

Phi  
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# FORUM

A QUARTERLY PUBLICATION

**Architecture**

Summer 2003



# Phi Kappa Phi *FORUM*

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## Letters to the Editor

Phi Kappa Phi Forum publishes appropriately written letters to the editor every issue when submitted. Such letters should be 150–300 words in length.

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# A Note from the Editor



James P. Kaetz

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## IN THIS ISSUE

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I am the first to admit that my knowledge of architecture is practically nil. As long as my house has sufficient room, does not leak, and is something that I can afford, I am largely satisfied. It is not that I am a complete Philistine; one cannot earn a PhD in literature and remain ignorant of art and artists and their influence on poetry and fiction. I even vaguely remember having read and, at the time, understood John Ruskin. No, it is more that with my general lack of visual perspicuity (to which I have confessed in the past in this space), I never really had the need or even the chance to study the field. At least when I was an undergraduate, one did not have the opportunity to substitute “Architecture 101” for the world history survey or conversational Spanish. So as Woody Allen says (tongue firmly in cheek) about his own lack of ability to understand the art of pantomime, “I possess an Achilles’ heel culturewise that runs up my leg to the back of my neck.”

Until now, of course. This issue has been an education for me, and a welcome one to boot. While I still do not claim to know my plinth from my cornice or my Doric from my Ionic, at least now I will be able to stem the rising panic if someone brings the topic up in polite conversation. Our authors offer a broad range of ideas and topics as they take us on a journey through the history, theory, people, and practices of architecture. Their essays are challenging, informative, and insightful. And if they can offer hope to a

visual idiot like me, then just think of what they have to offer for those of you who are not quite so design-impaired.

To lead off, Leland Roth offers an overview of the history of American architecture. Professor Roth covers major architectural movements and influences from colonial times to the present in a piece that provides context for the articles that follow in the issue. Next, Georgia Bizios advocates that architects and teachers of architecture build on sound architectural principles rather than following the whims of the moment or copying the models of the past. She suggests a systematic approach to design that involves paying attention to design philosophy, principles, guidelines, and standards.

Robert McCarter then explores what he sees as an overlooked tradition in American architecture, the legacy and relationship of Frank Lloyd Wright and Louis I. Kahn. McCarter discusses the achievements of these two great American architects of the past century, in particular the rarely acknowledged influence that Wright had on Kahn’s work. In her article, Kim Tanzer espouses an architecture that emphasizes practice before theory. Using the examples of Shigeru Ban’s practical designs for refugee houses and the unique work of Auburn University’s Rural Studio, she shows how architecture can be both innovative and engaged at the same time.

Speaking of Auburn’s Rural Studio, Bruce Lindsey follows with a tribute to the man who co-founded the re-

nowned program, the late Samuel Mockbee. Lindsey paints an unforgettable portrait of Mockbee as teacher, architect, artist, and human being. Peter McCleary next discusses architectural technology. Using a historical perspective, Professor McCleary tells us how the technologies of architecture have evolved in the areas of materials, production, structures, idea of space, environment, and digital design, and how this evolution has affected architectural practice. And finally, Donlyn Lyndon reviews some of the work done in the past forty years at The Sea Ranch, an innovative ten-mile stretch of the northern California coast where architects, engineers, builders, and property owners have made sure that homes there are constructed to give “prominence to the natural setting, incorporating the existing ecology of the place.”

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## APPRECIATIONS

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First, I want to thank Dr. Neil Luebke for the work he did on our Spring 2003 issue on “Professional Ethics.” His knowledge of the field and, even more important for us, his professional relationships with the authors whom we invited made for an outstanding issue.

Second, we also want to thank Robert Burns, former *Phi Kappa Phi Forum* “Arts” columnist, former Honor Society of Phi Kappa Phi National Artist award winner, and current professor of architecture at North Carolina State University for acting as our consultant on this issue. He advised us on topics and provided us with a list of excellent possibilities for authors, thus allowing us to present what we think is another special issue of the *Forum*.

Thanks go to Jessica Lytle and Calie Sparkman, our professional writing interns for the Spring 2003 semester, for their good work for us.

And please welcome the second half of our new columnists: Jennifer M. Stolpa, Anthony J. Dukes, Evelyn Tiffany-Castiglioni, and Heidi Tolles Motzkus. They start off their work for us with a provocative set of columns.

Enjoy the issue!



Forum on

# Education & Academics

Jennifer M. Stolpa

## Unexpected Confessions

Mary is sitting across from me in my office, explaining to me why her assignments from last week are late. Her abusive ex-husband has been threatening her, and last week she had to obtain a restraining order against him. By the time she finishes her story, the professional exterior she had adopted to tell me about the situation is quickly crumbling. She is fighting back tears, not wanting to cry in front of her professor. Mary is probably feeling vulnerable because she has shared so much personal information. She says that she does not expect special treatment, but it was important to her that I know she did not just “blow off” the class work.

As Mary talks, I am conscious of my facial expressions and my intermittent verbal responses. I certainly do not want Mary to think I find this story shocking. I have heard others that are similar or even worse. However, I want her to know that I see her as an individual who is in pain, not just as a name or number in the class. By making herself vulnerable, she has demonstrated an enormous trust, and I would like to live up to that trust. I want to say all the “right” things. While I know I cannot fix the problem, I certainly do not want to make her life any more difficult.

When she finishes speaking, I will need to say something, and what I say is important. What I say will affect her not only because everything we say affects others, but also because of the powerful relationship between teacher and student.

This is a part of teaching for which I was not prepared, and it is an aspect of the profession for which I suspect most other teachers are not prepared. No matter how old our students are, the struggles and tragedies of their lives intersect with our lives in profound ways over the course of a school year. Whether students themselves share their stories or their parents tell us what personal events are affecting school performance, such moments often offer teaching opportunities that go far beyond the skills and ideas of a particular subject.

“My mom has cancer.”

“My brother attempted suicide.”

“There was a car accident. . . .”

“My depression medication wasn’t working last week. . . .”

On any given day, any number of unexpected challenges may arise in students’ lives, and because of the very nature of teaching, those same challenges will then arise in ours. Yet most of us are not trained counselors. What I know about dealing with life’s biggest problems I have learned along the way from dealing with my own, but this experience hardly seems adequate for the myriad issues facing my students each week.

What *is* important for me to do or say in these situations? At some levels, the law offers us a guide as to what we must report, what actions we must take. However, to fully answer that question, I try to return to why students share these stories in the first place. Sometimes they want and need referrals to those trained to help them. Sometimes they are already getting

that help, and they share these stories because they need someone else to listen. To be a good teacher I must be willing to take the time to listen to all that they have to say and in doing so show them that I value their individual life experiences.

Sometimes students share these stories because they want to explain poor performance in class. To me that shows a concern with my opinion of them. They want me to know that they are not stupid or lazy but up against a brick wall in their lives. Then my response needs to be more than just listening. I need to affirm my respect for them as individuals.

Sometimes students share their stories because they want a second chance in the class. Then I consider the situation and offer them whatever accommodations I can justify — extending deadlines or offering outside assistance. They may be reaching out to salvage something in their lives this term, and I try to give them every opportunity to do that.

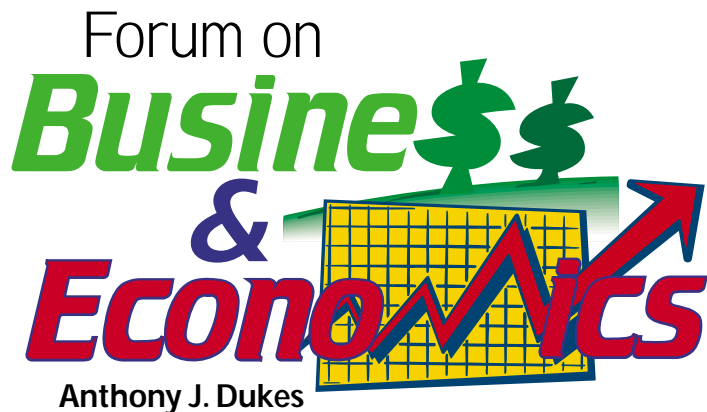
Sometimes students share these stories because they want advice. They will end with a direct question such as, “What do you think I should do?” I usually have no answer. Instead, I try to ask the right questions to get them thinking again, or I suggest they try journaling. When appropriate, I encourage them to seek help from those with more experience.

I suppose there was no way I could have been prepared for this aspect of teaching. One cannot rehearse responses for the very reason that each student is an individual. No two life struggles are the same, and no two students approach a teacher with the same purpose in sharing their stories.

Those who have taught longer than I have say that it is always difficult to deal with these situations because there are no easy answers to life’s biggest problems. They agree that a continuing challenge of teaching is not taking home the weight of students’ problems, not becoming frustrated because we can offer no real solutions. They acknowledge that we need to fight the burnout that comes from seeing life’s unfair treatment derail so many good students’ potential to succeed.

*(continued on page 5)*

# Forum on *Business* & *Economics*



Anthony J. Dukes

## Wal-Mart and Price Discrimination

Wal-Mart is currently the largest retailer in the world. With more than 4,500 stores, Wal-Mart generated \$240 billion in sales, which accounted for a little less than 2.5 percent of the U.S. gross domestic product in 2002 (Bureau of Economic Analysis, U.S. Department of Commerce Website, and *Fortune*, February 18, 2003). Wal-Mart's success, however, is not universally admired. In fact, it is often accused of engaging in anticompetitive business practices.

Many smaller retailers and some consumer advocates allege, for instance, that Wal-Mart intentionally and unfairly quashes competition through extremely low prices. Because of Wal-Mart's size, the argument goes, it can afford to suffer extremely low prices until smaller businesses are forced to close their doors, leaving Wal-Mart as the only retailer in town. Antitrust economists refer to the anticompetitive practice of which Wal-Mart is accused as predatory pricing.

To convict a company of predatory pricing, it must be shown that the company prices its products *below* its costs. But a highly efficient distribution system and retailing expertise give Wal-Mart a cost advantage that enables it to price its products below the competition and still make a profit. In the view of antitrust law, this is healthy, rather than unfair, competition.

