Tim Prentice, *Untitled*, 24" x 24" steel wire and aluminum. Cover: Sketch of homemade instruments by Tim Prentice and Steve Silverman from the recent exhibition *Please Play* at the Century Association, New York. A. Pan Pipe (whack on the open ends); B. Mother Plucker (base drum & clothes line); C. P.V.C. Bach (pat on the flattened ends); D. Tongue Drums; E. Mo Bell I; F. Mo Bell II (vanes from plastic milk containers); G. A Little Night Music; H. Pot Belly (strike gently); I. Spike (ten penny nails); J. Two-by-phone (mahogany & mailing tubes); K. McThump (pickle jugs from MacDonald’s); L. Pentaphone; M. Le Rouge and le Noir; N. Goat Bells; O. Tinkle; P. Handel; Q. Petra Phone (roof slate from old Belvedere in Central Park); R. Protest Song.
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Other Than Architecture

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From the Editor: Who Is An Architect?

Let him be educated, skillful with the pencil, instructed in geometry, know much history, have followed the philosophers with attention, understand music, have some knowledge of medicine, know the opinions of the jurists, and be acquainted with astronomy and the theory of the heavens.

Vitruvius, c. 90 B.C.

The profession of architecture is going through tremendous change. The public image of the architect is transforming. The very definition of architecture practice is open for reconsideration, as licensed architects pursue a wide variety of creative practices—from project development to product design—and many who are not ‘architects’ tackle traditional architectural roles—from “theming” a building to managing constructing. Who is an architect?

As we all participate in the design of our emerging profession, the Editorial Board is pleased to focus this edition of Architecture California on a variety of talented, trained architects who have been compelled to pursue work—“other than architecture”—outside of the traditional parameters of the field. The contributors to this edition illuminate the particular talents that drew them to study architecture but then led them on to invent and define entirely new careers. They give us insight into the interdisciplinary relationship between architecture and the arts and social sciences. And they help us embrace the question, what is architecture anyway?

The Editorial Board’s premise in planning this theme was that architecture education prepares us to do a lot more than we often realize, that artistic talent and problem-solving aptitudes are interconnected, that the common root of generative thinking is transferable to a wide range of applications.

Three distinct responses to the question “why did you leave ‘architecture’?” appear: some were driven by creative impulse to employ another medium better able to express their talents; some sought expertise in a specialization tangential to architecture and have refined it; and others, due to recession or economic necessity, pursued alternative means to make a living and found entirely new fields in which to engage themselves. In each case a unique link to architecture still appears in the particular character of their work. The seeming dichotomy between creativity and problem solving is collapsed when we look at the commonality between the diverse creators featured here: they each manifest a highly generative synthetic imagination.

For me, in fact, this selection of writers is most interesting because of their similarities, rather than their differences. They reveal the personal aptitudes that draw people to study architecture, and the talents that are cultivated through architecture education. Rather than explain the authors’ separation from architecture, their essays begin to explicate the basic elements that define architecture practice in its broadest sense.

Yet, the particular essays do bring different things to us for consideration. Some authors have engaged us directly, detailing how their training in architecture evolved into their present line of
work. Tower, Prentice, MacLean, and Hughes each convey the power of their creative impulse to lead them in entirely uncharted directions. Spitz, Gray, Sehnart, and Levin show the potential of architects to become leaders in tangentially related fields. Rocha, Hise, and Gantt—activist, historian, and politician, respectively—are selected to show the force of their present work.

Whether these architects were drawn to architecture’s artistic dimension or its place in the real world of problem solving, their desire and ability to delineate a path into the unknown replicates another basic attribute of architecture practice. This also explains why people not trained as architects but possessing similar endowments are able to grab hold of aspects of traditional practice and master them.

In this edition of etcetera, Gilliam’s sketches put a time-honored skill to work in capturing the social, political, professional experience of practitioners who have struggled to advance the cause of public school construction. Jencks’s excerpts outline the possible impacts in architecture of the new chaos theory. Estrada’s demographic lesson deepens our grasp of the State’s future Latino populations.

We welcome Barnes again, to shed his unique light on seemingly familiar subject matter. Norten’s comments whet our appetite for the discussion in the next edition on the issues involved in practice along the Pacific Rim.

Wardlaw’s account of the College Avenue walk provides a model of possible contributions by local AIA chapters to their communities. And the recognition of the Civic Innovations competition winners brings this edition of Architecture California full circle: The creative talents of architects—released from the bounds of conventional practice—hold tremendous potential to establish a new place for architecture in transforming our culture.

Lian Hurst Mann, AIA
Architecture As Language

John L. Field, FAIA

The changes wrought by each recession have as a byproduct a profound re-thinking about what we as architects are doing with our lives. That is one reason we hear so often today from all of the professions that plying their special skills is no longer what it was; it is no fun anymore. Is that because we had all of our fun in the eighties? Or perhaps we made fun out of something serious that would long outlast our humor. Or, it may have been only a private joke in the first place, and we were the only ones laughing. No matter. Today, professions such as architecture, medicine, and law remain the same, but our professional lives are radically different, and we liked it better the way it was.

Architects by the nature of our training are unusual in modern life. We are nineteenth century creatures, even if we use computers instead of drafting boards. We are unique in the endless learning our profession requires from project to project. Our natural skills and talents combined with this estab-

lished process of inquiry ever broaden our life experience rather than con-

stantly reducing it. This process fits our abundant curiosity and without our realizing it prepares us to undertake a variety of avenues other than traditional architecture practice. The constant thread in our work and our training is the experience of learning to make meaningful relationships between elements and functions that are seemingly unrelated.

But we would undervalue our skills if we saw ourselves as being only build-

ing designers. The Bauhaus was based on bringing together all the creative arts. Charles Eames combined his many skills as architect, furniture designer, film maker, exhibition designer, and collector. Thomas Jefferson was an architect, a philosopher, a statesman, an author, and a politician. Our natural turn of mind endows many of us with the talent to “design” more than buildings.

We tend to see our training too much as a trade school. Instead, we should view architecture education as we would an education in mathematics or philosophy: the opportunity to learn an intellectual approach to be applied to complex problem solving. There is hardly a politician who wouldn’t be better off having studied to be an architect first.

Beyond the visual, creative design involves all mediums wherein it is possible to touch the human response systems. The common element in all forms of creativity is the ability by means of a unique language to bring concepts from the mind and give them a form that can be commonly understood by others through one of the human senses. Architecture, literature, music, film, cuisine, dance, painting, sculpture: all have their form of communication. We as creators share the ability to see, or hear, or feel, or taste something that doesn’t exist for others until we give it a form and language all can share.

Just as buildings need structure, so does the novel. If we, as architects, excel at imagining places, what else is the novelist creating? We listen as does the
novelist to hear unspoken truths. The chef seeks the nature of basic ingredients as we look for the site features and the climate of the surrounding environment to give our designs roots of place. The mixture of flavors is no less design than steel next to glass next to brick. Light defines our buildings as it does any sculpture. The composer reveals and develops a theme by motivating the listener's senses as the architect forms a path for the body to follow by motivating the human eye. Lucky is the novelist, however, for few readers are going to start at the end of a tale or begin reading in the middle. The architect is the only one of the creative spirits who is once removed from the reality of the medium of creation, separated by the drawings that precede the actuality of the building.

The architect has not always worked at such distance from the object created, which may explain an unconscious need of the creative spirit that has led so many of us out of the profession, even after years of success in practice. Whatever the reasons, the creative drive persists. The well known chef Jeremiah Tower designs food and its presentation as much as he composes the environments of his very successful restaurants: form, color, texture, light, space, and sound.

I find this drive to create through all variety of mediums a more likely explanation for architects moving out of the profession than the lack of adequate money. Modern life is increasingly made up of dehumanizing experiences, synthetic sensory stimulation, and nonsensical regulation. We are looking for new ways of dealing with our problems, and we need a larger view that sees synthesis as solution. It may be that our profession has been missing opportunities to participate in society and that students who crowd into the architecture schools should be encouraged to take their training into the world and apply it way beyond the traditional practice of architecture.

If a diplomat can be referred to as the “architect” of a foreign policy, the word clearly suggests broader meaning than merely the builder. After all, we never hear of anyone being called the lawyer of a foreign policy doctrine.
“Painting, sculpture, and architecture ...the main element is pastry making”

Jeremiah Tower

Now leader of StarTeam, Ltd., Jeremiah Tower is the creative hand behind Stars San Francisco and Palo Alto, Stars Cafe, Stars Oakville Cafe, and Starbake. Educated as an architect, Tower is a father of California cuisine.

The quote from Fournier—"Three branches of Art: painting, sculpture, and architecture, of which the main element is pastry making"—expresses the similarity between the plastic arts: the structuring of formal elements. It has always been a very funny part of my history that I trained as an architect at Harvard and then ended up becoming first a chef, and then a restauranteur. Both are professions that require an enormous amount of creativity, balanced with logical planning. You cannot design a building without adhering to code, and you cannot prepare a dish without making certain the flavors of the ingredients work well together.

In recent years, as I have opened new restaurants and overseen the remodeling of others, I find I am using my architectural training even more. Obviously, most architects are not restauranteurs and sometimes place the aesthetic over the practical. Restaurants must be practical, not only for the customers (where is that restroom?), but also for the restaurant staff. A waiter, while preparing coffee or busing dishes, should never be in a customer's way.

Circulation is so important in restaurants, yet many architects I have worked with would rather sacrifice circulation and install an art-in-architecture program, or perhaps a dais in the restaurant's entrance, or hand-stenciled lettering on a wall near the kitchen (which would be a nightmare to clean if a waiter tripped and spilled soup on the wall). All might be beautiful, but not necessarily practical.

Anyone who works in the restaurant industry looks at a restaurant space in a completely different way from an architect designing the space. My training has given me the language and the knowledge to design most of the restaurants myself, with the architects providing knowledge of code requirements and essentially translating my vision to paper and then to reality.

My training has also given me the skill to ask designers the right questions, and to know when an architect is...
Stars Bar. The bar runs the length of the restaurant providing a geographical point as well as a clear circulation path.

Stars Cafe upper level dining area. A clear circulation path meets a dining area with flattering light and unobtrusive design elements.

designing for their own portfolio, and not for the good of the restaurant’s customers and staff.

Also, my appreciation for many kinds of architecture and design has helped me to better design my own restaurants. While I love certain periods and styles of architecture, restaurant design makes a logical synthesis of various style elements, again because of the need for practicality, and the need to accommodate changing technologies, such as in the kitchen and restaurant computer systems.

The point, common to the design of an extraordinary menu and the design of a successful restaurant, is to create excitement by simple means.
Movement in Play

Tim Prentice

If my father had grown up in the sixties he might have become a cabinet maker or a painter rather than an architect. He received his diploma from the École des Beaux Arts with the last class which didn’t get the word about the modern movement. I got mixed messages from him. He was dedicated to the profession of architecture, but he also loved to work with his hands and on weekends would retreat to his carpentry shop in Connecticut. After he retired he published a book of his watercolors titled Weeds and Wildflowers.

I was sixteen when I had my first encounter with a Calder mobile. I memorized it. Any thoughts of becoming an artist were banished by my belief that artists were a breed apart: magicians who worked in magic. I went on to study architecture at Yale. Lou Kahn was there as a visiting critic and his art gallery had just been completed. He consistently urged his students to go back to the beginning. His first principle was, “Let it be what it wants to be.”

Joseph Albers had recently arrived to head up the Art School. My current work bears no visual resemblance to that of Albers, but I would like to think that my efforts to isolate movement as the subject of the work stem from the example of his isolation of color. I took his basic color course as an undergraduate then again as a graduate student four years later. More than anything else Albers taught me to see more critically, more deeply, more accurately than I had before. He conveyed the idea that he was a student himself. Perhaps his greatest ability was to teach others to teach themselves.

Kahn and Albers were full of theory. It was Calder with his total absence of theory who taught me to play. He never wrote or said anything to guide his followers. He was brilliant, but he hid behind his humor. When asked how he would know when the piece he was currently working on would be finished, he would answer, “when it’s dinner time.” He demonstrated the joy of play and frequently gave his pieces away to friends. In a sense he played for us. As a society we hire people to dance, act, sing, and make music for us, and in a way we also hire people to do our playing for us.

Triatsular, Wire Frame 32" x 85", 1985.

Wind Wheels at Hotchkiss School, Lakeville, Connecticut.

After my architectural training, I worked briefly for Peter Blake. Later, as a designer with Edward Durrell Stone, I asked to be put in the production department in order to learn how to put a building together.

When I began my independent practice my models were Edward Barnes and Charles Moore. They had just made their mark with the Haystack Mountain School in Maine and the Sea Ranch, respectively. I responded to the economy of means and wit of these early projects. I felt fully challenged by the residential jobs that came to my small office. I became so engrossed in the psychological reactions to domestic space that my ambition for large commissions became somewhat atrophied along the way. The firm around me grew out of this modest scale, and I became a house architect within a larger office. The projects we had for low cost housing in the Bronx were socially responsible, but I was frustrated by the inherent bureaucracy and administration. I remembered hearing that an architect is lucky if he can spend 10 percent of his time on design. When I left the firm ten years later it had thirty employees. I had served as President of the New York Chapter of the AIA as well as head of the leading preservation group in the city. I had become respectable, but I still hadn’t found my own voice.

Increasingly I felt like a conductor who directs the orchestra but can’t play any of the instruments. I had met Yellow Zinger at Chesterwood. Neoprene and stainless steel. Stockbridge, Massachusetts, 1989.
George Rickey who was taking moving sculpture in new directions. The French word "mobile" had been suggested to Calder by Duchamp and it stuck. Rickey adopted the more generic term, "kinetic," and looked to the Russian constructivists for inspiration. I envied his ability to conceive a design, solve the technical problems, then pick up a welding torch and fabricate the work. He had control of the entire process. He could play the instruments. Today at eighty-seven he is doing some of his best work and continues to be an inspiration.

At forty-three I had built up the confidence I needed to leave the firm with an intellectually unjustified hunch that I could find my voice in kinetic sculpture. I was spending an increasing amount of time stolen from other activities exploring the possibilities. I had been a sailor for many years, and in the Navy I was a navigator. I took it as an article of faith that the air around us moves in ways which are organic, whimsical, and unpredictable. I therefore assumed that if I were to abdicate the design to the wind, "to let it be what it wanted to be," the work would take on these same qualities. Perhaps I would even get the credit for making magic. Perhaps, if I turned away from the usual visual considerations of color, proportion, and structure and focused exclusively on reducing friction and inertia, a new form would reveal itself.

I moved into sculpture partly because of my impatience with the time it takes to bring an architectural design to fruition. I might have a basic concept in minutes and hope to develop it over...
several weeks, which often grew into months. Then comes the agonizing wait. I imagined being a photographer and taking my film to be developed only to be told that the prints will be ready in two years. I can't learn from the decisions made on previous projects while working on new ones.

In sculpture this gap is dramatically shortened. It is not totally closed when working on large commissions requiring the help of assistant fabricators, but we are all working in the same space and they are not doing anything I can't do myself. They help to speed up the process. My greatest pleasure now is making small pieces by myself when I can really close the gap, and the process of design and fabrication merge. On good days I am visited by spontaneity, improvisation, and whimsey.

The idea is to play, but play is riddled with guilt. Play is not for credit. If the object being made can be sold or if some valuable insight is gained in the process then play has been turned once more into work and the guilt is banished.

