housing and brown-field studios proliferate in our architectural schools, the prospects for a substantial rebuilding in the inner cities have again raised the issues both of design's powers and design's limitations.

"How," Gutman asked in 1965, ". . . are we to produce a true social architecture and a genuine architectural

sociology?”³⁰ I would rephrase his question with special reference to the history of public housing. How are we to bring a transformative architectural imagination to affordable housing, while not forgetting to ask the crucial question, “Who pays the janitor?”

Notes

This article is based a paper delivered at the Princeton University School of Architecture to honor Robert Gutman’s forty-year contributions as a teacher. I want to thank the organizers of the conference, Hilary Ballon and Marta Gutman, and especially to thank Robert Gutman himself, whose lifelong commitment to “true social architecture” and “genuine architectural sociology” has been a continuing inspiration.

1. The most powerful critique of the influence of European modernist design on American public housing can be found in Richard Plunz, *A History of Housing in New York* (New York: Columbia University Press, 1990), ch. 8, “The Pathology of Public Housing.” For a more balanced view, the outstanding history of public housing and housing reform in America is Lawrence J. Vale, *From the Puritans to the Projects: Public Housing and Public Neighbors* (Cambridge, Mass.: Harvard University Press, 2000). A more positive view of European influence can be found in Gail Radford, *Modern Housing for America* (Chicago: University of Chicago Press, 1996). See also Peter Hall, *Cities of Tomorrow* (Oxford: Blackwell, 1998); and my *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier* (New York: Basic, 1977).
2. Charles Jencks, *The Language of Post-modern Architecture* (New York: Rizzoli, 1977), p. 9.
3. In addition to the work of Jane Jacobs cited below, one must acknowledge the influence here of Peter Blake, *Form Follows Fiasco: Why Modern Architecture Hasn’t Worked* (Boston: Little, Brown, 1977).
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5. United States Department of Labor, Office of Policy Planning and Research, *The Negro Family: The Case for National Action* [commonly known as The Moynihan Report] (Washington, D.C.: U.S. Government Printing Office, 1965), p. 20.
6. Ibid., p. 47.
7. Ashley A. Foard and Hilbert Fefferman, “Federal Urban Renewal Legislation,” in James Q. Wilson, ed., *Urban Renewal: The Record and the Controversy* (Cambridge, Mass.: MIT Press, 1966), pp. 71–125. See also Lawrence M. Friedman, *Government and Slum Housing: A Century of Frustration* (Chicago: Rand McNally, 1968).
8. Michael B. Katz, *The Price of Citizenship: Redefining the American Welfare State* (New York: Henry Holt, 2001), pp. 50–53.
9. Eugene J. Meehan, *The Quality of Federal Policymaking: Programmed Failure in Public Housing* (Columbia: University of Missouri Press, 1979), chap. 3. Meehan found that the costs of the notoriously poorly constructed Pruitt-Igoe development were 60 percent above the national average, and only 15 percent below the most expensive luxury apartments in St. Louis.
10. Eugene V. Meehan, *Public Housing Policy: Convention versus Reality* (New Brunswick, N.J.: Center for Urban Policy Research, Rutgers University, 1975), p. 71.
11. Ibid., pp. 124–125.

12. Ibid., p. 78.
13. Camilo Vergara, *American Ruins* (New York: Monacelli Press, 1999).
14. See Lawrence J. Vale, *Reclaiming Public Housing: A Half-Century of Struggle in Three Public Neighborhoods* (Cambridge, Mass.: Harvard University Press, 2002) for an important analysis of three Boston projects that survived long enough to attempt precisely the “reclaiming” in the 1980s and 1990s that fiscal constraints prevented in the 1950s–70s.
15. Peter H. Henderson, “Local Deals and the New Deal State: Implementing Federal Public Housing in Baltimore, 1933–1968,” Ph.D. diss., Johns Hopkins University, 1993, p. 469.
16. George Sternlieb, *The Tenement Landlord* (New Brunswick, N.J.: Rutgers University Press, 1969).
17. Michael A. Stegman, *Housing Investment in the Inner City: The Dynamics of Decline, A Study of Baltimore, Maryland, 1968–1970* (Cambridge, Mass.: MIT Press, 1974).
18. David Harvey, *Spaces of Hope* (Berkeley, Calif.: University of California Press, 2000), p. 133.
19. Jane Jacobs, *Death and Life*, pp. 326–37.
20. Godfrey Hodgson, *The Gentleman From New York: Daniel Patrick Moynihan* (Boston: Houghton Mifflin, 2000), chap. 7.
21. Abt Associates Inc., *An Historical and Baseline Assessment of HOPE VI, Vol. I, Cross-site Report, Baltimore Section* (Washington, D.C.: HUD, 1996).
22. See especially Paul Jargowsky, *Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990s* (Washington, D.C.: The Brookings Institution, 2003).
23. Bruce Katz and Margery Austin Turner, *Rethinking Affordable Housing Strategies* (Washington, D.C.: The Brookings Institute and the Urban Institute, 2003).
24. Alexander von Hoffman, *House By House, Block by Block: The Rebirth of America’s Urban Neighborhoods* (New York: Oxford University Press, 2003).
25. See Peter Calthorpe and William Fulton, *The Regional City: Planning for the End of Sprawl* (Washington, D.C.: Island Press, 2001), pp. 243–63, for an important discussion of HOPE VI from the point of view of a leading New Urbanist.
26. Von Hoffman, *House By House*, pp. 7–18.
27. The best sources for these projects are the websites of the most active architectural firms. In addition to Calthorpe Associates, they include Torti Gallas and Partners; Duany Plater-Zyberk and Company; and Solomon E.T.C. Michael Pyatok (Pyatok Architects, Inc.), though a critic of HOPE VI, has nevertheless been a major design influence. An important guide to the work that immediately preceded HOPE VI is Sam Davis, *The Architecture of Affordable Housing* (Berkeley: University of California Press, 1995).
28. The East Baltimore Plan can be found at www.urbandesignassociates.com.
29. Robert Gutman, “The Questions Architects Ask,” in Robert Gutman, ed., *People and Buildings* (New York: Basic Books, 1972), p. 343. The text was originally a lecture delivered at the Bartlett School of Architecture, University College, London.
30. Ibid., p. 368.