Unable to stop Wal-Mart on the predatory pricing front, competitors have recently put blame on its supply chain. For example, Mexican discounters Controladora and Gigante recent-

ly complained to Mexico's Federal Competition Commission (CFC) that Wal-Mart de Mexico pressures wholesalers and manufacturers into better prices (*Business Week*, September 16, 2002). The argument is that Wal-Mart, because of its size, is able to threaten abandonment to suppliers unless it receives lower prices. When suppliers cave in to Wal-Mart's pressure, Wal-Mart gains an additional competitive advantage because these suppliers are charging relatively higher prices to disadvantaged retailers for the same product.

If U.S. retailers, such as Kmart or Target, were to make the same allegation against Wal-Mart and its U.S. suppliers, how would U.S. antitrust law be applied?

Such allegations claim that retail suppliers are engaging in price discrimination, which is the practice of selling identical products to different buyers (retailers in this case) at different prices, where the price difference is not based on any cost difference. For example, a laundry-detergent manufacturer is price-discriminating if it sells its 64-oz container to Wal-Mart for a unit price of \$1.79 but sells it to Kmart for \$1.92.

The most relevant piece of antitrust legislation concerning this practice emerged from Depression-era sympathy for the local retailers, so-called mom-and-pop shops, against a new form of retailer: the chain store. The chain store in the early twentieth century bought in such large quantities that it could bargain with suppliers for cheaper prices. Because the traditional

shops were not entitled to these bargain prices, chain stores' discounts were generally viewed as unfair.

The Robinson-Patman Act of 1936 was a result of this public outcry against the chain store. In fact, the Robinson-Patman Act is historically referred to as the "antichain-store act." The act prohibits sellers from charging different prices to different buyers for identical products when the effect might be injurious to competition. Thus, the act was intended to eradicate the competitive advantage of the chain store.

Note that a necessary condition for violation of Robinson-Patman is that competition has been injured. Therefore, Robinson-Patman does not make illegal the practice of price discrimination by retailers themselves. For example, consider a grocery store charging \$3.99 for a box of cereal to one customer, but charging \$3.49 to another customer who had clipped a coupon from a Sunday newspaper. In this case, the grocery store is not violating Robinson-Patman because these two customers do not compete in the resale of cereal.

Since 1936, the economic benefit of the Robinson-Patman Act has been debated. On the one hand, Robinson-Patman is one way to ensure that competitors will be protected from those whose only advantage is size. Thus, Robinson-Patman is seen as preserving competition, the most important force in a market economy.

Many antitrust economists disagree with this reasoning by arguing that the act rewards less-efficient competitors, imposes higher prices and lower sales, and provides less economic benefit overall.

Since passage of Robinson-Patman, many cases involving alleged violations of the act have been examined by the courts. And despite a few plaintiff victories, courts have mostly ruled in favor of the defendant.

The difficulty in winning such price-discrimination cases is revealed by the various courts' allowances for subtle legal defenses. A classic illustration of such a defense comes from a 1964 ruling involving the Borden Company. Borden, a maker of canned evaporated milk, made its product

under two different brand labels. One was sold under the traditional Borden-brand label, and the other was sold under a private label, as a cheaper "house" brand for large grocery-store chains. The evaporated milk products, though chemically identical, commanded different prices, provoking the Federal Trade Commission to bring suit against Borden for injurious price discrimination.

In its defense, Borden conducted a study which indicated that consumers believed the Borden label brand to be of superior grade and quality relative to the private label. Borden could then claim that the products were not identical and, therefore, not subject to the conditions of Robinson-Patman. The court agreed with Borden and ruled in its favor.

If such rulings are any indication, it is unlikely that Wal-Mart and its suppliers will be found in violation of the Robinson-Patman Act, and that is probably a good thing. Antitrust policy, after all, was never intended to preserve inefficient competitors for the sake of competition.

But many argue that the victims of Wal-Mart's fiercely competitive business practices have been not only companies such as Kmart and Montgomery Ward, but also the small mom-and-pop stores. These small, local businesses are often a source of community pride and regionalism and are given sympathy for their sufferings.

If society values small, more traditional stores, then it is up to consumers, not antitrust policy makers, to preserve them. Many consumers have decided, for example, to pay a little extra, in terms of price and convenience, to support their local store. In doing so, they send a signal that things other than price or convenience are important in a market society.

That signal has been no stronger than in the café industry. Small, locally owned cafés are often seen as no match for the global corporate giant, Starbucks. Starbucks, like Wal-Mart, has been accused of strong-arming suppliers and property owners for better deals and, ultimately, lower costs of doing business relative to their smaller competitors. Indeed, hordes of coffee drinkers flock to Starbucks, allowing it

to expand from 17 to 5,689 cafés in just fifteen years (*Business Week*, September 2, 2002).

But equal hordes have turned toward local independent cafés in solidarity against the corporate café. In fact, the number of independent coffee houses has grown concurrently with Starbucks' expansion (*Wall Street Journal*, September 24, 2002).

Wal-Mart and other industry big shots should, certainly, be scrutinized and their business practices kept in check. However, injurious price discrimination is not necessarily anticompetitive.

To be sure, if it were determined that Wal-Mart and its suppliers colluded, explicitly or implicitly, to price-discriminate with the intent to eliminate competition, then an antitrust case should ensue. However, such a case would involve antitrust legislation that forbids price fixing and other forms of restraint of trade, rather than issues of price discrimination covered in Robinson-Patman.

Despite the legal impotence of the Robinson-Patman Act, business managers should be aware of its existence. As the Wal-Mart case illustrates, lagging or resentful rivals may use the act as a misguided and wasteful way to battle a leading competitor.



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## FORTHCOMING ISSUES

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IS DEMOCRACY IN DANGER?

Spring 2004

LITERACY

(Confessions *continued from page 3*)

At the same time, I have come to understand that in these moments lies one of the most profound opportunities of teaching. It is a privilege to hear students' life stories. It is a privilege to be permitted to see them as human beings and not just as names on a roster. In those moments, I not only learn about them, but also about myself. I learn about who I am as a teacher and where I still need to grow and develop, and I learn about who I am as a human being.

Mary may or may not make it through the semester. If she does make it, she may or may not succeed to the level of her ability. How I respond to her and what help I offer may play a role in her future decisions, but at that moment, I have to avoid thinking about the entire semester or her college career. I have to try to focus on that individual in front of me who has chosen to share part of her life's journey with me. I have to focus on being fully in that moment so that I seize the opportunity to better understand the nature of teaching.



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# Forum on Science & Technology



Evelyn Tiffany-Castiglioni

## 98.5 Percent Pure Chimp

On April 13, 2003, the human genome project succeeded in providing an index for the atlas called the human genome, which comprises all the genetic material in each human cell. The project is the largest biology study in history. Having indexed this massive atlas and also those of the laboratory mouse, rat, and a few simpler species, scientists are intrepidly making plans for the long list of other similar atlases that lack an index. The chimpanzee is high on the list of priorities. Protein and DNA similarities identified during the past thirty years have shown that the genomes of humans (*Homo sapiens*) and the common chimpanzee (*Pan troglodytes*) are about 98.5 percent the same. With the technologies developed to carry out the human genome project, we can now focus on that 1.5 percent of difference. Why do we have such a deep interest in how genetically similar we are to chimpanzees, or rather how different we are from them? In scientific debate, the philosophical and evolutionary aspects of this question are curiously more urgent than the implications for human health and disease.

Before examining scientific motivations for mapping the chimp genome, let us consider what we have learned from mapping the human genome. The genome, which is the complete set of DNA in a species, has been studied at several levels of detail, from the equivalent of continents to neighborhood street maps. The continents are the chromosomes of a cell, large packages of DNA and protein that can be seen with a standard light microscope. Twenty-four different chromosomes exist in the human genome, and each cell of the body, except for the mature

red blood cell (which has no nucleus) contains a genome. The chromosomes occur in pairs, including twenty-two duplicate pairs of autosomes and one pair of sex chromosomes — the X and Y. Females have two X chromosomes, and males have one X and one Y. Thus, each nucleated cell has two sets of the human genome, except sperm and ova, which each have a single set. Chromosomes are readily identifiable by species based on their numbers, shapes, and staining patterns. These chromosomes, or “continents,” have areas densely populated with genes, like cities, as well as sparsely populated areas, akin to deserts.

The neighborhood street maps are the DNA sequence itself. The address of each house represents a coding unit, or codon, consisting of three chemical bases of DNA called nucleotides. Codons, as well as non-coding chains of nucleotides, are linearly arrayed to form strands of DNA, one strand running through each chromosome. The human genome has about 3.2 billion pairs of nucleotides. Yet there are only four different nucleotides, and these form an elegant, efficient code with some built-in redundancy. The redundancy comes from there being only twenty different essential amino acids to code for, but sixty-four different codons ( $4 \times 4 \times 4$ ). Each codon specifies an amino acid or a stop signal that tells transcriptional machinery of the cell how to assemble a protein out of amino acids. Scientists have looked at short segments of DNA and determined the sequence in which the nucleotides are strung together for 99.9 percent of the human genome. A few gaps still need to be filled because they present unusual structures that

the current technologies cannot readily unravel. Also missing from the human genome map is intermediate detail. For example, we do not yet have long strings of accurately sequenced DNA, so we do not know all gene orders and orientations. In effect, we are missing details about the borders of counties and countries.

The human genome project has yielded some surprising results. The biggest surprise is that there are only about 30,000 genes, rather than 80,000 to 100,000 as previously estimated. Genes are the basic units of heredity that code for proteins, such as enzymes, peptide hormones, receptors for signals, and structural proteins. A second finding is that genes make up only 2 percent of the human genome. The rest is apparently non-coding and may provide chromosomal structural integrity, as well as hold clues for evolution and gene-regulatory functions. The proteins for which more than half of these genes code are currently unknown. A third finding is that out of 3.2 billion pairs of nucleotides, each of us has 2–3 million that differ from those of any other human, except for an identical twin. Most of these differences have no biological significance because they do not occur in genes and therefore do not change protein structure. In short, the human genome is 99.9 percent the same in all people. This last finding is particularly interesting in comparison with the chimpanzee, because even though extant populations are small and geographically limited, partial sequence data indicate that the chimp has much greater genetic variation within its species than does the human.