It has been twenty years since I changed my major. The first thing I realized after taking a deep breath was that all the architects around me whom I had been seeing as competitors had now become potential clients. The first commission I received was in a building designed by John Carl Warnecke for AT&T. It turned out to weigh 5,000 pounds. I realize now that I hadn't fully negotiated the transition to kinetic sculpture. I had hired a structural engineer for what turned out to be the last time. I can't imagine that the total weight of all the work I've done since then adds up to the weight of that single piece. If I were to do a piece for the same space today, it would weigh closer to 50 pounds.

I'm often asked about the process of collaboration with architects, and I must say that I have rarely had the experience of a true collaboration. Most typically the architect does the work of making the space, and then I get called in by a committee chosen by the occu-
Whack-O-Phone, PVC pipe, wood, rubber. 34" x 32" x 48". 1991.

I basically respond to the space. I try to make a piece that looks like it belongs and capitalizes on the invisible air currents which move through any occupied space.

I want to be conscious of what other artists are doing so that I don’t trespass on their turf. At the same time I want them out of my unconscious mind. I had an odd experience years ago when I was driving alone on the road between my studio and New York City. This route which I have known well all my life passes a wonderful vernacular building that contains switch-gear for a hydroelectric plant. For once I had my camera and was in no particular hurry so I parked and after careful study took a picture. Several years later I went to a retrospective at the Whitney Museum of the work of Charles Sheeler and for the first time saw a painting of that same building from the exact spot I had taken my photo. In his body of work he takes buildings and reduces them to overlapping planes. I had followed his work for years and had absorbed his argument and internalized his sensibility. I wonder how many influences we all
have that are unconsciously guiding our hand, how many rules we have buried within us that we follow blindly. Part of my search is to find them and throw them out.

When I took up my avocation full time, I had to bring something up to fill the position of hobby and that was music. Many years ago my wife and I were given a grant from the U.S. State Department to travel through Asia, India, and Africa as folk singers in the name of cultural exchange. We were exposed to a variety of homemade folk instruments, and it dawned on us that it wasn’t necessary to own a stradivarius to make music in all kinds of ways. Building one-of-a-kind instruments (some of which are shown here) in the spirit of Harry Partch has been a passion ever since. It is fitting that musicians “play” their instruments. It’s good for the soul.

I still design houses. I haven’t turned in my badge, but I have a different attitude about the work. The audience has shrunk, and the work comes in only by word of mouth. For the last ten years I have lived full time in the same small community in Connecticut where I spent my childhood summers. Everybody knows everybody and has an
opinion on every new structure in town from a sap house to the new town hall. I don't go far afield—about twenty minutes from home is my limit. I like to call myself a "weekend architect," which may not be good P.R. but which accurately describes the time spent. In fact many of the clients are weekenders from New York City. I try to charge them enough to pay for pro bono work with people in the area who can't afford professional services. My myth is that of the country doctor who makes house calls and doesn't exist any more. The greatest compliment I can have is when a local builder comes to me for help on his own house.

People assume that there is no work involved for anyone who loves what they are doing. There's a local story about a conversation overheard in the general store some years ago. The visitor is curious about a particular house in the area and, not realizing that the occupant is a nationally celebrated literary figure, asks, "What does he do?" The answer from the local is, "Oh he doesn't do anything, he's a poet." In my case whether it is seen as work or play I feel I've found my voice.
An Architect in the Garden

Katherine Spitz, AIA, ASLA

A day rarely goes by in which I don't consider what it means to be an architect practicing landscape architecture. With each design project, small or large, I confront the same questions: What is the meaning of this site, this garden, this plaza? How does this landscape that I am drawing make sense with the building, and make sense out of the building? How can I use the rigor of my training and apply it to the landscape? And, how can I make poetry out of the place?

By poetry of place I refer to the buildings, the gardens, and the landscapes that suggest a meaning beyond simple function, and beyond the purely empirical and rational. As architects, most of us are familiar with buildings throughout history that transcend their function to become works of art. These remarkable buildings inspire their users to experience both the uncomplicated fact of shelter and the imaginative content of the metaphors they embody.

One of the primary reasons I chose to practice landscape architecture rather than architecture was that I found landscape to be a more direct medium for the expression of symbolism, narrative, and metaphor. Its mutability, unpredictability, and sensuousness appeal to my desire to make places that are expressive and that suggest a meaning beyond their appearance. Landscapes, and gardens specifically, have their roots in healing, growth, and sanctuary; as a society we believe that a connection to the natural world in general promotes both mental and physical health.

Before architecture, I studied painting. The discipline demanded by the visual arts is similar to the discipline of architecture, and many of the lessons learned in those years continue to affect my current practice.

From painting I learned that the most personal can often suggest the most universal; that a close examination of our own stories reveals broader human conditions. Van Gogh's painting of his room at Arles describes an intensely personal portrait of space, yet it is precisely that quality which makes...
it so resonant—we are all able to envision ourselves in that very room, and to imagine its walls and bittersweet illumination. Both built and green architecture include expressive elements which are autobiographical or intuitive. These elements give the users something to jumpstart an internal dialogue and create a connection to the users own set of symbols, meanings, and emotions.

Landscapes change—they grow and die, and their cycles are measured in seasons, years, and decades. As a painter I learned that the observed world offers a collection of disparate images and juxtapositions that have significance only when they are organized through composition. These images must be framed by the painter’s eye to assume any meaning. As a landscape architect, I compose landscapes in a way that supposes intention and authorship. But as they grow and change, I must also recognize that the meaning I impose today may be very different from its meaning tomorrow, altered by the passage of time, season, growth, and change. Landscapes can be likened to the fugitive colors in oil paints: they transmute their tones in unpredictable ways.

In architecture, I sought a different vehicle for the expression of poetry in the environment. I hoped to imbue buildings and places with the kind of intention that had inspired me. Metaphors were the basis for these explorations. In one project, inspired by a Hiroshige woodblock, a museum took the form of a mountain set among low clouds, with heavy masonry walls surrounded by light steel wings. Set in a dense urban context, this building was intended to subconsciously suggest the natural world surrounding the city. Another project, a subterranean defense post for the military, took a more ominous form. Buried deep in the earth, the base was a sequence of symbolic spaces designed to subvert the military order of war. In retrospect, the symbolic content of both of these projects lay in the landscape.

When I practice landscape architecture, I am practicing architecture. The fundamental elements of architecture are the fundamental elements of landscape as well: Tree trunks are columns, leafy canopies are roofs and ceilings, the earth is a floor, and hedgerows are walls. These tools help me build the physical structures that support the underlying story each project tells. But these alone do not make landscape into architecture. The undefinable sensuous qualities of the garden and the awe inspiring drama of the natural landscape combine with this physical structure to complete the story. And, coupled with the sophistication, intelligence, and rigor demanded by program and budget, they form the basis of my landscape design work.

Until recently, Los Angeles celebrated the isolated and individual built form more than its urban fabric, leading to a city defined only by its diversity and not its continuity. Los Angeles does not purposefully celebrate its connection to the mountains, rivers, and beaches surrounding it, only accidentally; neighborhoods are defined by economics in spite of location. Children can grow up in Los Angeles without ever seeing the Mountain Lilac in bloom in the Santa Monica mountains, and they may never understand that the city is prone to floods because it is a settlement at the foot of the mountains. The desire to make a tangible and poetic connection between a specific site and its location in the regional landscape is a recurring motif in my work.

Function and artistic intention come together when the meaning one derived from the site is then built into the program. The Science Building at Santa Monica College was destroyed in the Northridge earthquake, and stood eerily torqued and cracked on the site.
for over a year. We wanted students to remember the event, and its accompanying emotions. The landscape of the new building (Anshen + Allen, Architects), currently in schematic design, intends to make a connection between the specific site and the geology of the region by insetting a map of the Santa Monica fault lines into the courtyard paving. An accompanying time line describing the different geologic structures of the region will also be incorporated into the paving pattern. These devices will not only serve to remind the students of the volatility of the California geology, but will allow them to see how it all fits together. The building is on a small site on a dense campus. There is no room for landscapes that will "be seen and not heard"; every inch of space needs to serve as an educational tool. After meeting with the Botany faculty, we designed the landscape surrounding the building as a series of garden rooms, each celebrating a specific California ecology. This allows the faculty to take classes through the site and demonstrate different botanical characteristics—on the shady north side, California Sequoias and Monterey pines mix with native ferns, and on the sunny west face, mountain lilac, manzanita, and alders demonstrate the chapparal plants of Southern California. At the request of the faculty, we also included many flowering plants with various botanical features. These will be collected by the faculty before their laboratory classes, and will be the basis for the study of flower characteristics.

San Bernardino lies at the base of the San Bernardino mountains. The area was originally inhabited by Indians. With the arrival of the Europeans, it was transformed into an agricultural economy, and finally an industrial base. For the plaza of the Caltrans Headquarters and the City Office Building (with DMJM Keating, Architects), we sought to design a place that would make sense only in San Bernardino, a landscape that would reflect the surrounding desert, the cultural history of the region, and its anticipated growth as an urban center. To represent the desert, eight foot long replicas of the native Phrynosoma coronatum, Coast Horned Toads, are set on a decomposed granite floor in the center of the plaza. The banding in the paving suggests a more
formal geometry gone awry, and Mesquite trees with native sagebrush below recall the textures, fragrance, and color of the local desert. The toads, who in reality spit blood from their eyes in defense, here spit streams of water into a fountain; they are both play structures and sculpture. To symbolize the industry of the region, we had originally proposed firesticks—tall steel pipes, suggesting the local oil refineries, from which jets of fire periodically burst. Ultimately, railroad rails were designed into the paving, linking the entrances to the two buildings with glinting steel. And finally, a streetside cafe and a greensward of lawn edged with flowering trees and perennials welcomes the public into the desert center of the plaza.

Currently, I am working with the Studio of Architecture, LTD., on a remodel for the historic City Terrace Park, a hillside setting between two gang territories in East Los Angeles. The site for the park is remarkable, overlooking a sweeping view of the L.A. basin. It has been the scene of violence, and although it has an active recreation component, families are often reluctant to use the park for passive activities such as picnics or casual play. The park plan separates the supervisor’s office from visual connection to the picnic grounds, handball court, soccer fields, and fenced tennis courts, but these same areas are exposed to the street, making them feel vulnerable to drive by shootings. Earlier park remodels added concrete shell structures that exacerbate the violence and impede visibility: the basketball court was recently used as a means to climb onto the roofs of the park structures in order to shoot into the park.

We have two responsibilities: one is to make the physical changes that will help solve safety and activity issues; but the other, maybe the more important one, is to address the intangible qualities that affect the perception that the park is a dangerous place. The truly unique aspect of the park is its site. Its site, with the dramatic view of the city, gives the neighborhood its identity, helps the children understand where they are (perhaps who they are), and demonstrates the Southern California ecology. In the dense urban environment of East Los Angeles, the landscape of City Terrace Park may be the only natural landscape some children will see. And so one of the design team’s goals is to open up the view. Plans include removing the chain link barricades, the dark concrete sports shell, the dank, exposed picnic shell, and planting drought tolerant and native plants to make a green heart for the park, a heart which will beckon families and children in so they can become reaquainted with that which is already a part of their community.

The difference between designing private gardens and public landscapes is like the difference between making etchings and making monoprints—one is a lengthy, complicated study in black and white, while the other is spontaneous study in color. It is in the residential garden where the landscape can become the most unfettered and poetic.

For a writer’s garden in Santa Monica, now under construction, we are suggesting that the garden appear older than the house. Stone walls and

Plan for City Terrace Park, East Los Angeles.
stairs recall another time. The planting is organized into two rooms: a dry fragrant room with walls of lavenders, sages, and santolinas, and a lush, verdant room with a yarrow carpet surrounded by white roses. In the garden, as in the private house, we can explore possibilities, take risks, and question our answers. In my own garden (The Dreamer's Garden), also under construction, there are four rooms, each with its own use and theme: a cypress allee linked to a rondel expands the vista of the garden from the house, a terrace under two fragrant mock orange trees is used for entertaining, and a sunny rose garden is a surprise one discovers only from within the garden itself. Within these rooms I experiment with everything—from metaphoric content to plant materials. And, as in any other architecture, there are programmatic requirements here as well—there must be a field to match the distance a seven-year-old can throw a ball!

In conclusion, a landscape colleague of mine once made a point by saying that I would be unable to understand certain elements of landscape design because I am at heart an architect. To her that was an indictment. She was correct about the facts—that indeed I am an architect—but mistaken about the spirit. To her, being an architect meant controlling the landscape, using it as a means to forward an egotistical agenda. To me it represents the application of invention, sensitivity, and intention to whatever it is we have the opportunity to design.
Onto Pressing Matters

Ann E. Gray, AIA

Last summer I left my job as studio architect at Paramount Pictures, a move inspired by the announcement that there would be no more funding for capital projects. I started an architectural book publishing company called Balcony Press.

My vision for Balcony Press is to publish books focused on West Coast subject matters. The East Coast, considered by many to be the real historic foundation of our country, is often the focus of regional architectural topics, leaving the rich, multi-cultural history of the West largely ignored. The publishing industry, headquartered in New York, does not expose "the second layer" of talented designers, but rather focuses on a few superstars. The large Eastern publishing houses must guarantee a certain sales volume, making it difficult to afford marketing topics of interest to smaller groups. (Recently, this seemed apparent by the fact that the primary monograph on John Lautner was produced by European publisher.)

In beginning this venture, I had to consider the context of Balcony Press among other architectural publishers and how I could approach architectural publishing differently. Rizzoli International Publications has mastered the photographic profile of major architects; John Wiley & Sons has outdone themselves with well produced technical books; and Chronicle Books covers popular design; then there are well respected European presses which release books on obscure European architects or hard-to-read criticism. Balcony Press was formed to publish books about architecture that relate design issues to everyday human concerns. It tests the theory that non-architects will be interested in how design affects their lives without being condescended to, and architects will have their visions broadened by seeing the human context of their work.

Balcony Press' first book, Los Angeles: The End of the Rainbow was completed late last year. The author, Merry Ovnick had responded to my call for manuscripts. While publishing it, I discovered that Los Angeles pioneered many city-forming ideas, such as certain zoning laws, garden-style public housing, and many architectural styles and uses of materials. This has to do with our Hispanic roots, our climate, and the unique convergence of the oil, 

![Image of Los Angeles: The End of the Rainbow by Merry Ovnick.](image)
film, and aerospace industries here. I am sure there are similar stories that remain unexplored for much of the West. This summer Balcony Press will publish its second book, a large format featuring color photographs of the architectural details of the Gamble House in Pasadena (Greene & Greene, 1908).

I have been approached many times in the past to provide career advice, or to speak on the topic of unusual careers in architecture. Though I never considered my architectural career in entertainment very unusual, publishing is a more abstract way to use my architectural training. I have discovered several parallels between the process of developing a manuscript into a finished book and that required to complete a built project. My formal training as an architect has proven indispensable in this process.