Now let us look at the estimate that the DNA sequence of our genome differs only 1.5 percent from that of the chimp. That makes the chimp our closest living biological relative, closer than the Rhesus monkey, which differs from humans by 7 percent. For reference, the laboratory mouse (*Mus musculus*) differs from humans by 40 percent. Some scientists look at 1.5 percent and say that cannot be right. Indeed, the estimate may need some refinement. One team of investigators has made a reasonable, though not airtight case, that chimps and humans differ by as much as 5 percent, based on recently described insertions and deletions within selected long DNA



sequences that were not detected by sequencing short segments of DNA.

Whether the difference is 1.5 percent or 5 percent, that still leaves a lot of similarity. In a biological context, this high degree of similarity makes sense. Proteins that have essential functions for life are known to be highly conserved throughout the animal kingdom and are virtually identical between species as diverse as the fruit fly (*Drosophila melanogaster*) and the human. Chimps and humans have a lot in common. As an example, we have similar body plans: two arms, two legs, hands and feet, and no tail. We also have similar nervous, skeletal, circulatory, digestive, immune, endocrine, and reproductive systems. Our cells have similar cell biology, such as signal transduction pathways, cell-to-cell communication mechanisms, and machinery for DNA replication. All of these similarities are coded for by very large numbers of genes.

And yet humans and chimps are very different organisms, and their differences are governed by a comparatively small number of genes. That is the scientific and philosophical wonder. Scientists have written white papers to persuade federal agencies that the chimpanzee should be sequenced as soon as possible. Such papers contain arguments on the biomedical value of the venture: we could expect to learn much about the greater resistance of chimps than humans to important diseases, such as AIDS and some types of cancer. However, better arguments can be made for the Rhesus monkey, because it has been used extensively for the study of human health and disease. The more interesting arguments have concerned evolution. How did the chimp and human evolutionary lines diverge from a common ancestor? The answer will likely be found in records of genomic change that can be deduced from the sequenced genomes. How can a difference of 1.5 percent in the genome endow the human species with cognitive abilities that far exceed the chimp's? Did we lose genes that would have limited our ability to leave the narrow arboreal niche of our ancestors? Did we gain mutations that gave us bigger brains? These are the questions for which many scientists seek answers. The proponents of sequencing the chimp genome have been convinc-

ing, and the U.S. National Human Genome Research Institute has placed the chimp, but not the Rhesus monkey, on its list of top-priority species to be sequenced.

Evolution is as much a philosophical as a biological subject. Though chimps and humans share a number of traits, such as self-awareness, care of family members, tribal warfare, and the use of tools, humans alone engage in cultural evolution. Humans have evolved rapidly as a dominant species because of three characteristics: the desire to know, the ability to question, and the flexibility to live in most environments on earth. A recent study suggests that the major difference between us and chimps lies in gene-expression patterns of the brain. This possibility is not surprising. It provides a biological basis for speech, written language, mathematics, and preserved history. It also suggests a biological imperative for the development of human intellect and human innovation. Can we find the genes for invention, for poetry, for music, as we compare the human and chimp genomes?

What a strange irony it is that the very genes that make us human compel us to seek them and peer into them. When we find and glimpse those genes, it will be like looking at our own molecular reflection. The 1.5 percent of our genome that distinguishes us from chimps may be a cryptic mirror in which to see our past, our present, and perhaps our future as a species.



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[Some topics she is considering for future columns include: the domestication of the dog, music and the mind, and advice to a young scientist. She would welcome your comments on these or other topics at [ecastiglioni@cvm.tamu.edu](mailto:ecastiglioni@cvm.tamu.edu).]



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# Forum on the Arts

Heidi Tolles Motzkus

## The Art of Cultural Studies

The emerging field of cultural studies has provided a new lens through which to view and think about the arts and culture. Since its beginnings in the 1960s in England at the University of Birmingham Centre for Contemporary Cultural Studies, the field of cultural studies has garnered much attention. The field as a whole has traversed a rocky road as it tries to make a home in academia. Some academics have been disturbed by the lack of pureness in the field, as cultural studies is by nature highly interdisciplinary. Drawing upon the theories and practices of disciplines as diverse as anthropology, art theory, social sciences, literary criticism, and linguistics, the field of cultural studies is characterized by the *practice* of theory. Lived experiences are central to this field.

A distinguishing feature of cultural studies is its insistence that culture and cultural products, such as the arts, must be studied within the social relations and system through which culture is produced and consumed. Therefore, the study of culture is intimately bound up with the study of society, politics, and economics. At its strongest, cultural studies is a comprehensive approach that examines not only the cultural texts, but also their systems of production and distribution and their impact on the audience. Such an approach produces a multifaceted analysis with a range of perspectives. As in postmodernist thinking, cultural studies maintains that there are no absolute truths, but that there is a myriad of perspectives, all worthy of examination. The frequency with which cultural-studies approaches are being used to investigate the arts indi-

cates that cultural studies has finally come into its own.

At the heart of cultural studies is the understanding that “the way we see things is structured by what we know or what we believe.” In this quotation from his 1972 book, *Ways of Seeing* (BBC and Penguin Books Ltd.), John Berger puts his finger directly on the pulse of this field. The statement may seem obvious, but at the heart of cultural studies is the idea that cultural norms are only norms for that culture. These norms change, are relative, and do not themselves contain any ultimate truth. This idea is far removed from that of the formalists in literary theory, who feel that a text is a “well-wrought urn” beyond which no one need look. All meaning was to be found within the text. A cultural-studies approach would entail investigating not only the cultural text of that urn, but also the conditions of its production and the impact on its users.

Berger’s book is, in fact, a stellar example of the analytical possibilities inherent in cultural studies. The back cover of the book places it within the category of Art/Architecture. However, it is clear that this book could be placed in any number of categories. In his discussion of the ways in which the female body has been constructed, viewed, marketed, bought, and sold, Berger uses European art from the Renaissance onward, print ads, and economic theory. Another section of the book examines the relationship between European oil paintings from 1500–1900 and the notion of possession. His discussions exist somewhere between art criticism and economic analysis. Above all, Berger asserts the

importance of viewing art within its historical and social context.

Crossing the borders of academic disciplines in true cultural-studies style is Performance Studies scholar, Richard Schechner. His interdisciplinary way of viewing theatre takes him on a path that leads from anthropology to political demonstrations, theatrical productions, and the performing arts. Schechner has traveled widely, studying the performance practices of many cultures in the manner of an anthropologist. He studies rituals and performances and ponders the nature of the relationship between performance in Western and non-Western cultures. He notes that performance is not only the object of study but also the means for studying it. His methodology is based on total engagement of the researcher. Schechner’s work sheds light on the in-between places of performance that are not often given attention in academia. For instance, his book *Between Theatre and Anthropology* (Routledge, 1985) includes fascinating descriptions of what happens when the actors and spectators are transported out of their ordinary experience during the throes of performance. This area seems particularly fecund for study, as most theatre patrons continue going to live theatre not for the love of the text or for appreciation of actor training, but for those magical moments when we are transported by the event. Schechner’s work embodies certain ideals embraced by cultural studies, such as the focus on the “how” of performance rather than the “what.” For him, the polished performance is not of interest; it is the changes that occur within the actors and spectators during an actual performance.

Characteristically, cultural studies seeks to expose power relationships and to explore the manner in which power relationships shape cultural practice. Popular culture has become a common area for cultural-studies investigations. From pornography to Madonna, practitioners of cultural studies have sought to understand the social and political context of popular culture. Though it is true that certain popular-art forms, such as the music video, have become overanalyzed and glorified in the opinion of many, a

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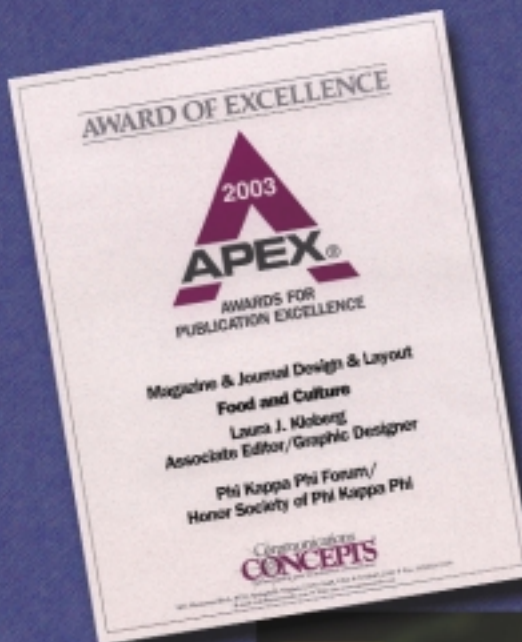
plethora of popular-art forms that are worthy of deeper analysis remains. A recent issue of *American Theatre* magazine (published monthly by TCG), a magazine that straddles the border between the popular and the scholarly, features a book review on three new books that each uses cultural-studies theory to look at issues of gender in American theatre and movies from a new perspective. Identity theory is of high interest to those who practice cultural studies, and theatre and films provide rich material for meaningful examination of the significance of identity formation.

Finding himself part of the cultural-studies field, George Lipsitz's study of American popular culture brought him into the disciplines of anthropology, literature, sociology, music, and speech communication. His book, *Time Passages: Collective Memory and American Popular Culture* (University of Minnesota Press, 1990), is an invigorating study of popular-art forms such as rock music, films, and television. Historically, Lipsitz found, these popular-culture texts seemed to resound with the emotions and attitudes of the times in a way that formal academic texts did not. Thus began his varied and colorful exploration of popular texts, which demonstrates that popular texts are a complex repository of historical knowledge, more reliable in some aspects than a traditional history textbook.

Richard Hoggart, the founder of the Centre for Contemporary Cultural Studies, once asserted that it is only through art that we are able to move outside the time-dependent fabric of our daily experiences. Whether our definition of art is classically oriented or includes popular-art forms, Hoggart's statement points to the monumental importance of art as a transcendent experience. Cultural studies, a field that is experienced in transcending boundaries, is an innovative approach and an exciting way to see the arts.



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Leland M. Roth

## Character of and in American Architecture

Thomas Jefferson, Virginia State Capitol, Richmond, Virginia, 1785. Based directly on the Maison Carrée in Nîmes, this building was intended to present both an example of beautiful architecture as sanctioned by antiquity, and also an example of architecture representing ancient Republican Rome. Photograph by L. M. Roth.

Most people — users, that is, as opposed to designers and critics — seldom think of architecture as anything more than a mute utilitarian container. Yet architecture, whether or not we take it in consciously, is nonverbal communication. Architecture speaks volumes about the values and priorities of the designer or architect, and of those who built the structure. This view of architecture has been voiced by many commentators, including the nineteenth-century critic John Ruskin, who observed in his preface to *St. Mark's Rest* (1877) that nations “write their autobiographies in three manuscripts — the book of their deeds, the book of their words, and the book of their art. Not one of these books can be understood unless we read the other two; but of the three, the only quite trustworthy one is the last.” Architecture is the most accurate, the most truly revealing cultural artifact.

A few tubes of paint are all that is needed to create a canvas; paper and typewriter (or nowadays a computer) are the only requirements to create poetry or a novel. Music initially requires only pen and staff paper, but to be realized requires musicians and a studio or performance hall. Architecture, in contrast to all the other durable arts, comes into being only through the coordinated efforts of client, architect, builder, and scores of workmen; therefore — because it requires such a formidable financial investment — caprice and personal whimsy are normally restricted, replaced by the pressures of what is truly important in the culture of client, architect, and builder. Architecture is a “bottom-line” art form. Moreover, who we are and what we do are influenced, if not determined, by the architecture around us. As Winston

Churchill suggested in speaking to Parliament in 1944, “we shape our buildings, and afterwards our buildings shape us.”

We sometimes speak of a quest for an authentic American architecture that, however, with every generation eludes definition. In the beginning, when our European forebears first settled in the New World, there was no thought of creating a uniquely American architecture. We started out as a few hundred transplanted Swedes, French, Dutchmen, Spaniards, Britons, and subjugated Africans, and we built in the ways to which we were accustomed “back home.” In the individual colonies, versions of the normal, everyday architecture that was common back home sprang up — around Stockholm, in the pays of France, next to the canals of Amsterdam or Delft, in the churches of Mexico or even Spain, or in the villages of East Anglia. The forcibly transplanted peoples from the West Coast of Africa built houses, when they were permitted to do so, as they had done at home — long, narrow houses that would, in a hundred years or so, become the so-called shotgun house of the lower Mississippi valley.

One significant exception to the transplanted vernacular building forms was a uniquely original building type in the Puritan settlements of Massachusetts Bay. Spurning the pomp and liturgical formalism of the Church of England, the Puritan separatists determined not to erect churches to house their worship but instead created a straightforward, four-square, unembellished barn-like structure to house their worship services, their town assemblies, and to provide shelter for the community in times of tumult. Because the term “church” was too firmly linked to the

Church of England, a new term, “meeting house,” came into use to describe these austere, multifunctional structures.

### COPYING AND REJECTING ENGLISH ARCHITECTURE

Toward the end of the seventeenth century, several developments fundamentally changed the appearance of architecture in the colonies. One was a political change as the various European colonies were absorbed in a pervasive English political and cultural aggregation, from Georgia to what would become Maine. Another was an artistic change as individuals aspired to assume the social position that expanding fortunes made possible. As awareness of the artistic shifts then occurring in England grew among the well-to-do, and as merchants and plantation owners acquired more and more of the architectural treatises and building manuals pouring from English presses, the desire to emulate the latest architectural fashions in England grew. In fact, in the Virginia colony, it was legislated that to serve in the House of Burgesses (an advisory council to the royally appointed governor) one had to build a grand plantation house befitting one’s social position. Architecture became the visible measure of social rank. The colonists were especially attracted to the proportionally balanced classicism of neo-Palladian villas. Not only did this classicism demonstrate one’s wealth (and social position), but it also was an emblem of humanist values (or at least the pretension of espousing classical learning).

Although modifications were made in building techniques in a land in which materials were abundant but skilled artisans comparatively rare (and expensive), little attempt was made to create an architecture that consciously aimed at being distinctively different from that of England. After all, the intent was to show that colonials were as cultivated as those in the mother country, that they were in fact true Englishmen.

Asher Benjamin, Center Congregational Church, New Haven, Connecticut, 1812–14. Although an early nineteenth-century building, for the oldest Puritan congregation in New Haven, the form is taken directly from Gibbs’ St-Martin-in-the-Fields, London, 1721–26. Photograph by L. M. Roth.

For the English colonists, designs published in books of the period became normative patterns to be followed up and down the Atlantic coast. In a notable development, in the eighteenth century the former Puritan congregations in New England began to rebuild their houses of worship, following these published models, increasingly calling the new buildings churches as their prejudices eased. Increased wealth softened the prohibitions against fashion, and the new churches were based on one particular compelling model: the church of St. Martin-in-the-Fields, London, 1721–26, designed by James Gibbs and published in his *Book of Architecture* three years later. There were now few qualms about basing these New England churches on one designed for the established Church of England.

For residences many varied published designs existed. All along the coast one standard pattern was the so-called double-pile Georgian house plan, governed by bilateral symmetry, with large rooms on either side of a central hall that ran through the depth of the house and a second pair of chambers flanking the hall to the rear. In the southern slaveholding colonies, this kind of plan was well suited to the separation of classes of society and was expanded to include flanking outbuildings, usually a kitchen and an office, so that field slaves were never in the main house, and overseers needed never to venture farther than the owner’s office. Thomas Jefferson so contrived the rooms and passages of his home, Monticello, that house slaves could deliver food (even bottles of wine from the basement by means of a small dumbwaiter hidden in the drawing-room fireplace) so that guests might never see them — Jefferson’s architectural way of dealing with the dichotomy of running a plantation, founded on human bondage, that made possible his life of philosophical inquiry which produced the ringing assertion that “all men are created equal.”

That ironic juxtaposition of slave labor supporting a life devoted to the pursuit of political freedom resulted, however, in Jefferson’s creating a new image of governmental architecture for the fledgling republic after the Revolution. Asked in 1785 to develop a design for the proposed new Virginia capitol then being moved from Williamsburg up country to Richmond, Jefferson took the opportunity to rethink what an American governmental building should be and how it should look. For him, the former colonial governmental buildings in Williamsburg were tainted by their connection to a detested monarchical system and to the imperious whims of a distant parliament. The new capitol must look nothing like those buildings. At the time Jefferson was in Paris, serving as our first envoy to the French court, and he was well aware of the recent publication of a folio of measured



drawings of the ancient Roman temple, the Maison Carrée, in Nîmes, in the south of France. Although a product of early Roman imperial expansion into Gaul, the temple nonetheless derived from even more ancient republican Roman sources that Jefferson may well have understood. In any event, it had survived nearly intact, and for Jefferson the temple was a superb example of the balance and decorum of ancient Roman architecture. Hence it became the model for his capitol in Richmond, a visible lesson for his Virginian countrymen in the virtues of architectural excellence from antiquity; even better, it could serve to inspire reflection on an individual's civic commitment essential to the success of the newly created American system of republican government. Not only was the new capitol intended to be a lesson in the art of architecture in its balanced proportions, its restraint of classical detail, and its adherence to universal models, it was also intended to instill qualities of ethical probity and respectability — to establish elevated moral character.

In contrast to Jefferson's reference to an ancient Roman model, in the newly formed state of Massachusetts a very different solution was created by Charles Bulfinch to house its new statehouse. Bulfinch's models came from contemporary England, buildings he had recently visited, and his brick, domed capitol was compiled of elements derived from the buildings of such English architects as Robert Adam, Sir William Chambers, and James Wyatt. Bulfinch felt that the work of these esteemed English architects represented excellence in contemporary architecture, just as ancient Roman architecture did for Jefferson. Eventually the salient features of these first two state-capitol buildings — the ancient classicism and the commanding dome — would be fused in the sequence of state capitols that appeared in the developing western states such as Kentucky, Ohio, Indiana, and Tennessee, to name a few.

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### BORROWING FROM THE PAST

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Jefferson hoped that his capitol would be a lesson in architectural taste, in much the same way that his classically inspired pavilions and library of his "academic village" at the University of Virginia would serve as an "architecture lecture." An unintended lesson that the Virginia capitol taught, however — as did the Pantheon-based library at Charlottesville — was that excellence and beauty in design resulted from historical borrowing. Such eclectic cribbing from ages past became the governing characteristic of architectural design in the nineteenth century. While the style selected for a particular building was often determined by the personal taste of the client, there was also a systematic coding of various historic styles,

the investing of semiological content, that was seen as appropriate to certain functional uses. Jefferson had already hinted at this in his selection of Roman classicism as the image appropriate to American republican government.

Later, in the 1820s and 1830s, even more austere massive Greek Doric classicism became the style of choice for public buildings, financial buildings such as banks, and even private houses for those so inclined such as Nicholas Biddle, president of the Second National Bank of the United States. Biddle had inherited a rather nondescript house from his father, but consumed with a passion for ancient Greece, he instructed his architect, Thomas U. Walter, to wrap the house in a Grecian Doric colonnade based on the columns of the Hephaisteion in Athens, built in the fifth century B.C. But doing this renovation placed the thick columns nearly in front of some of the windows; moreover, by rigorously following the ancient proportional relationships of column height to the height of the massive upper entablature, the topmost windows of the house were thrown into perpetual shadow.

Religious attitudes meant that medieval styles were preferred for churches. Architect Richard Upjohn strongly preferred the most accurate Gothic style for the most liturgical Christian denominations, Roman Catholics and Episcopalians, with more relaxed, rather generic Gothic for other denominations. Funereal architecture, such as cemetery chapels, might also be Gothic in style, but often the gates to mid-nineteenth-century cemeteries were massive Egyptian pylons, for Egyptian architecture also had strong associations with the theme of death. Such associational architecture was part of the Romantic movement in the nineteenth century, drawing on the same literary desire to link emotive feeling to certain activities.

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### THE SKYSCRAPER

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By 1885, a synergy developed among architectural clients and their architects that produced a uniquely American building type that changed the nature of urban building first in the United States and then around the world. The new building was the office skyscraper, the result of converging interests and forces: the clients' desire to maximize the yield on their investment by building upward in the crowded urban center; the architects' efforts to create an integrated, sensible vertical design; their engineers' success in solving unprecedented problems in soil mechanics and foundation design, as in dealing with significant lateral forces the higher that these towers rose; and the contributions of thousands of skilled construction workers, many of them newly



arrived immigrants with developed skills in old-world crafts.