Publishing requires similar project management skills. The publisher (in this case myself as Balcony Press) is the client. In this role, I am responsible for determining the project parameters, such as estimated sales, cost of production, and time of release. Next, a strategy for marketing the book must be developed before even accepting a manuscript, much like a spec developer must identify the financial feasibility and the tenant profile before hiring an architect. The roles of the writer and graphic designer are similar to that of the architect, with the printer acting as the contractor. It is important to preserve the spirit of what the writer and designer are trying to achieve, with modifications to meet budget and schedule demands for the project to remain viable. In order to do that, a productive partnership must be created between the writer, graphic designer, and printer to insure the physical parameters of manufacturing are clear before anyone has done too much work. For example, the printing press might most economically run a 6" x 9" format, much like a pocket book format, but an 8" x 8" book implies something more graphic in orientation where the impact in your hands is immediately one of geometry. As a publisher, if I want to develop a larger, vertically oriented book, then I must consider the cost of the paper wasted in trimmings. If I have a historical topic and want to use an antique typeface, how many words will fit on a page? The designer will often calculate a few different typefaces, do sample layouts for appearance, and together we select the typeface based on the final page count. Decisions are made for text stock, type of cover, and cover stock before any actual graphic layout is done.

My primary audience is the architectural reader, so I rely on my own instincts, as an architect, when selecting material to publish and determining the general book design. I have a basic sense, from years of browsing architectural book stores, what size, shape, binding, and layout will complement each manuscript. As an architect, I understand the importance of good illustrations and the way architects absorb information visually. Andrew Liang, who started Form Zero bookstore in Culver City, told me he has seen architects buy books without even opening them up—rendering the saying "judging a book by its cover" as no joke. Nevertheless, I review my ideas with a graphic designer, and I try never to second guess the details of their work. I've worked with hundreds of architects and designers through the years—acting mostly as the client. It is through this experience that I now appreciate a truly talented designer—and their work is a magical thing to behold. My philosophy is to hire a talented designer, make the project parameters clear, and let them run! By using designers with architectural sensibility I find there are few disagreements.
Many years of negotiating with contractors has prepared me for working with book printers. They like to suggest substitutions (e.g. “This uncoated stock would be a lot cheaper and, no, the photos won’t be as crisp”). The quoted estimates may not always tell the whole cost story. They may fail to submit samples (such as a cover laminate on the actual stock). And sometimes their subconsultants don’t show up for work. But through their expertise they can attend to details in a way a client or architect cannot. Most printers work unbelievable hours to meet a deadline, and their work can make everyone look like heroes when the book is complete.

Editorial work is done by free-lancers with a similar team approach. The author and I will agree on a goal for the length of the book. Then the author, editor and myself will gradually shape the book to maintain its focus and tone. This may sound like the way to create a great camel, but books produced by a small press reflect the vision of its owner, for better or worse, in a way books from a large press never could.

As publisher I make sure the book gets the attention of our distributor’s sales force. And we’re always trolling for new manuscripts. There are also author contracts, royalty accounting, and publicity campaigns. These elements of the business are completely foreign, but the fun of a career change is the steep learning curve—in this respect, publishing has not let me down. I stay connected with architecture through the subject matter I choose and through participation in the AIA. Though I must admit, I do miss the pace, excitement, and grunge of a challenging construction project.

I’ve always loved books and had considered publishing to be one of those professions that we all dream about but rarely pursue. Through my husband, Peter Shamray of Navigator Press, the manufacturing end of the business was demystified. I knew the rest of publishing duties would suit my professional strengths perfectly. While searching for a name for my press, I went through Pevsner’s Dictionary of Architecture and picked out my twenty favorite words that went with ‘Press’, finally narrowing it down to ‘Balcony’ because it wasn’t too intimidating (I wouldn’t have to spend a lot of time spelling it for people). This seemed to suit my philosophy of making architectural books accessible to non-architects. It is also an opportunity for raising the awareness of the public, through building a collection of books, rather than buildings.
I learned how to fly when I was in graduate school studying architecture. In a side conversation at a party, a professor remarked to me how fantastic it is to fly and to see spatial relations from an aerial perspective. That sparked my interest. I also had taken a glider ride and was really taken by the physical sensation of flying, the excitement of it. I had the opportunity to learn to fly with a friend, and as soon as I got my license I took my camera with me.

In architecture school, I was very interested in large regional-scale problems, and the aerial photograph at the time offered a virtual reality in relation to a map. I could actually see the imagined bird’s-eye view so commonly attributed to the particular cognition of the architect—the winged eye. I began to use photographs of site areas for basic land use analysis.

When I graduated I hit the recession of 1972-74 and turned to aerial photography to make a living. I started Landslides: I began marketing my existing slides to University slide libraries, and I sought clients who wanted surveys done of project areas. Pursuing a variety of ways to make a living doing aerial photography, I also made my own images which I sold in the fine art market. The commercial work, at least at the beginning, afforded me the opportunity to get up into a plane so that I could pursue my artistic work.

I have always loved to see issues as they are revealed from the air; there are so many lessons to learn—from abuse of the environment to good planning practices. I have become really interested in the transitions taking place in the landscape. The photography can record how the landscape is changing. We tend to think in very short time intervals—a year, fifteen years, twenty years—but in the scheme of things the surface of the earth is really changing like a kaleidoscope. If you look at a long enough time interval you can see this. But even in the time frame of one generation, the landscape changes in very small increments that go unrecognized. The changes are quite subtle, but the cumulative effect of those small increments gives the land a different look.

I have been focusing on trying to capture the increments. Much of the transformation is due to changes in technology. Building and materials technologies are changing rapidly. Wireless communication greatly alters land and settlement patterns because people can now do business from remote areas. Laser-guided leveling machines measure very exact three inch contours in a rice field. Pivot irrigators are being introduced, not only in arid areas but in the Dakotas, where the traditional wind rows of trees are now cut down to allow for the irrigators’ sweep. Then there are very simple things like the prevalent use of bright colored tarps everywhere from construction sites to farms where hay bales are wrapped.

Urban areas have an entirely different landscape. You have to readjust your eyes to look at the subtleties and nuances from patterns of urban blight to high density living patterns. My awareness of social, environmental, and planning issues effects how I frame things. I photograph a lot of anteced-
ents to the "new urbanism." I am now looking at sprawl patterns as well as compact development, not just new but existing ones—from small compact agricultural hamlets to old New England high density villages where the houses front right up on the street with back alleys.

These pre-automotive settlement patterns, which originally were mixed use, mixed income communities, exist throughout all parts of the country. But
they are not forming anymore. They haven't developed spontaneously since World War II. A lot of these villages are planning concepts that urban designers would die to be able to recreate today, but it is not happening. They look fabulous from the air. The public buildings are on the green; the commercial buildings have apartments on top; there's a factory on the edge of town; there are nice little quarter acre and eighth acre lots for housing sur-
Two Housing Developments, Laguna Beach, California, May 1987.

Two great rounding to what know what ours because beautiful towns define them oriented communities, and they Physically beautiful towns are referred to as holes because of their cultural distance from urban life. The general public is oblivious to the choices; they don't really know what the alternatives are. I think this will change. People are waking up to what they actually have when the alternatives are the mall or strip development. This has led me to more research-oriented work comparing dense patterns with sprawl patterns.

I have actually practiced this kind of research-oriented photography for some time. Boston has had a number of large projects involving transportation transformations which had huge economic impacts, and I worked on the projects from conception to completion, surveying the existing conditions and using the photographs in public hearings to explain the issues at hand. The photographs provide a great way to bring the public up to speed on major land use policy issues.

Regarding my perspective, I shoot from several points of view. I do frame very carefully when I shoot. Nothing in my book Look at the Land: Aerial Reflections on America (Rizzoli, 1993) is cropped. And I do care when my images are cropped; it devastates me. There is that side of me. But I have about 300,000 photographs in the library. Not every photograph is intended to be artistic; many are blatantly intended to document or record what is there. Often when I am traveling I take record images under less than ideal conditions, like a thumbnail sketch for ideas to be developed later on, a reference if I want to go back. Also, even as I concentrate on the composition, I intend it to convey meaning. That's because the photographs that really work are meaningful two-dimensional graphics. Ideally, the image speaks best for the message. These are powerful images that I am proud of because their patterns reveal underlying cultural and physical forces in our society.

In the air you can't help but see the interconnectedness of the multiple forces that constitute the earth. You see energy systems and resources and how they are utilized. Counterposing the vast population in Los Angeles with the clear-cutting in the northwest, you have a clear understanding of what is driving that use of materials. It is horrifying when, as far as the eye can see, the area has been cleared of trees. But when you look over the expanding population base you are amazed that not more has been cut. If you are looking at the issue of paper use, you can see the clear-cuts, then the paper mills with the effluents going directly into the streams; then outside of an urban area you see a huge landfill where they are burying paper—it seems crazy. In that sense, the inter-connectness of the planet is very clear.

I definitely came away from architecture school with a great awareness of these types of issues, not only the formal beauty of the physical landscape patterns but the social and ecological implications of land use. Also, I am motivated by a liberal, radical underlying drive to correct some of the things we all see. I want to capture the images, share my view, spread the alarm.
Tower in Salt Flats, Fremont, California, May 1980.
Plowing Creates An Envelope Pattern, Sacramento Valley, California, April 1980.

Cranberry Barn, Plymouth, Massachusetts, December 1977.
On a High Note

Ann Hughes

Ann Hughes, 1971 graduate of the Bachelor of Architecture program at University of California, Berkeley, now a soprano with the San Francisco Opera chorus, shares her experience in conversation with Architecture California.

In 1984, I made a trip with my family to Urbino, Italy for four months, and in order to go I had to turn off my architecture tap, so to speak. I turned away jobs and referred clients to other architects. It felt difficult at the time, but, using the trip as a time for reflection, I realized that between my architecture practice and my children I had not pursued my lifelong love of singing for years. I had been singing sporadically since childhood and had studied privately during college, but gradually it seemed there was no place for it. So it just slipped away without my really being aware.

My longing to sing began to wake me up in the middle of the night, and I knew I needed to respond in some way. I always knew that I loved singing more than anything, more even than architecture, although I pushed it out of my mind for practical reasons. When I looked at supporting myself, I had said “No, you can’t sing.” Singing, like many artistic careers, puts you in an extremely unstable situation. It is a career that chews up money for about ten years before you ever make any, if you’re lucky. So I had pursued my artistic impulses through architecture.

I had heard that singing in the San Francisco Opera chorus was a paying job, and when I returned from Urbino, I determined to put my architectural practice on hold while I made a try for it. I worked for a few months with my original voice teacher—by then in his eighties—and launched the experimental balloon by auditioning for the chorus without having any idea of my chances. It was exciting! I was hired for just one opera, which proved to be a great way of finding out how it might work. My kids were three and five then, but I was only gone a few nights a week.

I knew that architecture had used my intellect and my sense of space and desire for order in the physical environment. My early architectural experiences had often been compelling and absorbing, but I don’t recall having worked on a project later in my practice that really carried me away. When I began to sing again, I could feel myself expanding, drawing in and using my whole body, my emotions, my sensuality through a compelling, intense experience.

When the opportunity came the next year to audition for the full-time chorus (eight months a year) I was accepted, and then I was really floating for many months. In a sense, it was like being told every day: “Now, sit here and sing, and then you’ll go on stage and we’ll give you money.” I could not believe it! I almost completely lost my appetite for food, I was so constantly stimulated by music.

It was a very difficult time because my children were young, but I got through it because I was so ecstatic on a continual basis, more than I had ever been. I could do something that spoke to me on so many more levels, and it
was also practical. I could support my family without having to work ten hours five days a week as I would have had to if I had joined an architecture firm. My hours complemented my husband's so the children were not left without parents very often.

I would say that my personal evolution has been a task of trying to integrate more of the physical and emotional aspects of the human animal with the intellectual and spiritual side of life. Having babies and returning to singing became major markers for me on this path. Architecture is always there in my life, but now I carry over from my performing more awareness of its sensuality and the wordless physical experience it can engender.

How do I experience architecture like music? They both work with balance. I think of the exquisite cortile in the Ducal palace in Urbino—the size of the court and the slim proportion of the columns and arches is perfectly enhanced by the clarity and daintiness of the details. Likewise, the abruptly arrested development of a melodic line will throw you off balance, alert for the next sound. There is great force, great power in the magnificent Golden Gate Bridge, as in many great Wagner choruses. The soaring beyond earth feeling of some structures—S. Apollinare in Classe perhaps, I've experienced during the Act III finale of Verdi's Otello. The Pantheon in Rome and the short, perfect maestoso chorus in Mozart's La Clemenza di Tito....This correlating game has no end!

Also, I experience music three-dimensionally, volumetrically. Some musicians visualize the written score on paper as they work. Although I take intellectual steps to aid myself in memorizing music, I finally have to integrate it

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Excerpt from the choral score of the original Italian (with accompanying German translation) of the early opera Orfeo ed Euridice by Christoph Willibald Gluck as premiered in Vienna in 1772. This excerpt comes in Act Two in the Elysian Fields of Hades. A French libretto was employed for its performance in Paris in 1774, Orphée et Eurydice, which will be recorded by the San Francisco Opera this Spring.
spatially, in my whole body. I memorize more slowly, but I never forget!

There is one difference between the two activities; I don’t compose music. As a singer, I express the composer’s ideas. I do interpret, but I do not redesign.

There are forty-five full time members of the San Francisco Opera chorus, sometimes expanded for large productions to twice that size. We were the subject of a film In the Shadow of the Stars, which won the Oscar for best documentary film in 1992. All the musicians are unionized, and I’m currently a union rep for the American Guild of Musical Artists (AGMA). The union also covers many ballet companies, as well as solo singers and stage directors. The San Francisco Opera has issued many live videos, but in early May the company is looking forward to its first studio recording for Teldec—Gluck’s Orfée et Euridice, with Jennifer Larmore and Dawn Upshaw—using the state-of-the-art equipment at Skywalker Ranch.

In Montessori schools, the playful activities for young children, exploring and learning to manipulate their world, are properly called “works.” For me, it feels like I have come full circle: singing has the same self-propelling interest as child’s play, my work is play. I’m paid to play. I feel very fortunate.
For the Good of the State

Brian A. Sehnart, AIA

Architecture is a rich and diverse profession, I have always understood that. It is one of the reasons I enjoyed receiving my education at the University of Oregon, one of the reasons I became an architect, and one of the reasons that I have put so much effort into this profession. But surprise! Little did I know it would take me to where I am now.

WHAT DO I DO NOW?

Sometimes it seems like everything is an opportunity just waiting to happen. I have been fortunate, and my varied experiences continue to remind me what a extraordinary profession architecture is.

Presently I am involved in a unique career track as an architect in the Energy Services Department of a publicly owned utility company located in one of the fastest growing regions of California. In the early 1990s the Sacramento Municipal Utility District (SMUD) moved to the forefront as one of the nations leading, forward-thinking utilities. One of the objectives of SMUD’s energy services program is to offset the power needs of future growth and reduce the environmental impacts of that growth by initiating innovative energy efficiency programs. I have always been interested in energy efficiency, and have applied these principles when suitable for the client or the project.

This has now become my primary architectural focus. The SMUD Efficiency Advantage NCS (New Construction Services) program was formed in 1991 to provide design and technical services and consultant support to customers: planners, developers, architects, engineers, suppliers, and builders. Our goal is to influence and motivate the construction industry to design for and install appropriate, cost-effective energy efficiency measures in their projects. While SMUD presently provides monetary incentives to cover the costs of many of these measures, it is understood that incentives will be reduced significantly, or disappear, with the proposed deregulation of electric utility companies.

The NCS program brings a team of committed individuals to the table that work within the parameters of the architectural design process and provide needed assistance and expertise during all phases of design and construction. NCS advances a variety of services and varying levels of support ranging from computer building simulation, research, specification writing, economic cost benefit analysis and post-occupancy evaluation—what we refer to as commissioning. We also provide comparative solutions for project siting, the use of natural light and natural ventilation, increased levels of thermal insulation,

Sacramento County Sheriffs Substation. Architect, Reynolds Webber Architects, AIA.
efficient lighting, glazing and HVAC equipment, building materials and detailing.

In an attempt to deal with the complexities of the built environment, we are developing expertise beyond energy efficiency and more traditional environmental parameters. Concerns over pollution, "healthy" buildings, resource depletion and recycled building materials, and the response to other environmental impacts has influenced our work as design professionals. NCS acts as a resource, advocating when appropriate: early design analysis, building orientation, massing and materials, energy efficiency programming and budgeting, and advanced technologies including photovoltaics, light colored roofs, low energy window treatments, fuel cells, thermal energy storage, and electric vehicles. Through a recent alliance with the California Integrated Waste Management Board, we can coordinate counsel regarding alternative water and waste management systems, recycled and "healthy" building materials.

Consider this: for technologically advanced countries to continue to enjoy the comforts of the late twentieth century and for the developing world to ever hope to attain them, sustainability must become the cornerstone of our design philosophy. Rather than merely decreasing our dependence on fossil fuels and creating less pollution, we must come to design sustainable buildings that rely on renewable resources to produce some or all of their energy needs and create no pollution.

It is less costly to a project, and society, to deal with these issues during the initial stages of development, and there are greater opportunities for maximizing efficiency, reducing negative environmental impacts, and promoting healthy, more comfortable and productive environments. Our New Construction program puts its emphasis on "value added" design, striving to influence developments as early as possible in the process by monitoring city/county/community plans and preparing energy efficiency recommendations for
master plans, development criteria, and zoning guidelines.

WHAT'S IN A CAREER?

Mine has been what an architect would consider a fairly traditional architectural path. A five-year degree from an accredited University, followed by several years of apprenticeship. During the day, I designed and drafted my time away in an office, soaking up all the information I could gather. On off-hours I continued my architectural education: moonlighting on projects, taking classes, sketching and visiting the “angels in the architecture” whenever the opportunity arose.

During this period, I joined the AIA and gained a new appreciation for design and professional practice issues affecting the built environment...and I became an advocate for the profession. I studied diligently for and passed the architectural exams. I had the good fortune of working with unique firms on challenging projects. For many years I continued to hone my professional and architectural skills. In 1988 I moved my family to the growing community of Sacramento.

In the fall of 1991, as the economy continued to shrink and the recession continued to grow, inevitable cut-backs became apparent. It was unsettling, while at the same time a bit of a relief, that I found myself having to re-evalu-
Building Ecology Is My Destiny

Hal Levin

If architectural education is about problem solving, then I lucked out. Because now I am working on the biggest design problem yet: Building Ecology!

My two years designing schools in rural Colombia as a Peace Corps Volunteer architect helped expand my horizons beyond my narrow Oregon and California upbringing and the middle-class design problems posed at Wurster Hall, UCB. Given $300 budgets for one room schools with teachers’ living quarters, I learned to design with nature and a lot of volunteer community organized labor. Climates that close to the equator vary with the altitude. The eighteen school sites ranged from sea level tropical rain forest to 10,000 foot high plain—hot and steamy to cold and dry. Passive heating and cooling as well as daylighting were the only options. These schools were energy efficient by necessity, forcing me to learn what later became a valuable asset, design with climate.

After the Peace Corps I was determined to continue my work in community development and social change. I pursued social housing—farmworker, Native American, self-help, owner-builder, Model Cities—mostly dependent on the Federal government for subsidies. I became disenchanted with these programs as I learned they often helped those most who needed the help least, and those least who needed it most.

I consulted on the sites and services approach to squatter settlements around Mexico City with British housing guru John Turner, and to people who were designing or building their own homes, empowering people by putting them in charge of the important decisions. I was seeking anything that seemed socially meaningful.

In the mid-70s, when I moved to the Santa Cruz Mountains to learn to build so that I could give competent advice to others, I ran into code barriers to environmentally-sensible building. Everything that made sense was illegal: the use of recycled building materials including lumber, windows, plumbing, and electric fixtures; wastewater disposal in greywater systems; human waste disposal in compost toilets; and low voltage direct current wiring for power from wind generators and solar photovoltaic panels.

As I began to fight the authorities around the code issues, I was launched into leadership of a local group advocating building code reform. I chaired a County committee to advise the Board of Supervisors, and I practised what I had preached by showing that I could build myself an energy efficient, passive solar, 1,200 sq. ft. house for $13,000 using recycled windows from a military base, used plumbing fixtures, recycled lumber, and a variety of other dollar-and environment-conserving materials. After building a handful of houses and remodelling a couple of others while taking on a consultant role for people who wanted to do it themselves, I pursued ways to make a wider impact.

When Governor Jerry Brown appointed me to the State Board of Architectural Examiners, frequent meetings in airport hotels reminded me of how terribly uninhabitable—how unhealthy—much of what our licensees designed really was. Our mandate was to protect public health, safety, and welfare. It was clear to me that most
architects didn't have a clue as to what their buildings were doing to the occupants health.

When I began to research environmental health issues, I discovered that nearly everything I found offensive in modern institutional building environments was potentially hazardous to occupants health. I was given an advance copy of The Healthy House, a self-published book by the late Ken Kern, owner-builder advisor supreme. He had discovered lots of potential health hazards in housing—indoor air pollutants, electromagnetic fields, noise, certain kinds of light or its absence, and a host of others. I was fascinated. I began my own intensive research, reading scientific journal articles, contacting Federal and state government researchers, and talking to experts I encountered.

At this same time, in the summer of 1978, I began working at the research center at the College of Environmental Design at UC Berkeley and teaching in the Department of Architecture. It was an excellent context for me to dig further into the problems of indoor pollution, and I did. What I couldn't understand became the syllabus for my self-education in environmental and health science.

Several things became clear. Building analysis was static. Separate aspects of a building were treated as whole problems rather than as integrated parts of a larger system. Environmental problems in buildings resulted from a lack of coordination by the architects of all the increasingly specialized disciplines and consultants involved in making buildings. A pattern lead me to understand that buildings, their occupants, and the larger environment formed a system that was interdependent. To describe the systematic study of these relationships, I borrowed from ecology and systems theory to articulate the concept of "building ecology" in Progressive Architecture in 1981.

I became an indoor air quality expert, although my interests and concerns continued to be much broader. I have remained concerned about all the physical, social, and psychological factors that affect building occupants health, comfort, and well-being.

When the Steering Group of the AIA's new Committee on the Environment, assembled by Bob Berkebile to implement the Critical Planet Rescue Resolution from the 1990 AIA Convention, failed to win significant support beyond Susan Maxman's presidency, many of us turned to participating in charrettes for clients expressing interest in sustainable design. Solar energy, energy conservation, daylighting, recycled materials, no CFCs, waste water treatment on site, and a number of other so-called "sustainable design" strategies were implemented, as much as possible into every design project. But there was no rationale basis for choosing one strategy over another, other than the clients willingness and budget.

Still, knowledge of the harmful impacts of human activity on the global environment has increased significantly in recent years. Concern about potentially disastrous impacts on the balance of planetary processes that affect all forms of life, including humans, has become manifest in rapidly growing expressions of public awareness and concern. As a result, governments, corporations, and individuals have been increasingly adopting new goals and behaviors to slow the environmental degradation from human activity. Noteworthy examples are the energy conservation efforts that were born during the oil supply crises of the 1970s and more recent efforts to phase out the use of stratospheric ozone-depleting compounds used for refrigeration, aerosol propellants, and pesticides, among others.

Architects and their clients have increasingly attempted to improve the
environmental performance of building projects. The terms “sustainable design,” “green building,” and others have been applied to this growing tendency to practice environmentally-responsible design. To a great extent, the practice has consisted of the application of a litany of established methods, such as energy and water conservation, recycling of waste products, incorporation of used materials into new building products. These practices are being adopted increasingly by designers. Standards and guidelines are even being developed to inform these practices.

However, there is a total lack of any comprehensive assessment of building impacts on the environment. There is a lack of any analysis by designers of the relative environmental impacts of the various components of the “sustainable” building design, operation, and use practices that they employ. As a result, decisions are made among alternatives without benefit of any fundamental analysis of the outcomes. There is currently no way to prioritize environmentally protective or benign design alternatives when they may conflict or to choose from among harmful ones.

I am now working on an EPA research project, the goal of which is to characterize (describe and quantify) the overall environmental impacts of buildings on the environment, in order to inform actions related to planning, design, construction, use, and disposal or reuse of buildings.

The global warming, water pollution, air pollution, resource consumption, ozone depletion, habitat destruction, and other environmental impacts of buildings are being quantified in order to assess their relative magnitudes. This will allow determination of the significance of building contribution to the overall environmental hazard. A scoring system will then allow comparison of the degree of harm contributed by various phases of a building’s life cycle. This information together with a rating or scoring of the relative seriousness of the environmental degradation will allow a ranking of the importance of the various environmental impacts created by building design, construction, use, and disposal (or reuse). The scoring system will require the development of specific assignable values to environmental harm, including biological, social, ethical, and moral considerations.

The ultimate outcome of the project will be an analytical framework, tools, and data that will “translate” various general properties of a building and its materials and equipment into an environmental impact score. This score will enable designers to assess alternatives on-line in real time as they investigate various implications of design alternatives, and seek to achieve sustainable design.

True sustainability, however, means establishing a planetary system that can continue indefinitely. This means closed-loop systems of resources, equity among the haves and the have-nots, and a major shift in the efficiency of our resource consumption. Many believe that, while significant changes are required in order to accomplish this, we can maintain a European standard of living in a sustainable world. But the synthetic problem solving I learned through architectural education, seasoned by years of research and experimentation, leads me to embrace an inevitable fact: energy and resource consumption must be cut drastically. And this can only be accomplished if efficiencies are increased commensurately. This will require a new mode of living unlike anything we know. In the end we must do this, or planetary environmental changes such as global warming, ozone depletion, and scarce resources will change our living patterns for us, perhaps more than we can tolerate as a species.
Los Angeles into the Future: Two Hills One Vision

Elpidio Rocha

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La vida no es lo que vivimos. La vida es el honor y el recuerdo, por eso mas vale morir con El Pueblo vivo, y no vivir con El Pueblo muerto!

When it's all-American dog-eat-dog, everybody may go hungry.

A study focusing on American individualism has found that American children are competitive to an extent I think we all would consider irrational. They repeatedly denied themselves the possibility of rewards because, in order to receive those rewards, they had to work cooperatively with others. This was in stark contrast to children from other countries (for example, Mexico) who most often received the offered rewards because they chose cooperation over individualistic competition for all or nothing. The extreme competitiveness of American children is also found in American adults: in business, in sports, in politics, and in academia. What propels us, as a culture, toward this competitiveness which overrides our self-interest?

In order to begin to answer this question we need to examine the development of the West and of Western culture. The discovery of the "West" was fueled by the development of science and technology in a genocidal quest for wealth. During this period, nature came to be seen as subordinate, as controllable, and as a limitless resource to be used for the benefit of mankind. The Earth ceased to be sacred. Western religion turned to what was useful and declared that to be Truth. Utilitarianism became the moral benchmark as religious prescriptions of "stewardship of the earth" urged us to use the land to our best interest.

However, not only did nature suffer at the hands of the "Barbarians," people also suffered. People of color, seen as part of the animal world, were associated with unfree labor and were conquered, killed, and subjugated. During this process the Anglo-European suffered as well; in his quest for dominance, he also mutilated himself. Denying his own humanity and the need for emotional community, he developed a culture of "self-renunciation" that rigidly confined human nature, desire, and freedom. This self-imprisonment produced a rage, now buried deep in our cultural recesses, which threatens to destroy us all as we mindlessly continue on our journey of destruction. We now can no longer see the course of our journey as it threatens to overwhelm us. We can no longer see that there are other ways of 'being' in and with the world.

[I]ron cages...emerged in American society as the self was placed in confinement, its emotions controlled, and its spirit subdued. As
white men in power separated themselves from Blacks and Indians, they promoted a republican ideology rooted in the Protestant ethic and devised what may be called republican "iron cages" to help Americans rule the emotional part of themselves. Rational, ascetic, and self-governing individuals, republicans were expected to fear spontaneity and resist serendipity...ascetic self-control and individualism isolated people from each other and helped to make possible the ascendancy of bureaucratic corporate capitalism [corporate iron cages]; both, in turn, in their domination of the instinctual life and their denial of human completeness, generated the discontent and rage which gave power to the demonic 'iron cage' promising white Americans regeneration through violence.5

Although the West borrowed fundamental beliefs and ideas from the great African and Asian world cultures, (for example, the universe as a beautiful, well ordered cosmos), it also borrowed ideas concerning social ordering, for example taking from Greek democracy the recognition of free males alone as worthy of citizenship, excluding women and slaves.6

While the Enlightenment brought us many benefits from technology and science, it also began our lemming-like "march to the sea." Artists and intellectuals were enlisted to help alter our consciousness, in order to justify the rape of Mother Earth. We were taught to see Her as only a step-mother; we learned to see the planet as a mechanism, part of the industrial machine, rather than as an organism, part of an ecological whole.

Science had proved to [artists and intellectuals] that inequality between men and women, like that among races, was a simple inexorable law of nature...the intellectual assumptions which underlie the turn of the century's cultural war on woman also permitted the implementation of the genocidal race theories of Nazi Germany.7

In his prophetic novel Moby Dick, Herman Melville describes the condition of Western man.8 The Captain, Ahab, represents white males in American society, constrained, but also energized by their self-inflicted "iron cages," denying their humanity and propelling themselves in a fury of rage toward self-destruction. Ahab had the technology and the science to survive, but he lacked his essential humanness. The members of the multicultural crew were able to work together, fueling the industrial machine and Ahab toward certain death, but they were unable to transcend their cultures, even in order to save themselves. They lacked a sense of community. They lacked a vision. This, then, is our cultural heritage. This is where we are now, the point at which we must begin. The children described so compellingly in the study on American individualism could learn cooperation. All was not lost for these young people. They had hope. My question is: "Where lies America's hope?"

Approximately one hundred years ago, in 1889, at the World's Columbian Exposition in Chicago, America demonstrated our world leadership in science and technology with which we proudly proclaimed our control of nature. This was juxtaposed with Pacific Rim cultures that had to live with nature, which were represented by the exhibition of their architectures, e.g. a Japanese house and images of Mayan structures. The Greene brothers and Frank Lloyd Wright visited the exhibit. Later, taking inspiration from the Pacific Rim, they produced the Gamble House in Pasadena and the Hollyhock House on Olive Hill—what we now call Barnsdall Park in Los Angeles.
During this time, those inspired by the West created a rational modern architecture, claiming that it would create a rational modern society. This was an expression of the "iron cages" Takaki describes, imprisoning white men, denying them their wholeness and separating them from their humanity. Rational man became the symbol of success, of virtue, and of the true American spirit. In Los Angeles, this is presented to us symbolically in architectural terms by Bunker Hill.