These ever-higher towers represented the apotheosis of American business enterprise, untrammelled by any cultural restrictions and free of building codes limiting height. These towers, each striving for a distinctive profile and style, also were corporate image-making, celebrating American self-aggrandizement, with each new corporate-headquarters tower designed to be taller than those built previously. For a moment, at least, building owners could take fleeting pride in possessing the world's tallest building. This race for the sky reached its serio-comic height in 1928–29 with the rivalry to see whether the Bank of Manhattan or the Chrysler Building in New York would be taller. As the design of one was altered to achieve the record, the other was modified to outreach it. Finally it appeared that the Bank of Manhattan would seize the record. Secretly, meanwhile, a needle-like spire of 185 feet was being assembled *inside* the top of the Chrysler Building. On October 16, 1929, in the span of an hour and a half, the spire was jacked up from below to make the Chrysler Building the tallest in the world at 1,046 feet in height — tallest, that is, for about eighteen months, until the Empire State Building was topped off at 1,239 feet (to

William Van Alen, Chrysler Building, New York, New York, 1926–30. Aspiring to be (briefly) the tallest building in the world, the building's spire was constructed inside the structure and jacked up in several hours to achieve the record. Photograph: Wurts Brothers.

be extended to 1,459 later with the addition of a television antenna).

A hiatus in this skyward race followed during the Great Depression and then World War II. But by the 1960s the race was on again, as several office towers in Chicago vied with each other to be the tallest. Sears-Roebuck deliberately went after the record, instructing its architects — Skidmore, Owings, & Merrill — and the firm's engineer, Fazlur Kahn, to do whatever was necessary to make its office tower the world's tallest. In the 1920s the *Chicago Tribune* had held a contest for a design of an office tower with the prime consideration that it be the most beautiful skyscraper in the world. Sears was not interested in such niceties; they wanted the world's tallest, whatever it took, and they got it at 104 stories and 1,454 feet (not counting the twin television antennae). At nearly the same time, in New York City, efforts by the port authority to house numerous international commercial and investment companies (as well as to eliminate a blighted area through urban renewal) produced the twin towers of the World Trade Center, whose scale-indeterminate sheer faces rose roughly 1,368 feet.

Such massive tower-building can be seen as an act of boastful breast-beating and is done often with little initial thought of the environmental or social effects on the surrounding area. Frank Lloyd Wright proposed a mile-high tower in the 1950s, but the utilities and the traffic needed to service it daily would have destroyed the surrounding city, perhaps a deliberate gesture by Wright, who believed that the typical American city was fundamentally wrong. Considering how the World Trade Center was viewed as symbolizing the global effects of expanding American business empires, and a forceful assertion of vaulting hubris impossible to ignore, it is no wonder that the towers became the target of those consumed with hatred for the imperious secular American worldview.

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## FAMILY DWELLINGS

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While architects Louis Sullivan and Cass Gilbert, among others, were focusing on defining the form of the skyscraper at the end of the nineteenth century, Frank Lloyd Wright focused on redefining the nature of the American single-family house proliferating in the suburbs surrounding American cities. He created a domestic architecture of interconnected expanding space, blurring the distinction between interior rooms and exterior spaces. Hoping to create a new America in the model of Broadacre City, totally decentralized, spread across the landscape, and wholly reliant on private automobile transportation, Wright was unable to build it by himself. After World War II, it was realized through the efforts of private builders and planners such as William J. Levitt and

his sons on the east coast, and Joseph Eichler on the west coast. In the 1950s and 60s, with the proliferation of the endlessly repeated suburban house and the fixation on enhancing private comfort in the suburban home, came a lessening of interest in creating or maintaining excellence in public facilities such as libraries or schools. At the dawn of the twenty-first century, while a greater interest is apparent in building such public facilities as libraries (at least in selected cities), interest is still far stronger in building elaborate media rooms in private residences, complete with wide-screen, high-definition plasma displays and surround-sound, than in maintaining a tax base sufficient to run schools and to build libraries. We still, in general, prefer our private pleasures at the expense of public services.

The irony is that during our most economically challenging times, during the years in which we became involved in World War I and particularly during the Great Depression of the 1930s and the privations of World War II, we built some of our best communities — the Emergency Fleet ship-builders' villages (Atlantic Heights outside Portsmouth, New Hampshire), the communities serving public-works facilities such as the Norris Dam (Norris, Tennessee), or the Greenbelt satellite communities (Greenbelt, Maryland). Significantly, all were planned recognizing the use of the private automobile, but none were driven in their design by the demands of the automobile. These communities had closely clustered houses and nearby public facilities easily reached on foot. Their compact designs facilitated human interaction instead of enforcing isolation.

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## MODERNISM AND POSTMODERNISM

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The message of modernism, as devised and proselytized by architects such as Mies Van der Rohe, Walter Gropius, Wallace Harrison, and Minoru Yamasaki (to name but a very few), was that there was no message. Such architects as these emphasized functional utility while conveying no particular meaning, at least to the normal user. Architects might wax rhapsodic over “less being more,” but the ordinary user saw such modernist architecture simply as so many disposable boxes. Later, with the rise of the preservation movement in the 1980s and 90s, yet another irony became evident; the handmade, neo-romantic, stylistically eclectic architecture of the 1920s and 30s was far more easily repaired and maintained than the intensely utilitarian modernist buildings of the 1950s because the latter employed special industrially produced parts and assemblies now no longer available except as expensive custom work. The details of classical, medieval, or Renaissance architecture, and stylistically related Georgian buildings, had

been developed over centuries or decades to facilitate weathering; modernist pioneer architects seldom troubled themselves over their buildings surviving in the real world. Many modern buildings did not last more than a generation without significant intervention. In *Form Follows Fiasco: Why Modern Architecture Hasn't Worked* (1977), Peter Blake noted that architects in the 1960s specified adhesives, caulking compounds, plastics, and other recent formulations with no idea as to whether they would hold up even long enough to amortize the cost of the building.

The bland, nonreferential emptiness of modernism prompted the rise of postmodernism, loaded with references to various periods in the past. Postmodernism began with tongue-in-cheek references to traditional classical details, as in the early work of Robert Venturi in the 1960s. In the forty years after that, postmodernism branched into numerous variants, including the late modernism found in the white cubical masses of the work of Richard Meier. The ironic architectural whimsy of the 1960s matured in the work of Michael Graves, such as his San Juan Capistrano Library, 1980–82, with its generalized allusions to stucco-covered California mission architecture. References to past traditions were sometimes abstract, as in Frank Gehry's Loyola Marymount University Law School, Los Angeles, 1978–86, or even more in the General Foods Corporation Headquarters, Rye, New York, 1977–83. Or references to the past were sometimes quite literal, as in the first Getty Museum, Malibu, California, 1970–75, by Langdon & Wilson, which was a direct realization of the ancient Roman villa outside of Pompeii. At its best, postmodernism is a double-coded fusion of modernism in functional utility merged with stylized references to the past, as in the many allusions to the history of Chicago's architecture in the Harold Washington Library Center, Chicago, 1987–91, by Thomas Beebe. Another good example is (or was) the modestly scaled Observatory Hill Dining Hall at the University of Virginia, 1982–84, by Robert A. M. Stern, but an intelligent response to the architecture of Jefferson was no guarantee of longevity, for the building is being demolished.

Another response to the vacuousness of modernism was a dramatic embrace of form for form's sake, the antithesis of Louis Sullivan's dictum that “form always follows function.” One architect who has pursued this path is Bart Prince, whose residences are almost biomorphic in the undulations of their shingle-covered forms, or which, alternatively, appear to be alien space craft. Frank Gehry began experimenting with broken angular forms in the 1970s, most notably in the angular, projecting additions to his own house in Malibu, California, 1978. Gehry rocketed to international attention when he adapted



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 BUILDING COMMUNITIES
 

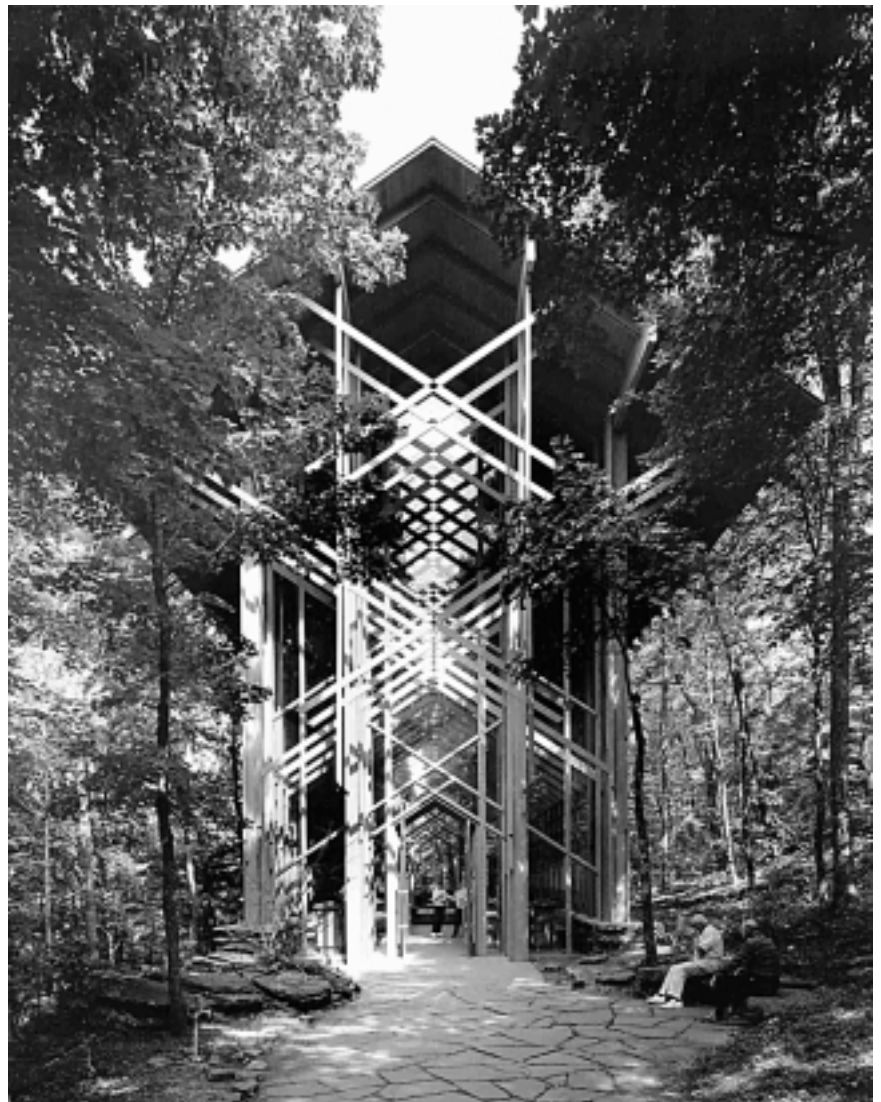
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French aircraft-design computer software for designing buildings, allowing him and his associates to translate his loose, swirling hand-drawn sketches into modeled computer drawings, even to generate structural drawings for buildings that undulated and curved back on themselves. His best-known work is the Bilbao Museum, a branch of the Guggenheim, inserted into the abandoned industrial river front of Bilbao, Spain, 1987–97. Its complex undulating forms gain drama by being sheathed in tough, thin sheets of titanium, so diaphanous that they flutter in the breeze, making the building shimmer in the light. Gehry has become a victim of his success, being inundated with clients' requests for spin-offs of the Bilbao Guggenheim.