The history of Mexico is the history of a man seeking his parentage, his origins...He wants to be a sun again, to return to the center of that life from which he was separated [by the European]...to re-establish the bonds that unite us with the universe. Nothing could be further from his feeling than the solitude of the North American. He has built his own world and it is built in his own image: it is his mirror. But now he cannot recognize himself in his inhuman objects, nor in his fellows. His creations, like those of an inept sorcerer, no longer obey him. He is alone among his works, lost...in a 'wilderness of mirrors'.

Our Western values have brought us to an abyss. We are experiencing national environmental and social crises. It is necessary, now, to true our path.

In Los Angeles we are capable, unlike the crew of the Pequod, of providing an answer and leading the rest of the nation. We are undergoing a paradigm shift from the Western way of understanding the world, as a mechanism, toward the Western, Pacific Rim, way of understanding the world, as an organism.

Not long after the arrival of the original forty-four Mexicanos at the settlement of Los Angeles, white Europeans built their structures on the foundations of the original settlers' adobes. The original Calle de la Eternidad was renamed "Broadway" and "Brooklyn." Los Angeles was colonized. Its Mexican settlers now lived in what we call Internal Colonies. While not geographically separated from their Colonizers, as India was from England, the social relations which developed were those of Colonizer and Colonized.

These social relations remain viable and in place to this day, supported by many mechanisms. Some of these are subtle and some (such as the actions of former LAPD Chief Daryl Gates) are not subtle at all. The process by which these social relations have persisted is called social reproduction. This refers to the methods by means of which relations of domination persist and are reproduced with little effort from those who benefit from the domination. The system of mechanisms is "capable of objectively ensuring the reproduction of the established order."

Reproducing social relationships (relationships between groups) over time necessarily and essentially involves space. Social relations and spatial structures are inseparable and must both be considered as they act recursively, shaping and at the same time being shaped by the other. Social relations are at once constituted through, mediated by, and constrained by space. Thus, not only is space the outcome of social relations, it is also the medium of those relation-
ships. Individuals and groups therefore are not only shaped by the spatial contexts in which they live, they are also active in their articulation.

Therein lies our opportunity. We, as Chicanos, as Latinos and Mexican-Americans, have the potential and the opportunity to shape our lives and our city. We have the responsibility to make demands, to fight oppression, to battle the Colonizer. Unlike the crew of the Pequod, we in Los Angeles do have a vision. We do have a sense of community. We will survive.

In Los Angeles, the “majority” (Anglo-Europeans) is now the minority. Latinos are the fastest growing segment of the population and are represented, in large numbers, in virtually every community and municipality in metropolitan Los Angeles. In April of 1994, Los Angeles renamed Brooklyn Avenue Avenida Cesar Chavez in honor of our Chicano hero. La Calle de la Eternidad is being reborn.

The two views of the world Melville presented to us in Moby Dick are expressed in Los Angeles by two symbolic forms—two hills: two visions. The two hills, Olive Hill and Bunker Hill, are like mountain tops peeking through the clouds, giving just a hint of the enormous substructures which support and give life to their existence.

Bunker Hill is the site of LA’s downtown corporate center. Bunkers are military fortifications and Boston’s Bunker Hill is the site of a historic Revolutionary battle. Below Bunker Hill in the City of the Angels I see a sprawl of serpents (some, ironically, called “free”ways) which arrived during the days of federal urban renewal and white flight. They were sent to control our people, to isolate us from each other, to destroy our communities. These serpents crawled in from the sea, devoured our houses, and separated our families. We survived, and the serpents have been turned to stone by the Quetzalcoatl, the Mexican flowered serpent who gave us strength. He now serves as La Calle de la Eternidad.

The Bunker Hill plan is inspired by the Utopian radiant city plan, separating vehicular and pedestrian traffic as well as desirables from undesirables. The architecture embodies Western values of scientism and the superiority of rational man. Its high-tech buildings, enveloped in glass curtains, are surrounded by European plazas and modern art. They are the focus of an urban apartheid, deeply entrenched in the soul of Los Angeles, a symbol of corporate power. The capture of information and cultural space by international corporatism continues in the acquisition of sites of public expression. The architects of the Los Angeles Downtown Strategic Plan (an all-white team in a city where people of color are now the majority) have designated Bunker Hill the “heart” of Los Angeles.

Olive Hill exists in stark contrast to Bunker Hill. Olive trees are symbols of peace, and the Mount of Olives is the traditional site of the Garden of Gethsemane and of Jesus’ Ascension into Heaven. The imagery of Olive Hill and the Hollyhock House are symbolic of a new American art and architecture whose forms draw symbolic as well as moral inspiration from Pacific Rim cultures. Olive Hill is the site of Barnsdall Municipal Art Park dedicated to the education of the community, particularly the children, in the arts. Aline Barnsdall, desiring to create a new American form of performance art, commissioned Frank Lloyd Wright to design a master plan for the park and for her home, the Hollyhock House. Wright accepted the commission as a challenge to create an indigenous American architecture inspired by the Native American and Pre-Columbian Maya and Aztec architecture.

Wright saw in the architecture of the Maya primitive abstraction of
Americans must question technology, and finance. Hill politicians, for Mother Earth, having no understanding of education, of sanctuary...had it not changed so much culturally. 16

Mrs. Barnsdall was the daughter of a wealthy oil man who represented the "other" side of life, always rushing, having no time for anything but business, drilling oil, and taking from Mother Earth. His daughter, on the other hand, dedicated Olive Hill as a sanctuary for children to learn the arts. Her father could not enjoy the fruits of his labor; she proudly proclaimed them for him and gave Olive Hill to the City of Los Angeles.

In giving the park I have thought of my father, of the happiness of children and young people with Olive Hill as a place to work and play, a background for their dreams and memories...no country can be great until the least of its citizens has been touched by beauty, truth, and freedom; unless all three radiate from this little hill, it is nothing. 15

There are architectural educators, politicians, and others that see Bunker Hill as the sole heart of Los Angeles instead of understanding it as science, technology, and finance. It needs to be wed to Olive Hill, the symbolic form of education, art, and spirituality, to create a holistic view of the planet, to create one vision. In order to do this, we Americans must question our collective myths and our cherished ideals.

The West...has reached that point which comes to all civilizations if they are not to decline. They must transform themselves by learning from others. That is to say that the other civilizations we borrowed and stole from...lasted...for far longer than we have. And they have not changed so much culturally. 16

As Chicanos, Latinos, Mexicanos, and Mexican-Americans, we must resist the values of the dominant paradigm, of the "Barbarian West." And we will continue to resist assimilation into a culture that makes us less than whole, and, therefore, less than we are. It will not succeed in losing us in a "wilderness of mirrors." We will continue working at the edge—always striving toward the center—through the appropriation and transformation of public spaces to celebrate our myths through rituals and symbols that hold a vision for a sustainable future. Saber es Poder: when there is knowledge there is a way, there is power.

The Pacific Rim is a dramatic, spectacular topography of mountains, valleys, streams, rivers, and beaches created by the Ring of Fire volcanos, fires, and earthquakes that began many hundred thousand years ago and continue to this day. From the cultures of the Pacific Rim we find that the basis of life is harmony between humans and nature. In these worldviews the needs of the individual are subsumed under the needs of community. In a world of finite resources, people must accept constraints on consumption. The indigenous peoples of the Pacific Rim developed myths, rituals, ceremonies and symbols in order to coexist with nature. Those practices are still with us in our Internal Colonies, the neighborhoods of the descendants of the indigenous peoples of the Pacific Rim.

Symbols are socially constructed. If there are no symbols, there are no ideas and a society surely, slowly dies. A people's values are translated into public policy through its art. The values of the European immigrants who came to the Atlantic Coast a few hundred years ago made policies that created a great industrial and technological nation by oppressing and economically exploiting people of color. This ideology is still being proclaimed in Los
Angeles' grand public spaces. Yet within our public spaces there are also islands of hope, for example, El Pueblo de Los Angeles Historic Monument, Chinatown, and Little Tokyo.

Our goal is to assist in transforming the dominant American culture to make us all ecologically and spiritually whole, to participate in transforming our dominant symbols, to wed the best of two worlds, the West and the Pacific Rim, so that we may all benefit. Like the children who initially denied themselves rewards because they did not want to work together, we, too, can learn to change our ways to survive—unlike the crew of the Pequod.

Notes

1. From Oscar Zeta Acosta, *The Revolt of the Cockroach People.*
3. Linden et al., ibid.
5. Takaki, ibid., ix-x.
8. Takaki, op.cit.
12. For example, the Spanish Stairs by landscape architect Lawrence Halprin.
15. Hoffman, op.cit.
“The Airplane and the Garden City”: Regional Transformations During World War II

Greg Hise

Greg Hise is an urban historian and Assistant Professor in the School of Urban and Regional Planning, University of Southern California. His research and writing examines modern community planning, the structure of building practice, and contemporary metropolitan landscapes—projects informed by his prior training and employment in construction and architecture. An expanded version of this article will appear in the catalog that accompanies the exhibition World War II and the American Dream at the National Building Museum in Washington, D.C. through December 31, 1995. Exhibition catalog by Donald Albrecht, ed., World War II and the American Dream: How Wartime Building Changed the Nation, co-published by the National Building Museum and MIT Press (Cambridge: MIT Press, 1995).

In 1945, noted urban theorist Lewis Mumford articulated his vision for the postwar era, a time when the airplane would be “as much a part of our daily lives as the motor car.”1 He wrote, “At the beginning of the twentieth-century, two great inventions took form before our eyes: the airplane and the Garden City; both harbingers of a new age.” Mumford believed this new transportation technology would transform urban regions into Garden Cities with wide belts of open land. Contrary to Mumford’s assessment, however, the coupling of the airplane and the Garden City was already in place, although not in a form the doyen of rational urbanism would endorse.

World War II transformed the American city. Three factors—modern community planning, industrial location, and migration—informed these changes. During the war, Federal policies designed to meet defense production quotas intersected with the objectives of regional planners and social reformers. The War Production Board, for example, encouraged defense contractors to disperse manufacturing. Design professionals promoted the garden suburb, a complete community composed of housing, neighborhood services, schools, and retail centers, all in close proximity to employment. Private-sector builders capitalized on these initiatives. In fact, the war accelerated the emergence of community builders, who consolidated land subdivision, construction, and sales into a single organization. Although the implications of this new spatial and social order were national in scope, western cities—Los Angeles in particular—prefigured future trends. In short, defense-related manufacturing was the necessary foundation for home builders to experiment in constructing communities for balanced living. These large-scale developments were in many cases virtually new towns, and they ultimately helped shape America’s contemporary urban landscape.
Modern community planning was a two-part package. The first component was a low-cost, efficient dwelling that met minimum requirements for space, light, and air. This basic house had its roots in the workingman's bungalow and mail-order housing from the 1910s and 1920s. During the 1920s and 1930s, social and environmental reformers, industrial engineers, and advocates for building prefabrication, ranging from the American Public Health Association to the National Forest Products Laboratory, worked independently and in concert to identify and codify a standard dwelling unit. Following passage of the 1934 Housing Act, the Federal Housing Administration adopted a popular plan variant, a square, four-room plus bath, basementless unit they designated the minimal house.

This effort to transform home building into a modern industry extended beyond the house-type to encompass quantity production and site planning. Reformers conceived the minimal house as a basic module for self-contained, satellite communities, the second component of the package. Mumford, an outspoken proponent for modern community planning, drew explicit links between an individual dwelling and the community: "A good house can not exist in a city by itself; it can only come as part of a community plan, and until we learn to design our communities and our houses cooperatively, treating each separate unit as part of the whole, we shall not succeed much better than the jerry-builder does today." 2

Clarence Perry offered the most comprehensive and influential articulation of these principles in his 1920s design for a "neighborhood unit." Formally the concept employed superblock planning and a hierarchical, functionally segregated street system. Major arterials, built to encourage and accommodate through traffic, would bound each neighborhood. Internal streets were designed for circulation and access only. Retail shops were placed at specific intersections; the implication, in plan, was that contiguous, interlocking units would form a commercial district.
Although the neighborhood unit, and, more broadly, modern community planning presented a highly coordinated landscape, these design professionals and theorists remained silent concerning implementation. In their polemic “New Homes for a New Deal,” Mumford and Henry Wright articulated the need for scale economies in planning and production including comprehensive plot and building design, centralized material purchasing, and rationalized site operations. Implementation, however, required an unintended convergence of defense-related government policy with the objectives of large-scale community builders.

The 1931 President’s Conference on Housing and Home Building and subsequent New Deal agencies provided an institutional framework for the recombination of these constituencies. The Federal Housing Administration (FHA) played a critical role in this process; its loan programs revolutionized conditions for purchasing a dwelling. The FHA’s mortgage insurance incentive assured that their technical bulletin series became a blueprint for community design. For example, Bulletin No. 5, “Planning Neighborhoods for Small Houses,” included diagrams illustrating “Good” and “Bad” development patterns. “Good” site plans applied differentiated street patterns to restrict traffic hazards and avoid visual monotony. The FHA promoted a Radburn-type plan based on superblock principles with a minimum area devoted to circulation and more emphasis on recreation.

During the war, private builders followed FHA guidelines to secure guaranteed mortgage and construction financing. They produced over one million housing units, which represented eighty percent of the total built, and home ownership climbed significantly. The fifteen-percent increase from 1940-1945 outpaced any comparable time span on record.

Local conditions informed the nature and timing of defense housing, which varied within and across regions. In the San Francisco Bay Area, for example, the Federal Works Agency oversaw a program of temporary housing, trailers, and demountable dormitory units. The urgent need for community-scale projects was underscored by a local civil defense official who, in March 1941, noted that “whole new towns are springing up, a thousand houses at a clip, where yesterday were empty fields, and where today there are no provisions for sewers, playgrounds, fire and police protection, hospital facilities, and all other local services.”

In Los Angeles housing was available, albeit not always in close proximity to employment. Immediately preceding the war, the pace of residential construction there compared favorably to the 1920s boom; in 1941, there were over sixty thousand units for sale or rent. In San Diego, by contrast, home building was stagnant; there were only five-and-a-half thousand dwellings available, and the city was experiencing an immediate and severe housing shortage. Acknowledging the marked discrepancies between regions and among cities within a given region does not reduce a discussion of wartime production, housing, and jobs to mere particularism. On the contrary, modern community planning and industrial location informed defense housing projects throughout the country.

Home builders anticipated an influx of defense workers drawn by employment centers and selected sites in close proximity to new production for community projects; Westchester, ten miles southeast of Los Angeles’ City Hall, is a premier example. In just three years, four sets of developers converted a five-square-mile parcel owned and master planned by Security Bank into a complete community for 10,000 residents housed in 3,230 units. The devel-
Defense related community development was not restricted to prime contract sites such as Los Angeles, and the demand for housing and services encouraged modern community planning in mid-size and smaller cities as well. As the war progressed, new materials, security concerns, and the need to reduce transit time and costs encouraged the War Production Board and the Plant Site Board to develop satellite facilities. Planner Clarence Stein argued that the threat of air strikes demanded a national policy for dispersing industry beyond existing population and manufacturing centers, where residential areas could be separated from factories and other communities by open greenbelts.

By early 1942, the War Production Board had directed prime contractors to construct and manage decentralized modification centers and feeder plants. These took two forms, the first were company towns designed to bring the labor force to strategic sites. More important in terms of modern community planning and the postwar landscape were projects along the then urban periphery such as Midwest City, Oklahoma. Nine miles southeast of Oklahoma City, an enterprising community builder secured a 330-acre tract opposite a new Douglas cargo plane plant.

Wall panels for “Homes at Wholesale”, Westchester (1942). Courtesy of Regional History Center, University of Southern California, Special Collections.
Working with the Army Air Service Command, the state FHA office, Douglas officials, and sixteen Oklahoma builders, W.P. Atkinson created an “air industry city” promoted in Insured Mortgage Portfolio as the “first FHA city.” In 1944 the Urban Land Institute (ULI) featured an aerial of Midwest City on the cover of Urban Land under the heading “Model Community.”

Planners and public officials equivocated when predicting whether the secession of hostilities would alter or stem migration. Homer Hoyt, a location theorist and FHA consultant, predicted a vast, floating postwar population and questioned whether postwar urban development would follow old patterns or if a new structure might usher in a new type of city. In response, planners, industrialists, business leaders, and developers from regional centers such as Los Angeles began to explore ways to capitalize on wartime industry in the postwar era.

The Los Angeles Regional Planning Commission (RPC) spoke directly to this intersection of modern community planning and industrial dispersion. Their vision of a coordinated metropolitan region comprised of discrete, satellite communities was consistent with a fifty year discourse concerning the creation of a new kind of city. In "Congestion de luxe: do we want it?" (1926), Clarence Dykstra argued that contrary to the "centralization complex" manifest in east coast cities, "the city of the future ought to be an harmoniously developed community of local centers." Dykstra believed that the "natural reaction of a population anywhere is to spread out to sub-centers [and] build up communities and business districts." In Los Angeles he foresaw "a great city population which for the most part lives near its work, has its individual [homes] and gardens, finds its market and commercialized recreational facilities right around the corner, and which because of these things, can develop a neighborhood with all that it means."

One of the industries the RPC focused on was aircraft manufacturing. During the defense emergency, airframe assembly and ancillary industries became one of the region’s most significant manufacturing sectors in terms of jobs, payroll, and multipliers. Postwar conversion posed a vexing question: the peacetime market could not guarantee output comparable to what the war had generated. Along with the Los Angeles Board of Public Works and Bureau of Engineering, the RPC undertook or revised a series of land use surveys as projections for postwar public works. The objective was to construct an infrastructure attractive to additional defense contracts. The Master Plan for Airports (1940, revised 1945) was a critical component with direct ties to military and
defense. The plan identified fifty air-strips located judiciously across the region. It was a crystalline diagram, drawn as self-fulfilling prophecy, simultaneously a reflection, reinforcement, and projection of the region's spatial pattern. Business and civic leaders, planners, and organized labor in San Francisco, Oakland, and San Diego, to cite only examples in California, also campaigned and secured funding for new or expanded airport facilities.9

Thus the transformation Mumford predicted was already underway. The airplane and Garden City ideals had already transformed Los Angeles and Southern California, and planners, business leaders, and civic elites in other metropolitan areas were grappling with the spatial implications of industrial and residential dispersion in the postwar era. Urban expansion was proceeding, however, in a manner contrary to what Mumford and the regionalists envisioned. For Mumford, Los Angeles and other sprawling regional cities were the Garden City's antithesis. In a New Yorker column, Mumford denounced the physical planning at the 1939 New York World's Fair "Town of Tomorrow" calling it a "Coney Island out of Los Angeles." The exhibition's streets accounted for "traffic circulation...as ample as Wilshire Boulevard" requiring everyone to "spend the greater part of the day circulating needless distances," a condition he ascribed to the "modern metropolis."10

Others viewed postwar prospects in a more positive light. Addressing the legacy of the defense effort for large-scale planning and community design, New Pencil Points editor Kenneth Reid argued that the "needs of war housing brought problems of greater magnitude, involving whole communities of hundreds and even thousands of houses. These projects had to have shops and stores, schools, community centers, and other facilities to serve [residents]."

According to the planner Tracy Auger, this was precisely what American servicemen went to war for. "The American home that we are fighting for is not just a well-built building, not even a building equipped with the gleaming bathtubs and refrigerators. It is a dwelling place composed of house, neighborhood, and community rolled into one."11

A Los Angeles example illustrates the type of development Reid and Auger envisioned. Following the war, the Regional Planning Commission fixed the "area of greatest growth at...a radius fifteen miles from the Civic Center." Within the 15-mile circle, sections such as the 212-square-mile San Fernando Valley were still predominantly agricultural. A 1943 "Los Angeles Master Plan" document stated that the "Valley should be planned as a self-contained unit...industry and commerce should be introduced to supplement the agricultural economy and supply employment for present and future residents." According to Director of Planning Charles Bennett, the plan would result in a "regional city...a number of well-planned and moderately sized communities separated by agricultural areas."

Panorama City epitomized the convergence of this planning ideal, the decentralized regional city, with the production emphasis and community building expertise of a corporation such as Kaiser Community Homes. Panorama City underscores the point that the complete community, including the requisite proximity to employment, continued to be a highly touted objective, actively pursued by planners, builders, and home buyers. Analyzing postwar development patterns in California, Edward Eichler and Marshall Kaplan wrote: "[l]f suburbia means large groups of housing developments with little or no major shopping facilities or employment centers, most of the
development in California in the last fifteen years should be given another name.”

Historians routinely single out William Levitt and Sons and their Levittowns in Long Island and Pennsylvania as the paradigm of postwar community building. Often presented as revolutionary, Levitt's postwar developments were in fact part of an ongoing evolution. The FHA’s Technical Bulletins were a paean to rationalization and modern industrial organization. American Builder and other trade journals alerted readers to the advantages these innovations could secure. During the war, Levitt adopted many of the time- and cost-saving methods reformers advocated and that Los Angeles community builders had already put into practice. At the New York Levittown, the builder capitalized on the employment offered by Grumman Aviation, Republic Aviation, and other aircraft, later aerospace, firms. The Pennsylvania project was sited in close proximity to U.S. Steel’s Fairless Works. The importance of this link is generally overlooked.

Surveying our contemporary metropolitan landscape, the home-front legacy seems obscured by fifty years of city building. Recent accounts of postwar urbanism refer to the outer city, postsuburb, and technoburb as scattered satellites in a galactic metropolis. In his better-known "edge city" thesis, Joel Garreau asserts that in the past thirty years Americans have "launched the most sweeping change in one-hundred years in how they live, work, and play." According to Garreau, edge cities are the "third wave" in a causal ocean that has inundated the postwar landscape. The first wave was residential, followed in turn by retail and services and more recently, business and jobs. The latter, he argues, followed people "weary of returning downtown for the necessities of life.”

In his uncritical examination of our contemporary metropolitan landscape, Garreau reiterates the traditional suburban thesis. But edge cities are not, as Garreau states, exclusively post-war phenomena. We can trace their conceptual roots back to Ebenezer Howard’s Garden City and the planned dispersion of the nineteenth-century industrial city. America’s World War II defense programs accelerated this urban morphology when epochal migration coupled with rapid industrial expansion and a dispersed spatial pattern for aircraft and other industry. Garreau is incorrect as well when he claims that housing led and continues to lead urban expansion. Rather, wartime satellite developments were dynamic centers with a mix of land uses. Industry provided an economic base, jobs and people, the foundation necessary for large-scale builders’ experiments in modern community planning.

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The Architect of the New Public Realm

Harvey B. Gantt, FAIA

Harvey Gantt, former mayor of Charlotte, North Carolina, and practicing architect for thirty years, explains the relationship between his views as an architect and as a major political advocate for the public urban realm. These comments are based on a speech he delivered February 7, 1994 at the New Public Realm Symposium in New York City, sponsored by the New York Chapter of Architects, Designers, and Planners for Social Responsibility and Progressive Architecture magazine.

I am a child of the city. Indeed, I grew up in historic Charleston, South Carolina, an eighteenth century city that retains its charming urban fabric primarily, I think, because it was largely missed by the industrial revolution of the late nineteenth century.

There was something about Charleston that I understood early on even as boy living under rigid segregation. I understood that, though my own private home was small and crowded, there was something special about the street patterns, the porches that addressed the sidewalks, the public squares, the parks where we played ball, and the schoolhouse where I made my first "public" speech—all of these public things made my private realm bearable, and enriching. Jane Jacobs reminded us a generation ago what cities are truly all about—the richness and diversity of life where public places blend with private spaces to form the city. So the words "public realm"—although a relatively new term in vogue recently—for me, evolved to mean something both in a physical and spiritual sense. It was institutions of the government and the civic realm, as well as the physical artifacts that organize, regulate, and manage the activities of people who live close together—the whole of which made for an environment of reasonable civility and relatively peaceful coexistence. The public realm is hardware: sidewalks, streets, buses, utilities, schools, etc. But it is also software: policemen, teachers, attitudes, sense of opportunity for advancement, quality of education, or a community’s positive or negative outlook for the future.

So when I look back in retrospect at growing up in Charleston, not only did I enjoy and bless the environment of rich architecture, decent schools, and good parks, but I remember how that environment encouraged my neighborhood of working class families to pursue the American Dream for themselves, and perhaps even more important, to make sure that their children moved further up the ladder than they did.

The pursuit of architecture as a career seemed a healthy way to satisfy my hunger for urban life. The world of cities today has changed dramatically from my childhood, and it seems at times that my own profession has been caught up in a time warp—refusing to focus seriously on the forces that threaten the viability of the cities that we all dream about. Our magazines and journals too often reflect our relatively shallow understanding of the political, economic, and social upheaval going on.
in central city America. Most of us still paint wonderful renderings of water-front renewals, centrifuged neighborhoods with well designed housing, shopping spaces with wonderful middle-class folks strolling through delightful settings of high price boutiques and fancy restaurants.

Some of this truly exists, in cities like New York. But we must surely know that in general cities are under siege! That in many ways, our pencils are impotent in the face of these mighty forces. The automobile has exploded the urban landscape and sent our population scattering over an increasingly larger area. Suburbia has given new meaning to the configuration of cities. And the public realm is shrinking in size, often inaccessible to a diverse population. Not only is there a physical separation, but an economic and racial separation as well! Yet, the new information superhighway will further shrink the public realm as we know it, and there will be less need for people to use the public realm for information gathering, for transportation, for recreation, or even for meeting your neighbors face-to-face.

But by far the greatest threat to cities is the isolation of the have-nots—the masses of poor and minority citizens who often find themselves trapped in an environment that borders on nihilism. Crime and violence, perceived or real, has produced a fear and repulsion that reflects itself in rapid flight, declining public support, lack of funding for the very facilities that need upgrading. So the major public school systems of our major cities are among the poorest in the nation. The wonderful parks built in major and minor cities in the nineteenth century are abandoned today for fear of muggers and criminals. Streets are unsafe. Police are fearful and are distrusted. Teachers don’t teach. Services are shoddy—I could go on and on.

The remarkable thing is that we in the design community have tiptoed at the edges of the vast social changes going on. I served on the jury for the Progressive Architecture competition on the “Public Realm” in 1994. I applaud the fact that the PA editors suspected that profound changes were really occurring, and that with possible new funding of public works by government, we needed to examine what kinds of public projects ought to be built.

And while the winners of this competition should also be applauded, I note that so very few entries dealt with the demanding social issues of our time. If my memory serves me correctly, the percentage of projects that dealt with the homeless, public housing, neighborhood renewal, drug addiction, crime prevention, economic development strategies was probably less than 10 percent.

Perhaps it was a tacit recognition that indeed architects are not social engineers, and that our power to influence the social development in cities positively has severe limitation. Or perhaps we are guilty of being coconspirators with the very forces that facilitated the deterioration of the public realm. Maybe our planning and designs for superhighways and subways make it easier for the haves to escape. Our industrial and office parks facilitate relocation from the center city of millions of jobs, making such jobs inaccessible to millions of immobile inner city residents. Perhaps our suburban shopping malls cause the decline of downtowns. Clearly, our relative silence may be attributed to our being coconspirators to the cities’ decline.

Whatever the reasons, I remain optimistic that committed public officials, advocates, and designers can help turn around the growing wretchedness we see eating away at the public realm. I have thought for some time now that we undervalue our potential to influ-
ence the physical and social development of our cities. And yet, this is where 90 percent of the building, planning, and designing will take place in the next 50 years.

Let me share three initiatives that might provide fodder for discussion. First, we (that is the design community) need to get involved in the public debate that rages in the halls of government, in the churches, civic clubs, and all other forums, where the social and public policy on race, crime, violence, aids, drugs, education, etc. are being developed from the grassroots to the mayor's desks. Showing up only when someone issues the call for an architect, planner, or interim designer is often too late and hurts our credibility. All too often we are seen as "paid" and "hired" hands whose job it is to facilitate an already done deal. When I served as Mayor oddly enough the only architect around when the real deal was happening was me.

Right now, we are too docile as a profession. Aggressive positions by organizations willing to get a little muddied up in the political arena is well worth the risk if it means better cities to work in the years ahead. A few years ago—in the late 60s and 70s—we tried community design centers in inner city neighborhoods. These worked for a spell. But for the most part they have not sustained themselves for the long term. Our presence is still very much needed in the inner city, but perhaps more today from an advocacy posture to deal with basic issues first—like raising children, building families, being role models, expanding horizons, creating a sense of hope. We ought to try going back in the inner cities with no initial ideas of designing buildings and places, but rather helping people to redesign their lives and overcome the atmosphere of fear and hopelessness. I obviously disagree with those who call that social engineering and say that we are least trained to do it, but that brings me to my second initiative.

I believe that we need to restructure architecture and the design professions to train a new kind of professional whose destination is not necessarily the drawing board of an architect's or planner's private office. Some of us need to become community organizers, public officials, advocates, business persons, etc. What we need more of is the vision and practical problem-solving skills that architects often get in their training, blended with a more in-depth education about the social and economic environment that shapes public and economic policy. More people trained like us, but sitting in other places, can dramatically increase the impact of our profession. I am always amazed at where lawyers are positioned today...in just about every arena except the design profession! I often wonder why! Who can argue the legal profession's influence, for good or bad, on public policy in America.

Finally, when we are allowed to use our design skills, we ought to challenge ourselves to make no trifling plans that push us further apart from people along class and racial lines. More public transportation, less superhighways. More public sectors, not private sectors. I long to see planners weave more housing designs that intermix economic class. What about building public housing that blends into middle class neighborhood fabric? How about the linkage of prisons with community college and vocational schools? What about experiments in design forms that examine what it would take to lift the spirits of an at-risk child and inspire learning? What about a new building type that would combine elementary and preschool facilities with vocational training for parents? Or what about the design profession collaborating with construction unions to provide apprenticeship programs for
unwed fathers in the construction trades.

You get my point. What we need is a movement to restore people first. Then a secondary need to knit together a new public realm that can address bringing people together again. The bottom line is that we need to see ourselves as community first, then the things that facilitate community—streets, parks, schools, government—will all take on new priority and meaning.

I return to my initial observations on growing up in Charleston. Sure, nostalgia is a powerful emotion that is often selective in what is remembered. There was segregation. There were, in fact, horrible experiences of injustice, discrimination, and racial hatred. But if I think back on the things that propelled me forward, it was family first, then the social vehicles of the public realm—school, church, sense of community, a spirit of belonging—that gave movement and meaning to me. In the context of 21st-century thinking, we, with all of our resources, must work to restore this old-time definition and reality of the public realm to the millions trapped in our cities, for their well-being and ours.
etcetera
School Funding Sketches

Jim Gilliam, AIA

etcetera frontispiece, Field Trips. Above left, State of the State. Right, The School Architect’s Other Office. These sketches and those on the following two pages are excerpted from a collection of drawings done by Jim Gilliam over a decade of participation in California’s School Construction Program.
The sketches compiled in *School Funding Sketches* (Ontario: HMC Publications, 1995) were drawn with a felt tip pen to capture an interesting, humorous moment as the events depicted occurred, often on the closest available blank space: agenda margins, the back of handouts, and sometimes on drawing paper.
There's no free lunch... robbing Peter to pay Paul... year-round school incentives getting away with murder.