Contrasting absolutely with the flash of Gehry's sparkling biomorphs are the quiet chapels designed by Fay Jones in the 1980s, beginning with the Thorn-crown Chapel near Eureka Springs, Arkansas, 1980. The delicate, reed-like verticality of the structure resulted from an initial decision of client and architect to respect the building site, an expanse of woodland thick with trees. Conventional building practice would have necessitated clearing the site so that trucks could drop off building materials, and opening a place for workmen to park their pickups, making an impact on the site that would have required significant repair and relandscaping. Instead, it was decided to use only those materials that could be carried in by hand, to use small-dimension lumber, fabricating support and truss assemblies on the floor of the chapel. The result is a structure whose delicate lines blend with the interlaced tree branches. Inserted in the midst of the trees, it was a building created as a stop for travelers, a quiet place, as Jones said in an interview, where people could come "to think their best thoughts." And people have come, not because it is the work of a renowned architect (Jones did become famous for it), not because it is some *de rigueur* stop on an architectural grand tour; but because of the palpable presence of the contemplative atmosphere and its natural setting. The magnet is pure transcendent architecture.

Fay Jones, Thorncrown Chapel, Eureka Springs, Arkansas, 1980. This simple but elegant structure was built with materials carried into the wooded site by hand so as not to destroy the enclosing landscape. Photograph © Timothy Hursley.

Human beings cannot exist in isolation; as animals we lack the mass and muscle, the teeth and claws, to survive alone. Our basic support unit is the family, and beyond that a community of people living in a coordinated group. Perhaps because of the staunch frontier individualism that is part of the American myth — and the concomitant mythical American single-family house set on its own grounds — our tendency has been to not particularly value houses intelligently clustered together, designed to foster a sense of connectedness with each other and to exact fewer demands on the environment. This is why we do well to look at the housing complexes of Michael Pyatok in the areas around Seattle and in the San Francisco Bay region. For the most part his work is for housing subsidized by charitable organizations, compact residences for those who work at or just below the poverty level. Such is their sense of scale,



the complexity of massing, and the attention to detail that they appear to be upscale condominiums. Pyatok likes to tell of passersby who stopped to see a complex nearing completion in the Seattle area, asking when the condominiums were going on sale; he was amused to see their befuddlement when they were told that their household income could be no more than 80 percent of the regional median income to qualify for the subsidized housing. Cost-effective architecture need not look cheap or uninspired.

Self-important corporate headquarters, extravagant mini-mansions, and preciously elegant museums do little to build a sense of community. There is more to be learned that will improve the quality of American architecture in the low-cost, socially responsive architecture of the late Samuel Mockbee and his Rural Studio in Alabama [See Bruce Lindsey's article in this issue. — Ed.], or in the housing complexes of Michael Pyatok, than in any number of vaunted office towers, mansions, and museums. For if we would aspire to lift the character of our communities, we must build as if it mattered.



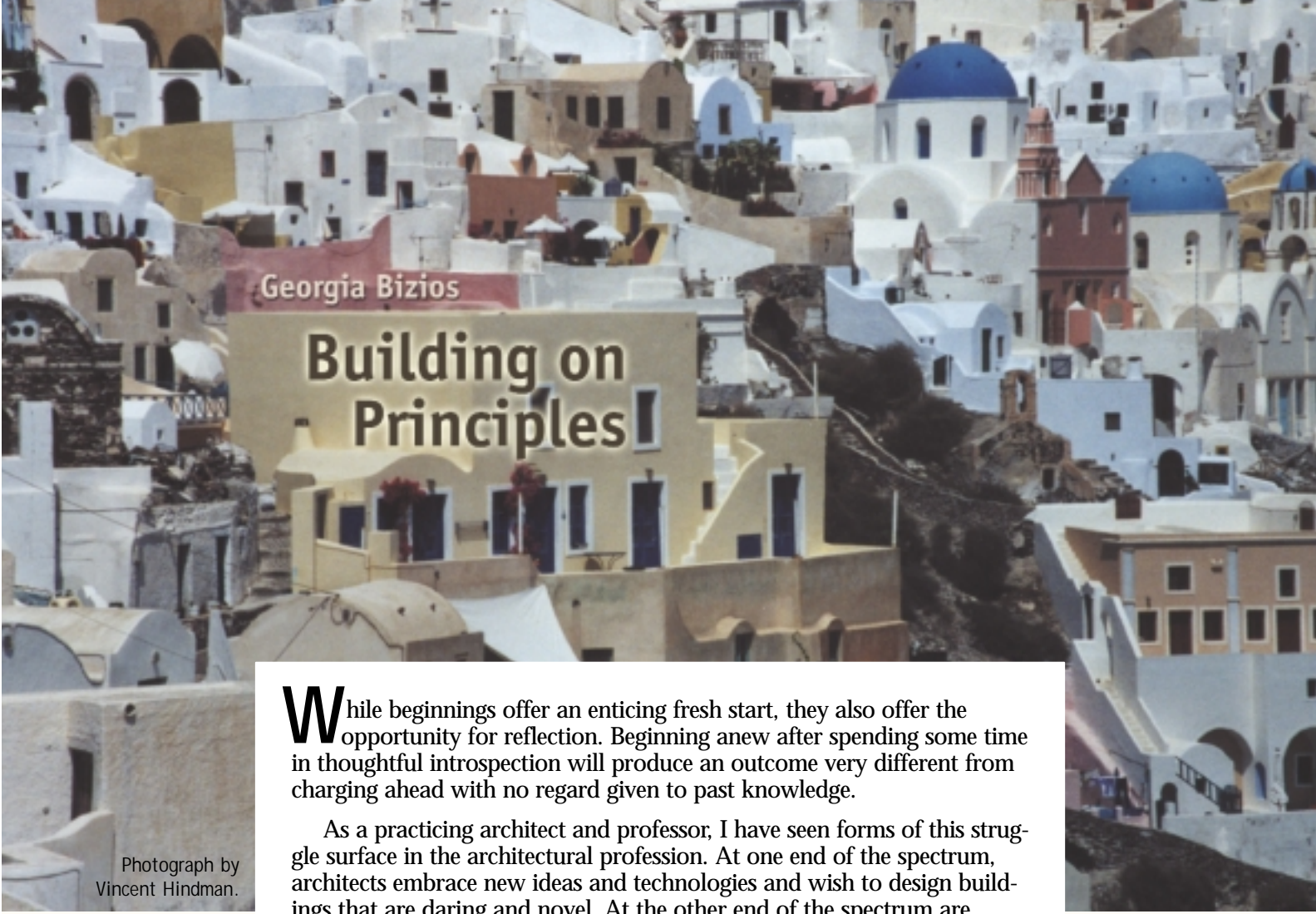
Michael Pyatok, Tower Apartments, Rohnert Park, California, 1993. Appearing to be upscale apartments, these buildings are carefully designed to enhance the preferred living patterns of renters working at or just above the poverty level. Photograph courtesy of Michael Pyatok.




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Photograph by Vincent Hindman.

**W**hile beginnings offer an enticing fresh start, they also offer the opportunity for reflection. Beginning anew after spending some time in thoughtful introspection will produce an outcome very different from charging ahead with no regard given to past knowledge.

As a practicing architect and professor, I have seen forms of this struggle surface in the architectural profession. At one end of the spectrum, architects embrace new ideas and technologies and wish to design buildings that are daring and novel. At the other end of the spectrum are designers who are content merely to replicate the past. Architectural award programs and professional journals almost exclusively promote the design of novelty buildings, yet much of the work for architects lies in designing buildings in the same ways that they have been built before.

The division does not end with architects. On the one hand, the public's and the media's fascination with the adventurous avant-garde — buildings the likes of which you have never seen before — is splashed across television, newspapers, and magazines throughout the world. Whether personal opinion is favorable or unfavorable, the hype renders star status to the building and its architect. On the other hand, the same people who are awed by these novelty buildings are drawn to conservative traditional homes, with furnishings that replicate European or Asian designs of centuries past.

Designers and the public both lose in the battle to choose exclusively one extreme or the other. Buildings that represent a “novelty for the sake of novelty” mindset or buildings copied from the past with no regard for current conditions ultimately degrade our culture and do not respect or fulfill the public's needs.

I have found unity between these spectrums of thought from studying and using the centuries-old practice of creating a framework of design principles that informs and guides my design process. Given the current conditions of twenty-first century living, such as automobile-dominated environments, dying city centers, and endless suburban sprawl, I find this unity not only desirable, but also absolutely necessary as we are challenged to find solutions to create more humane surroundings.

For centuries, buildings and places were built according to time-honored design principles. Social customs, existing technologies, building types, and human needs evolved sometimes slowly but almost always continuously. Periodically a historic event, technological invention, or the creative spirit of an individual or group brought about significant innovation in building practices.



Santorini, Greece. Photograph by Vincent Hindman.

#### Vernacular Architecture

Architectural harmony achieved by following time-honored design principles regarding topography, climate, available materials, human needs, and social customs. The specific requirements for each structure and the individual builder's creative genius result in a delightful variety within the overall unity, a unique place with universal appeal.