I came up here as a dedicated public servant... I go home feeling like a sneak thief.
I asked the jury about their award for the cutting edge design that totally pissed off the client... why not include criteria on client satisfaction and contractor's opinion on the quality of the working drawings? Their answer: because the client's expectations were different from the architect, and most disturbing, because the projects in litigation!
The Architecture of the Jumping Universe

Charles Jencks

AN ARCHITECTURE OF WAVES AND TWISTS

Why give so much emphasis to an architecture of undulating forms? The partial answer is that wave motion, like nonlinearity, is so crucial and omnipresent in nature. At a basic level, in the microworld of quantum physics, the wave function of the atom is as fundamental as the particulate aspect. Every subatomic particle is both wave and particle. Every object and human being is composed of this bipolar unity, this double entity. The wave aspect is masked to us, however, because it is unobservable compared to our relatively huge size.

Some physicists believe, moreover, that thought is basically a wave phenomenon. This is intuitively obvious; after all, an idea weighs nothing, is contained all over the brain, is stretched out like a wave, can travel near the speed of light, and is changeable like an ocean wave. Quantum waves also have, unlike particles and objects, they can tunnel through walls—a miracle that happens in every television set. A wave form is also the superposition of many small waves and thus, like a thought, can contain many contradictory states within itself without collapsing. It is a truism of psychology today to say that the self is constructed of many contradictory parts (child self, parent self, worker self, leisure self, and so on) just as it is a truism to say we often have many contradictory thoughts struggling in our mind at once—voices superimposed on each other and held in suspension, just as a quantum wave is the superimposition of many smaller waves.

Quantum waves can add up, cancel, go through each other, and be in several places at once. In short, the wave form contains the properties well known as ‘quantum weirdness’, the paradoxical and essential mind-quality of the universe. This is not the place to discuss the extraordinary aspects of quantum mechanics, but the wave form and function are so basic and important in the universe that it is the place to emphasize the fundamental place they should have in architecture.

I have been particularly drawn to representing the strange phenomenon of the soliton wave, because it shows the coherence of a nonlinear feedback system, and something approaching ‘memory’. The Red Spot of Jupiter is a soliton, as are the tidal bores that can reach twenty-five feet in height and travel at a constant speed for five hundred miles. Solitons were first theorized by the Scottish engineer John Scott Russell in 1834, after he had an unusual experience while riding his horse along the Union Canal near Edinburgh:

I was observing the motion of a boat which was rapidly drawn along a narrow channel by a pair of horses when the boat suddenly stopped—not so the mass of water in the channel which it had put in motion; it accumulated round the prow of the vessel in a state of violent agitation, then suddenly leav-
ing it behind, rolled forward with great velocity, assuming the form of a large solitary elevation, a rounded, smooth and well defined heap of water, which continued its course along the channel apparently without change of form or diminution of speed. I followed it on horseback, and overtook it still rolling on at a rate of some eight or nine miles an hour, preserving its original figure some thirty feet long and a foot to a foot-and-a-half in height. Its height gradually diminished, and after a chase of one or two miles I lost it in the windings of the channel.

Russell’s solitary wave, or soliton, keeps its identity instead of dissipating, as do normal waves because the smaller waves that constitute it bounce back and reinforce the overall shape and frequency. This feedback is the reverse of turbulence. It is obviously balanced on the delicate edge between order and chaos: if the width or depth of the canal is varied greatly, the resonance will not occur. Given the coherence of such waves, they can do unusual things, such as pass intact through each other. Or a high, thin, humpbacked soliton can overtake a short, fat one, combine for a while as a single wave, and then re-emerge, as if the two remembered their separate identities. Solitons have been found in such diverse systems as planetary atmospheres, crystals, plasmas, and nerve fibers, and have been created for such systems as superconductors and optical fibres.

In general they can be considered as focused energy waves, or coherent patterns. They can be represented in two basic ways: either as the traveling hump in a whiplash or as a twist in a flat strip, such as a leather belt. The second is ‘topologically trapped’ and can be eliminated only by an anti-twist. ‘Humps’ and ‘twists’ are two signs I have used, especially in a series of metal gates to represent the travelling of focused energy through the universe.

These show waves of energy moving from the points of focus, or structure—here the latch or hinges. They travel across the gate diagonally, giving a kind of visual energy that is accentuated by the alternation of solid and void, black and white, foreground and background. The twists appear almost absent, so the represented soliton seems to pass through the gate to the points that hold it, and where it opens. The latch is further focused by a twisted Mobius Strip, itself an endless form, and a spiral fossil, which also takes up the curvilinear geometry. Sometimes the soliton even travels, at least visually, into the stone wall. Thus natural and designed wave forms are merged.

I find depicting solitons compelling, not only because of their aesthetic energy but also because of their inspiration in a new science. They represent deeper aspects of the natural world that are just being discovered, and I believe architecture should always engage with such investigation. Even if it should not situate itself exclusively at the edge of knowledge, architecture needs always to be pushing the frontiers—not just of technology and materials, but of science and our understanding of ourselves. I believe we are most fascinated by this art when it is conveying something in a beautiful language that we did not know before. Perhaps this is because, of all definitions applied to us, we are the 'learning animal'. Our aesthetic enjoyment and pleasure in life are deeply tied to curiosity, adaption, the will to discover new truths, and this drive has to be put at the center of a new philosophy.

Plato, Nietzsche, and Freud were wrong—it is not immortality, power, and, sex which drives us (important as they may be)—but learning. The whole universe is trying to discover its own being, and we are at the forefront of this cosmic list for knowledge.

**The Architecture of the Jumping Universe**

If architecture must be oriented to nature and culture, then it also must have a larger orientation: the universe as a whole. Architecture has always had some cosmic dimension in traditional cultures. In India, Egypt, Greece, Japan, and in the West throughout the Renaissance, architects inscribed the cosmos in their buildings, oriented their structures to the propitious points of the universe and represented it in the details. Today architecture must also do these things, as well as go beyond this to our contemporary view; that is, cosmogenesis....

What is the cosmogenic world view? It is the idea that the universe is a single, unfolding self-organizing event, something more like an animal than machine, something radically interconnected and creative, an entity that jumps suddenly to higher levels of organization and delights us as it does so. Complexity Theory, the Gaia hypothesis, Chaos and Quantum theories all point in this direction. We know truths that have been revealed to no other generation, and they can give us great hope and strength....

So, choose another aesthetic of life, of undulating movement, of surprising humour, of catastrophic folds and delightful waves, of billowing crystals and fractured planes, of layered glass and spiralling growth. Quantum physics is behind it, pushing, while the continuously unfolding cosmos is ahead, luring one on; not designing like an architect, but gestating and giving birth, like a fecund animal....

**Criteria for Architecture**

What are the implications of the new view of cosmogenesis for architecture?
What, after all, is to be done at this particular place in cultural time? One conclusion follows the Complexity Theory which has an ironic implication for a polemic—there are no simple answers. Nevertheless there are definite directions implied, as well as positive and negative trends for orientation. Certain things are demanded, others are placed in debt, and a few questions are left open or undecidable. There is some latitude for architectural principles in the age of complexity, and they are necessarily unfinished because of the principle of emergence, and contingently unfinished because of my limitations and focus. Nonetheless, here are eight directions which follow our situation and argument.

BUILDING CLOSE TO NATURE AND NATURAL LANGUAGES.

Natural forms tie us into the cosmos at one end of the continuum, cyborgs tie us in at the other, so design should face both ways. Design, therefore, with twists and folds, waves and fractals, self-similarity instead of exact repetition. Look to the rhetoric of natural continuity with the natural world, and it might be supplemented with an additional source of creativity; that is, ourselves as the originators of a second nature.

REPRESENTATION OF THE BASIC COSMOGENIC TRUTH—SELF-ORGANIZATION, EMERGENCE AND JUMPS TO A HIGHER (OR LOWER) LEVEL.

There is a basic direction of evolution towards increasing complexity, but it is attained through an oppositional process of gradual improvement and catastrophic change, continuity and jumps, smooth transitions and the Butterfly Effect. The Universe story is fundamentally one of unpredictability and surprise. Architecture might therefore dramatize punctuated equilibrium, the optimism and tragedy; and it can do this through both juxtaposition and smooth continuity.


ORGANIZATIONAL DEPTH, MULTIVERSE, COMPLEXITY, AND THE EDGE OF CHAOS.

Evolution pushes species, the mind and machines towards the edge of chaos, and it is the most fruitful place to be. The creative modes which achieve depth are imaginative play and intellectual research, while the rhetorical means are redundancy, self-similarity, variation on themes, feedback, and rich linkage. A too-simple order is boring, an overly-connected building is too complicated, so one looks for an upper mean of connections. The injunction is not New Age—‘connect, always connect everything’, nor traditional—‘order the chaos’; but rather ‘higher organization out of order and chaos’.

THE CELEBRATION OF DIVERSITY, VARIETY, BOTTOM-UP PARTICIPATORY SYSTEMS WHICH MAXIMIZE DIFFERENCE.

Since ‘more is different’, watch when systems grow in size, energy, information and start to jump, for then there is opportunity for change. Since the universe cannot compute its own next move, the only sensible policy is to have as much diversity as possible. Diversity creates tension and conflict, but these are small prices to pay for continuous evolution. If the universe as a whole, and societies as parts, are inherently self-organizing and in the end chaotic, the survival strategy will depend on a variety of models, species and ap-
proaches. The conclusion must be that one should foster a difference which will reach a maximum point of 'self-organizing criticality'; that is, just before it explodes in complication.

Diversity can be supported by techniques such as collage, radical eclecticism, and superposition. The equivalence of age and depth can be built into a house or city by including a mixture of different designers in a single scheme, or by using methods which simulate this heterogeneity. The juxtaposition and superimposition of different systems is superior to the minimalist method of excluding variety.

Architecture should acknowledge the time and its compelling agenda, which include the ecological imperative and political pluralism. This truth leads to the various green alternatives and locally-based styles which root a building in a particular time, place, and constructional relevance. We cannot deny the mass-extinctions which are caused indirectly by modernization. Architecture may be powerless to change this situation directly but, like any cultural practice, it can change consciousness by symbolizing the situation and proposing a piece-meal alternative....

It should double-code these concerns with aesthetic and conceptual codes. Most building tasks are complex, not simple, and demand a mixed response which takes on the opposed requirements of history, urbanism, contrary function, and differing tastes. Since all architecture is coded, and experienced through a language of architecture, it owes as much obligation to the formal system as to the content. As the public language of the environment, architecture must adopt a shared symbolism and this means both the local and universal, cosmogenic language.

Architecture must look to science, especially contemporary sciences, for disclosures of the cosmic code. To get beyond the provincial concerns of the moment, beyond anthropomorphism and fashion, to regain a power that all great architecture has had, it must look to the transcendent laws which science reveals. The shared content of architecture lies primarily in these laws: such things as the priority of wave motion which is fundamental to thought, to our being, to the quantum world, and perhaps to an ultimate reality of superstrings. However, right content, like right-thinking, is not enough. A cosmogenic architecture must embody imagination in action, it must dramatize creative processes, or it is nothing. Its spiritual role is to portray the laws and be emergent—that is surprise.

Note
1. There is no single source for this world view, but the concept 'cosmogenesis' is used by the astrophysicist professor David Layzer in Cosmogenesis: the Growth of Order in the Universe (New York: Oxford University Press, 1990) and, more generally, by Brian Swimm and Thomas Berry in their The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era (San Francisco: Harper, 1992). The writings of Erich Jantsch, Ilya Prigogine, Paul Davies, John Gribbin, Freeman Dyson, James Lovelock, David Bohm, and those in the Santa Fe Institute have contributed to this paradigm. Like any world view, however, it is much larger than the work of a single corpus of authors.
Latinos in California’s Future

Leo F. Estrada

Latinos have spent the last 25 years in California trying to accommodate and integrate into California’s mainstream. Latinos in California have progressed incrementally, election by election, through small businesses becoming enterprises, occasional appointments to significant boards and commissions, and a visible presence in most state occasions. There have been, of course, a few notable high-profile events in that process—the farmworker strikes and grape boycotts, the East Los Angeles “brown-outs” in the schools, and student protests—but for the most part Latinos have attained leadership roles and progressed quietly and without much fanfare. Latinos have not sought to shove their way into the public arena but have relied on the acceptance of others based on their willingness to play by the rules. Thus, despite signs of continued resistance, Latinos have shown great patience and optimism in their future in California.

The November 1994 election, however, was a shock to many of those who have been willing to accept incremental progress and to those who thought that Latinos had attained a higher level of societal acceptance. They wrongly assumed that the voters would recognize the “spill-over” effects of Proposition 187 that could jeopardize the lives of legally resident and citizen Latinos. It was self-evident that Proposition 187, which focused on children and poor people in need of medical help, was crudely designed to reflect negatively over all vulnerable segments of California’s population. In the aftermath of the election, there was relief that the proposition would not be implemented immediately; however, it was also clear that Proposition 187 was not the culmination of this anti-immigrant movement but rather the opening shot in a long battle to come. With voter approval of Proposition 187, Latino populations in California are entering a critical stage in their history where they are a cross-current to California’s expressed goals and future.

Latinos are a high-growth community at a time when the growth ideology—the belief that growth and expansion are inherently beneficial—is waning. Today’s environmental concerns with non-renewable resources, sustainable economies, and world population has shifted the discourse to arenas where impressive and dramatic Latino growth is viewed unfavorably. Immigration from Mexico, Central and South America, and migration from Puerto Rico accelerates Latino growth. Thus, it is not surprising that California is in the midst of a restrictive immigration era, and proposals to reduce immigrant flows are desperately sought in the refusal of services for undocumented immigrants.

California’s Latino population is young at a time when the Anglo population is more mature and has turned away from children, youth, and young families and turned to concerns about housing values, policing, and security in their retirement. Thus, those issues that concern the youthful Latino population are less at the forefront of mainstream concerns.

For some time, California’s Latino population has been largely peripheral to the state’s political system. Most Latinos are too young to vote, and
many others, as noncitizens, are ineligible to vote. While representing one of
every four Californians in population
but only one of every thirteen Califor-
nia voters, Latino concerns are less
likely to receive attention.

In addition, California’s Latinos
are viewed as a regional minority rather
than as a statewide minority group.
California Latinos are already the
state’s largest minority and, by the year
2015, they will be the nation’s largest
ethnic/racial group as well. But there
are few signs to indicate that state or
national leaders have taken note of that
fact and begun to actively promote
Latinos within the existing power
structures.

The expectation has generally been
that Latinos, while primarily of Mexi-
can origin, will be unable to act collect-
vively or work in concert due to their
internal heterogeneity and subgroup
differences. Thus, despite these projec-
tions there are few signs that any sig-
nificant role is being prepared for
Latinos in California’s future. The pri-
mary reason is that Latinos challenge
California’s self-image. Latinos chal-
lenge the precept that California is ca-
ble of acculturating and integrating
newcomers. The expectation that with
time newcomers would shed their na-
tionalistic feelings, native language, and
eventually become “brown Anglos”—
Americanized in every way—just does
not work anymore. Latinos challenge
the idea that there is one, unified
American culture in California.

Latinos who are primarily bilin-
gual—along with other recent immi-
grant groups—challenge the state’s
delusion that it is primarily an English-
speaking state. Latinos challenge the
ethnocentric idea of California as the
most important state in the United
States, since Latinos view California as
just one part of the equation in the
Pacific Rim or one part of the greater
globe. Latinos challenge the
United States-Western European ties
that have served historically as a foun-
dation for our foreign policy and cause
them to move south to U.S.-Mexico/
Central and South America where tradi-
tional paternal approaches are no
longer tolerated and new patterns yet
established.

Latinos challenge the dominant
English media and the information it
portrays with a parallel system of
Spanish language television, radio, and
newspapers. Latinos challenge the pre-
vailing system of race—viewed gener-
ally as a black/white dichotomy—with
an ethnic element equivalent to race
and with a mix of skin colors that offset
long-held stereotypes. Latinos challenge
the prevailing culture, the concept of
what California is and should be. This
is why Latinos remain on the periphery.
The challenge is too broad and threat-
ening to embrace with open arms.

Given these factors, what hope is
there for Latinos to assert themselves
into the state’s arena?

First, Latinos are residentially con-
centrated in the most populous metropo-
lan counties, areas that historically
have more political representation in
the Assembly, with sufficient votes to
sway a statewide election in a state that
has experienced some notoriously tight
races. In addition, residential concen-
tration is found in the state’s major
metropolitan centers with its powerful
economic forces. Latinos have not yet
been able to use this advantageous
position to their benefit, but all the ele-
ments are in place and will continue to
be there into the near future.

Second, Mexico and Latin America
are emerging as significant partners to
the United States in the developing glo-
bal economy. With increasing trade
and commerce, the role of Latinos as a
“liaison culture” to this economic
world will emerge.

Finally, Latinos have increasingly
shown an interest in knowing and un-
derstanding other Latino sub-groups. Most Mexican-origin persons from East Los Angeles are unlikely to visit or get to know Latinos in the Inland Empire, San Joaquin Valley, or any other of the many Latino enclaves in California. Nonetheless, largely due to Spanish-language television, Mexicans have come to understand the Cuban-American concerns with Cuba; the struggle between statehood, commonwealth and independent forces in Puerto Rico; and the emerging democracies of Central America. Mexicans in a California barrio listen to Puerto Rican salsa, Dominican merengues, along with their Tex-Mex music and banda. They watch novelas produced in Argentina and Venezuela and then watch Bart Simpson. Mexicans watch soccer from Mexico and Spain and Los Angeles Raider football. Mexicans learn about elections results in Parlier, the grape harvest in Novato, earthquakes in Coachella Valley, and about new educational programs in San Luis Obispo. Interestingly, Spanish-language media serves to link Latinos together in an “information carretera” that is bringing Latinos together, mixing our cultures and merging together elements of Latino/California culture into new entities. Where this will lead in the future is uncertain. What is certain is that Latinos—and this emerging amalgamation of Latino elements—cannot be ignored.

In retrospect, Proposition 187 may serve to mobilize this large and growing population, to demystify their attitudes about how they are viewed by others, and to allow a more aggressive and forceful leadership to emerge. With well-defined “targets” like Governor Pete Wilson and Proposition 187 co-author Howard Ezell, political mobilization will be easier even if it results in political tactics based on “we-versus-they.” Finally, Latinos in California can make it imperative that together we confront the future of a post-Anglo state.

Light on a "Temple of Art"

Richard Barnes

Driving north, as one approaches the relatively staid and uneventful skyline of San Francisco, the new Museum of Modern Art stands out tough and broad-shouldered among its taller neighbors. Mario Botta has created a building of monumental proportions, balanced by delicate gestures in light and materials. Its elliptical turret—the symbolic center of this building—gathers light by day, and renders it nearly tangible as it filters down to illuminate the atrium and stairtower below. At night it gives this illumination back, and as is often the case in San Francisco, the fog softens and distends the light emanating from the cylindrical skylight.

As a photographer, my work is concerned with how light modulates and defines structure, and with buildings that symbolize the age in which they were built, whether the pyramids of Egypt or Biosphere II in the Arizona desert. Museums are the containers of our memories, representing what a culture chooses to pull out, preserve, and exhibit. Mario Botta has likened the social role of the contemporary museum to that which religious centers played in earlier times, though perhaps it is the weakest part of his new building that it too literally resembles a church. The simple equation of modern museum to cathedral, making it a "temple of art," may be facile, but the geometry of its light, momentarily captured in these frames, mediates the Museum's massive forms and does inspire awe.

San Francisco Museum of Modern Art.
Mexico, Latin America's largest importer of Northern capital during the recent deregulatory period, has suffered terribly since the overnight devaluation of the peso announced by Mexican president Ernesto Zedillo in December of 1994. Enrique Norten, of TEN Arquitectos in Mexico City, served as a juror for the AIACC Design Awards and shared with Architecture California his thoughts about Mexico's economic crisis and the dilemmas of architects now practicing in an increasingly global economic, social, and political climate.

The whole country of Mexico is in a massive collapse since the recent devaluation of the peso; it has been such a chaotic time. Architecture practice is dead. There is no money in the country, literally. The government has totally cut any investment in new infrastructure, including, of course, architecture. Governmental work is zero. Private work is also zero. Interest rates in the banks are over 100 percent, so nobody can afford to invest. The cash that anyone has is much better in the bank. Besides the whole situation is so unstable; everyone is very nervous. Even people that need, for example, a house or just some of the basic things, are frozen and waiting. So, the practice of architecture is halted, down—without exaggerating—to 3 percent of what it was just six months ago.

TEN Arquitectos is doing a little better than the norm, because we still have some work under construction that is going to go on for the rest of the year and, therefore, bring income to the office. Also, miraculously, we have been invited to participate in a couple of possible unique projects that may materialize in the near future. That would carry us through for another year; otherwise we could barely survive. We have already had to cut back from eighteen people to nine, and we will probably have to go lower.

Even though Mexico has opened itself to foreign investment and sits on the Pacific Rim, we don't have any work resulting from this. The Japanese that have newly come into Mexico are not investing in architecture. We thought they might, but with the economic collapse of everything, that possibility is now cancelled. We don't have work outside of the country. I would love to, but it is very hard. I know that architects in the United States are seeking and getting commissions in Asia. We don't even know where Asia is. Asian countries have made it very prestigious to hire an architect from the United States, but they would not seek to hire a Mexican.

I am asked if this might be a time for advances in theoretical work. This economic crisis doesn't lead to people going back to school or paper architecture. First of all, the crisis is so deep people do not know what the future holds. Also, we have a very weak academic environment, at least in Mexico City. Academics are very badly paid. People that teach really do it for free, and most practitioners cannot afford to teach. When the economy is bad, neither practitioners nor students look to the educational institutions to foster architecture. I myself have been teaching in the States, at Cornell, SCIArch, Rice, Columbia, USC. This has mainly developed because of interest in my work here.
Even though I am an architect from Mexico, it is not the conditions of my region in general that are driving my work. It is clear to me what I want to do, what is driving me. On the one hand, we are living in a world that is defined by a very complex network of communication—the travel of people, ideas, and products. On the other hand, more and more there is a tremendous demand for recognition of the local, for the particularity of specific communities, persons, places. Our search is for the intersection—the tension—between both, that is, of belonging to a global international culture but at the same time understanding and responding to the specifics of particular problems and places. This sounds very general, but many people do not agree with this.

When I speak of the globalization of information, I am not so concerned about the technological advances that have changed architecture all over the world, very directly. I am much more concerned about this moment in history that has to do with communication, with the traveling of information, with the accumulation of information that is putting everyone together at the same time. Yet the more we are together, the more separate we are. The more we belong to one culture, the more the personal and communal are affected by common visual imagery. Yet the more global we are, the more specific our task then with each architectural problem. Again, I don’t mean specific as a region. Mexico is indeed different because of political reasons, but it is not itself homogeneous as a region. As a country, it is extremely diverse. Maybe the corner where I am studying to make an intervention is very distinct from another corner one kilometer away in the same city; maybe it is closer to some intersection in Tokyo. It is really the specific versus the global, rather than regional identity that compels me.

Therefore, naturally, since I do not focus on Mexico as a region, I do not believe in Mexican architecture; it doesn't exist. Nor does California architecture. Those are only stereotypes. The fantasy of Hispanic architecture is the fantasy of the Latin lover. It is the same stereotype. Even Los Angeles is so diverse that each problem is distinct with very unique conditions based in those very small unities of space that are formed against the global. This is where the generative tensions are, theoretically and practically.
Local Lessons on College Avenue

Donald Wardlaw, AIA

Community landmarks, though familiar, are often unrecognized for their significance in the physical landscape of our neighborhood main streets; the stories of buildings and their architects of record are often overlooked, or unknown to the general public. Raising the awareness and educating the community was the goal of the AIA East Bay during the state designated “Architecture Week” (April 1994). The group focused on a three-mile segment of College Avenue in Oakland and Berkeley. This thriving commercial district, and its supporting residential fabric, date from the late 19th century and provide a rich lesson in the incremental development of a pedestrian-scale commercial streetscape.

A self-guided walking tour was created; along the route histories of each building were told through “story panels” placed on approximately 100 facades and shop windows. In addition, local property owners donated two exhibit spaces featuring historic photodocumentation of the district and the recent work of over twenty AIA chapter firms.

Although local merchants were anxious to claim back their window space for merchandise, several weeks after the project concluded an occasional story panel remained. More importantly, a process for acknowledging the architectural legacy of the most familiar of places—the neighborhood avenue—was begun.

College Avenue at Broadway in Oakland. This main street extends north three miles to the University of California, Berkeley campus.
1989
Gallery Here
Peter Wilson, Architect

This College Avenue art gallery housed one of the Architecture Week exhibits, featuring historic photographs of the district and work of local chapter firms.

1922-27
Originally a plumbing shop and Gilbert Furniture Store (Renovated 1988 by Ace Architects)

This grouping of buildings is known as Acehnd. Originally three one-story buildings; one of plaster, of wood and of brick. Each form is now an exaggerated expression of buildings traditionally built from these materials. Note the canopy formed to resemble “dentils”, a form of wood ornament and normally a small detail quite exaggerated on the building to the left.

1917
United Presbyterian Church
Julia Morgan, Architect
D.C. McMillan, Builder

In the early twentieth century, population shifted to the outer edges of cities like San Francisco and created demands for new congregations, this building is one example of these new small churches by Julia Morgan.

1911
Bill McNally Building (Remodeled 1935, 1941)
J. Campbell, Builder

Local lore has it that McNally took out a liquor license as soon as prohibition ended in 1933 despite objections by the congregation of United Methodist Church. The Gothic treatment of the roofline was McNally’s humorous response to church efforts to oppose his tavern. John F. Kennedy stopped in during his presidential campaign.
Civic Innovations

Civic Innovations, a design competition sponsored by the Los Angeles Forum for Architecture and Urban Design and judged in December 1994, was organized to give the design community an opportunity to do something for streets and public spaces in Los Angeles. It focused on no site in particular, but rather on modest elements that could be found in every Los Angeles community and neighborhood, on the street, in parks, plazas, and beaches. These elements were deliberately selected to demonstrate the potential of small streetscape elements to positively affect one's experience in Los Angeles. Entrants were asked to consider the design of the essential urban elements as street lighting, bus benches or shelters, public restrooms, or information stands. The challenge: "Ride a bus, seek directions, wait in the heat of the summer sun, pay for a newspaper, try to find an operable public phone, and use a public restroom."

The Forum and the competition winners hope to foster public debate about the potential of these modest but pervasive civic elements.

Bus Shelter Design, 1st place winner: Cast concrete letters act as a sign to announce the system and establish the bus stop territory. These letters support a translucent roof, printed with a screened palm frond pattern. Keith Krumwiede and Carol Treadwell, Venice, CA.

Public Restroom, 1st place winner: A machine for safe, clean services would be a simple structure ventilated at the top and bottom. It would function as a coin-operated system and fit into diverse urban settings. Min Jin Park, Jeong Won Ryu, UCLA students, Los Angeles.

Information Stand, 1st place winner: Dynainfo is a communication device, that incorporates automated technology. Retractable arms suit diverse locations, creating an icon for functional information in Los Angeles. John Somerville and Mike Vanderhoof, SCI-Arc students, Los Angeles.
Street Lighting, 1st place winner: Designed as a "light tube" powered by photovoltaic cells, this 30' light pole is supported by a steel frame structure encased in a plastic sheet. Nearby buildings and sidewalk would be washed in light. The four foot base contains the luminaire and energy storage unit, and could be designed by an artist, or crafts-person. Judith Sheine, Alex Pang, Los Angeles.

Letters

Dear Editor:

Lian Hurst Mann’s essay on "The Myth of Market Sustainability" should begin a thoughtful discussion in this laissez-faire climate. What is missing are all those elaborate codifications that give formal structure and goal-oriented coherence to regulatory authority. The current self-confirming milieu contains no trace of communal order, history or science, nor any basis for moral judgement. We see fierce debates about choice, and the right to die; but no discussion about the lottery of death that takes place daily as architects, planners, and scientists debate permissible or threshold limits of pollution. Premeditated releases of pollutants and toxicants are considered part of the background of deaths occurring every day.

Just what is going on? This is all part of a well-known territory—the currently fashionable cost-benefit balance sheet. Causally connected sequences of health effects are not induced from the data to which the profession dimly responds. Effects are noted, in a timeless, dreamlike existential void in a brief and passing way. The right to life, or death is not a choice under this regime.

William Firschein, AIA
Venice, California

Dear Editor:

I can’t tell you how much I enjoy receiving my issue of Architecture California. As a Board Member I receive copies of several state component publications and I enjoy all of them. Yours, however, is a truly professional journal.

Thank you for caring and for providing us with a great publication.

Richard H. Bradfield, FAIA
Director/South Atlantic Region

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CALL FOR ABSTRACTS FOR VOLUME 17 NUMBER 2

The Editorial Board of Architecture California seeks abstracts on the topic of the globalization of architecture practice. This edition of Architecture California, to be published in November 1995, will address the current state of international architecture practice, with particular attention to the relationship of California to the Pacific Rim. As the market for architecture services globalizes, California architects are increasingly addressing practices to an international clientele, with a focus on the growing Asian economies. The Editorial Board seeks proposals for articles from practitioners, clients, scholars, or allied professionals who are participating in this transformation of the building industry and, specifically, the relations of architecture production. Additionally, proposals are invited that address aspects of architecture education needed to respond to these transformations in practice.

The etcetera section always welcomes a variety of submissions beyond the scope of the focus topic. In Volume 17 Number 2, etcetera will include a discussion of the role civil rights law, affirmative action policies aimed at remedying past discrimination, and contract set aside programs have had in strengthening the diversity of the architecture profession, as well as the responses of those who seek to reverse the existing policies. Proposals for participation in this discussion are welcome.

All proposals will be reviewed by the Editorial Board, and those selected for publication will then be further developed with the Editor. Please send abstracts of approximately 500 words to the Editorial Office in Los Angeles no later than July 1, 1995.

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Forthcoming theme: The Pacific Rim