#### Playing By the Rules/Playing With the Rules

Responding to a site that "enjoys from every part most beautiful views," Palladio invented a new plan and space organization for a house. He raised the main floor with "great rooms," designed a covered terrace on each of the four sides, and placed the service areas on the lower level. In other aspects of design and construction (dome, columns, proportions, decoration) he relied on his solid knowledge of Greek and Roman architecture.



Villa Rotunda, Vicenza, Italy. Andrea Palladio. Drawings: Plate from Andrea Palladio, *The Four Books on Architecture*, Dover, 1965. Photographs by the author.

These design principles are the basis of thoughtful introspection that I am proposing as a valuable first step to the architectural profession and public before confronting the challenge of what to build. Design principles offer a framework that results in producing buildings and places that are enriching and memorable.

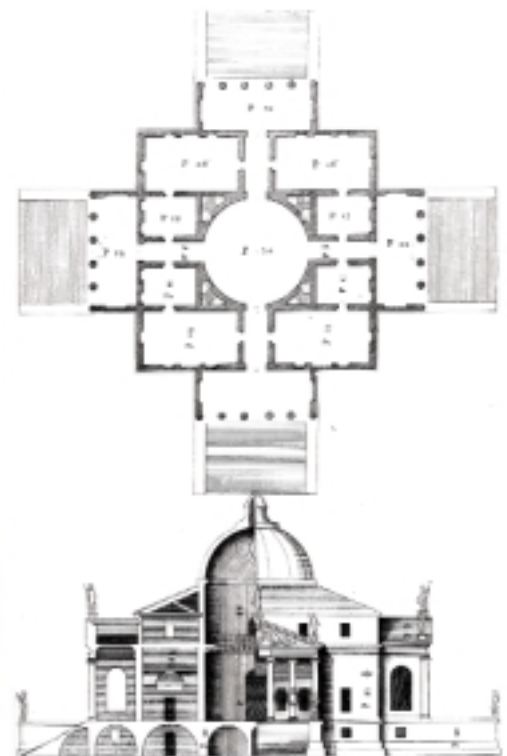
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### AN INTELLECTUAL HERITAGE

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Architectural thought has not always been consumed by the relentless pursuit of novelty that currently characterizes our culture; nor has it always been paralyzed by the reluctance to embrace anything that is new. We have a long tradition of architectural treatises that attempt to outline and document time-honored design principles for the construction of buildings and towns while encouraging innovation.

Early examples of significant design-guideline documents include the treatises of Vitruvius, Alberti, and Palladio. Around the first century B.C., Marcus Vitruvius Pollio, a Greek-trained Roman architect, wrote his treatise *On Architecture*, which outlined principles and advice for design, construction materials and methods, building types, and ornament. During the Renaissance, Leon Battista Alberti attempted to clarify and update Vitruvius. His goal was "to collect and transcribe . . . all the most curious and useful observations left by the Ancients . . . and to these we shall join whatever we ourselves may have discovered that seems likely to be of use." His work was com-



### Front Porch

A great American tradition, the front porch provides an appropriate transition from public to private realms, a threshold yet a place to be. Interpretations of the porch as a transition space are appropriate in new buildings.



Residence, Chapel Hill, North Carolina, Bizios Architect. Photograph by Dale Mulfinger.



Residence, Chapel Hill, North Carolina, Bizios Architect. Photograph by the author.

piled in a manuscript titled *Of Built Things*, written in 1450. A treatise that influenced generations of architects, including Thomas Jefferson, was *The Four Books of Architecture*, written by Andrea Palladio. First appearing in 1570, the document contained illustrations of ancient classical monuments as well as Palladio's own designs of town and country residences.

During the rapid growth of the United States in the nineteenth century, pattern books were widely used as an educational and professional tool both for the general public and for carpenter-builders. These books were a means of improving the reader's architectural knowledge and taste because there was no established institutional architectural training in the United States at this time. Books such as Andrew Jackson Downing's *Cottage Residences* (1842) and Calvert Vaux's *Villas and Cottages* (1857) borrowed principles from Victorian England and addressed aesthetic issues of taste as well as practical issues involving the parts and assembly of architectural elements.

During the twentieth century, discord in attitudes toward design principles of the past dominated architectural thought. Some architects replicated the historic aesthetic styles such as the Gothic or Classical, while others ignored all former design references, as seen during the Modern Movement. While books such as *Architectural Principles in the Age of Humanism* (1949) continued the legacy of understanding and applying design principles beyond aesthetics, it was not until the latter part of the century that a strong interest in the value of design principles resurfaced.

A significant example of this renewed interest is *A Pattern Language* (1977) by Christopher Alexander (and others). This book identifies 253 patterns or design concepts that continue to be successfully used in endless variations to create new designs. Likewise, *Patterns of Home* (2002) by Murray Silverstein (and

### Sheltering Roof/Ceiling Height Variety

Recent publications of pattern languages remind us of tested design concepts that make buildings comfortable and meaningful for their inhabitants.

others) outlines ten fundamental principles for the design of a good home and illustrates them with diagrams and photographs of houses built in the United States in recent years. Sara Susanka's *The Not So Big House* (1998), proposing "clear, workable guidelines for creating homes that serve both our spiritual needs and our material requirements," has had a tremendous impact on the public's criteria for what they want in a home.

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## THE VALUE OF DESIGN PRINCIPLES

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**A**s a staunch believer in the fundamental worth of design principles, I find them to be the very cornerstone for the process of designing buildings that contribute to the creation of good places.

A written framework of principles provides an individual with the means to understand, analyze, and make informed decisions about the built environment. It helps one to assess or evaluate a place by offering criteria for decision-making. A thoughtful, well-written framework encourages the individual not only to consider aesthetics, but also to examine functional, social, and environmental issues. Design principles facilitate public participation in the design process because they offer a common language.

Guided by a framework of design principles, an architect is able to serve the public not only as a designer of a building, but also as a leader. Developing design principles for the kind of place of which a community can be proud requires professional expertise as well as the participation of diverse groups — citizens, business owners, public officials, designers,

and developers. An architect can provide leadership in the development of guidelines, using them as a framework to clearly express ideas and agreed-upon goals.

Design principles also communicate ideas and innovations within the architectural profession. All professions strive for the collection, dissemination, and preservation of evolving ideas, trends, and discoveries; architecture is no different. Without the ability to capture and communicate the array of information that the building process creates, the profession is stunted from its own lack of clarity, organization, and written history. With the establishment of solid communication, a proud heritage and legacy can emerge.

Architects also have a responsibility to serve as leaders in creating innovative solutions to complex building and planning issues. Design principles support innovative thought by providing a fertile source of expertise that nurtures and stimulates such thought. As French chemist Louis Pasteur reminds us, “Chance favors only the mind that is prepared.” In allowing design principles to guide the creative process, innovations are conceivable as opposed to lucky happenstance.

**PRINCIPLES, GUIDELINES, AND STANDARDS**

Viewing the design process through the lens of a framework composed of principles, guidelines, and standards is helpful in understanding the relationships among design decisions and the implications that each decision has on the entire process. At various times, these terms have been misused or misunderstood by both professionals and the public. Because of their misuse, the public has often been wary of guidelines and standards because it feels that guidelines squelch

the individual’s voice and discourage or even prohibit innovation in decision-making. Such misuse has led to the boring uniformity of many neighborhoods and communities.

Defined and applied properly, principles, guidelines, and standards are fundamental tools to aid decision-making.

- *Design philosophy* refers to the idea that design principles, guidelines, and standards developed or adopted by an individual or group are founded on philosophical beliefs of the individual or group.
- *Design principles* are design concepts on a broad scale, affecting a large part of the environment. They influence design decisions by directing a number of guidelines and standards.
- *Design guidelines* are informed by design principles and are concepts that affect the environment at the building-site and building-structure scale. They are the series of closely related design decisions that, when applied over time, create architectural harmony and consistency with variation.
- *Design standards* are rules, usually technical in nature, that specify in detail the physical characteristics or the construction of building components, building form, or public space.

The table below is a structure for understanding the relationship between design principles, guidelines, and standards and offers a framework for listing and organizing information within its proper category.

Organizing the concept of design principles into this table has proven indispensable to my work. This formulation is a theoretical framework guiding and

<i>Building/Neighborhood/Town Type:</i> (downtown, small town, neighborhood, existing residence, single-family home, school, office building, other _____)					
Scale (circle those that apply)	What is the information about?	Design Philosophy	Design Principle(s)	Design Guideline(s)	Design Standard(s)
Site Building Building detail	Issue:				
Site Building Building detail	System:				
Site Building Building detail	Place:				

informing my design process from the conceptual level of developing a program for a single building such as a college dormitory or single-family house to helping the town of Carrboro, North Carolina, create a vision for its downtown community. In class, my students have used the table in developing their own studio projects and have asked thoughtful questions that have refined it.

How can the table assist an individual in organizing information and making decisions about the built environment? Consider this exercise that some professors give to their architecture students: Each student brings one gray cardboard cube and a trophy from his or her school or an athletic competition. The students are then asked to arrange the cubes in a grid pattern resembling a town or a neighborhood. The outcome is the creation of a drab and homogeneous community.

Then, the students are offered the opportunity to replace a cube with a trophy. The first such exchange brings a welcome sigh of relief to all participants. The trophy, no matter its level of gaudy ornateness, is celebrated. It has served to create a hierarchy, a point of interest, an element of variety in an otherwise dismal situation. And so it goes with the second and third trophy. But (as one might have guessed) by the time all students have replaced their gray cubes with trophies, the environment has become cacophonous. With no underlying principles, each element stands as an object vying for attention.

The exercise serves as a cautionary experience for students of architecture, and I hope it offers an explanation of how many neighborhood covenants have mistaken the purpose of guidelines and standards. Out of the fear of each individual designing a structure that would stand out in a neighborhood like a “trophy,” rules have been set that govern all aspects of form, creating the dullness of “gray cube” structures. Or, out of the fear of the monotony of sameness, the development and application of principles and guidelines is opposed and boycotted. The lesson learned is that when there are no design principles to guide us, buildings and places become chaotic messes, and when design standards are written that dictate every minute aspect of form, they result in a monotonous nightmare.

The public is often asked to make design-related decisions that affect the environmental quality of their community. Should a new downtown plan or a new subdivision be approved? Should the establishment of a historic downtown be considered? Can individuals assess a museum or an airport they have seen while traveling and conclude that they have useful information to contribute to the design of similar building types in their town? In deciding on the design of one's new house or addition, what criteria will be used?

This table is useful in organizing information for such decisions. When planning occurs within a framework and the process allows for decisions to be made incrementally according to stated goals and philosophies, the result will be a harmonious whole. In essence, using this framework validates the decision-making process and allows the architect to begin the design process with the client's or the public's support and confidence and a complete understanding of their values.

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## PROMISING TRENDS OF THE TWENTY-FIRST CENTURY

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During the last decades of the twentieth century, I believe that architectural thought and action have shifted, resulting in architectural approaches that use design principles as a methodology. Emerging trends such as Critical Regionalism, New Urbanism, and Green Architecture offer answers to challenges such as the destruction of the natural environment, decaying towns and cities, expanding suburbs, and the feeling of placelessness in the surrounding environment.

### *Critical Regionalism*

Industrialization and the global economy have inadvertently caused uniformity and placelessness in buildings, towns, and urban landscapes. Vernacular architecture, the architecture of traditional societies, consists of buildings and settlements constructed on design principles adopted by a society based on customs, needs, local climate, site conditions, available materials, and technologies. Towns were usually not built by experts, but by the users themselves. Over time, design principles were followed, occasionally modified, and passed down from one generation of builder/user to the next.

Critical Regionalism is an approach to contemporary architecture that synthesizes new ideas and technologies while reflecting on a region's past to ensure that its unique character and identity are not lost. This trend evolves from vernacular architecture of long ago and offers an antidote to the feeling of placelessness that industrialization has created. (See illustration on the following page.)

### *New Urbanism*

In reaction to the catastrophic failure of the federally funded urban-renewal programs of the 1960s and continued urban sprawl, New Urbanism, urban design based on the design principles of pre-World War II towns and neighborhoods, emerged as a fresh approach to designing towns and cities. New Urbanism serves important functions: it acts as a research tool for assessing the attributes of what made these prewar traditional neighborhoods successful; it pro-

vides the framework for applying these design principles to revitalize existing neighborhoods and towns and to build new ones; and it facilitates the public's understanding and participation in the design process and decision-making within their respective towns and neighborhoods.



Residence, Raleigh, North Carolina, Bizios Architect. Photograph by the author.

**Regionalism**

This Raleigh home's exterior forms and materials recall North Carolina vernacular architecture through its simple, long, rectilinear shape, pier foundations, metal roof with large overhangs, and porches. In contrast, its contemporary interior has dynamic space qualities with varying ceiling height, open stairs, lofts, views, and light.

**Green Architecture**

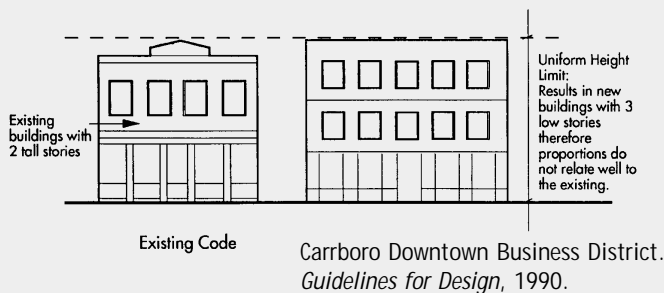
The destruction of our natural environment and the overconsumption of nonrenewable energy sources are contemporary issues of paramount importance. Green Architecture as an umbrella term encompasses sustainable approaches to the design of buildings and places. Such approaches promote using our planet's resources wisely without destroying them or depleting them for future generations. The proliferation of stories in the press, client requests for information on issues such as passive solar design, and the educational opportunities in energy conservation and environmental sustainability offered in workshop settings provide me with optimism that the United States is ready to curb energy consumption in buildings. The framework of design principles is a perfect structure for organizing scientific data that informs Green Architecture. It also serves as a useful vehicle for communicating this often technical information in a workable and easily comprehensible format.



Residence, Durham, North Carolina, Bizios Architect. Photograph by Bob Donnan.

**Hierarchy of Building Height**

"Uniform building height limitations result in new buildings or additions with low floor-to-ceiling heights. Such buildings are often incompatible with adjacent, older buildings and create oppressive, uniform interior spaces. Therefore, in downtown Carrboro limit the number of stories, not height. Encourage story heights compatible with those of adjacent buildings, particularly in the Historic/Commercial Area."



**Green Architecture**

Located in a new community committed to energy-conscious design and construction, this house employs a passive solar system of appropriately shaded south-facing windows and floor thermal mass (concrete slab and tiles). Public awareness, as well as attractive state-tax credits, has encouraged energy-efficient residential design. Incorporating such systems without making homes look or feel peculiar has made energy-efficient design popular with many owners.

**THE FUTURE OF PRINCIPLES, GUIDELINES, AND STANDARDS**

**A**ttention to new ideas is inherent to human nature. Affinity to tradition is also inherent to human nature.

Respect for and appreciation of tradition and its evolution — as well as the pursuit of innovation and novelty — are necessary if architecture is to successfully



address the complex challenges facing the world. A theoretical framework of understanding the design process as a series of closely related decisions based on principles suggests that by comprehending the value of our building traditions, we can respect and continue them while allowing architectural design, building types, and environments to evolve. Architecture must remain relevant while continually exploring and researching new ways of building to ensure that its contribution to our culture is worthy.

At the beginning of the twenty-first century, I see a strong appreciation and conviction that the design of buildings and towns is a creative act that takes place within a context, and not in a vacuum. I see the application of design principles which have shaped our past-built heritage, yielding successful new, renovated, and revitalized buildings and places. I also see that design decisions based on such principles result in architectural harmony. They result in buildings and places that connect us in meaningful ways to natural processes, the past, and the future. They result in buildings and places that enrich our culture and inspire our living.

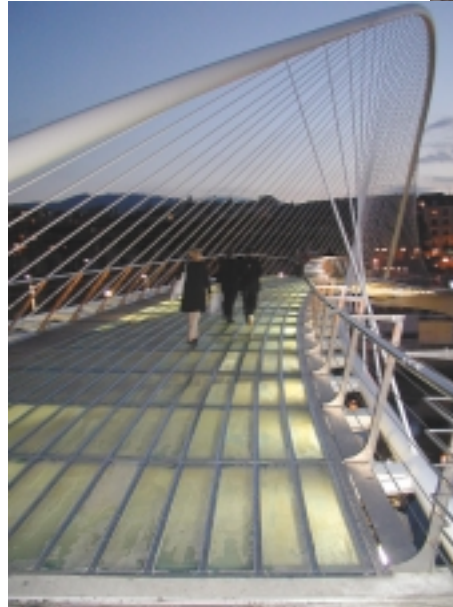


**A professor of architecture at North Carolina State University, and a Fellow of the American Institute of Architects, Georgia Bizios enjoys a combined career of teaching students and practicing sustainable residential architecture. Her work in the development of design principles and guidelines for institutions, communities, and residences has provided her students inspiration and her clients a true partnership in the design process. She welcomes questions and comments at [www.bizios.com](http://www.bizios.com).**

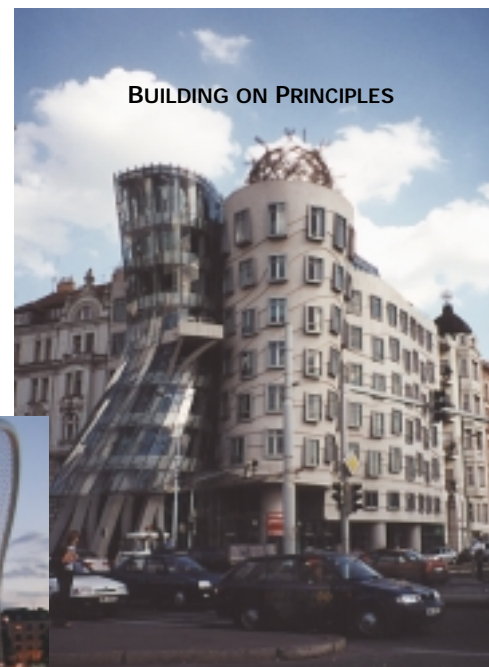
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Nationale-Nedelanden Building ("Fred and Ginger Building"), Prague, Czech Republic. Frank Gehry. Photograph by Jessica Beil.



Campo Volantin Footbridge, Bilbao, Spain. Santiago Calatrava. Photograph by the author.



### Contextual and New

Two examples of contemporary architecture whose designs respond to the existing context, while they dare to be new, fresh, and technologically advanced. The popularity and fondness that the citizens of Bilbao and Prague hold for their new neighbors confirm their success as urban structures which embrace and use the old and the new wisely.

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Frank Lloyd Wright, Unity Temple (interior), Oak Park, Illinois, 1906. Photograph by Robert McCarter.

Robert McCarter

# The Other Tradition of American Architecture: Frank Lloyd Wright and Louis I. Kahn

**W**hat is the American tradition in architecture? Judging from what may be seen in the vast majority of suburban residential developments, office parks, or university campuses, the “traditional” American architecture that we have inherited exhibits a kind of schizophrenia, presenting to the street a thin veneer of “Victorian,” or “Mediterranean,” or some other cannibalized “historical” style (creating what is called “curb appeal”), which is totally unrelated to the thoroughly modern open-plan residential or office spaces to be found inside. What has happened to our traditional concept of American character and integrity, to “what you see is what you get,” to the idea that internal values are more important than external appearances?

While this ideal of integrity has disappeared from the vast majority of our buildings today, it lies at the very heart of the uniquely American tradition of modern architecture embodied in the works of Frank Lloyd Wright (1867–1959) and Louis Isidore Kahn (1901–1974). Wright and Kahn are arguably the greatest of all American architects, and they are without question the only ones ever to reverse the traditional “trade deficit” with Europe and the world with respect to architectural ideas of consequence.

## FRANK LLOYD WRIGHT

As Horatio Greenough noted even as early as 1852, fifteen years before Wright's birth, Americans tend to accept all their styles — of clothing, entertainment, and architecture — from Europe. Yet Frank Lloyd Wright's early work was without question the first true manifestation of what has come to be called Modern architecture, and Wright's architecture had enormous and far-reaching influence on architects and artists all over the world, from the emergence of the Prairie House in 1900 until his death in 1959. Today, forty-four years after his death, Wright is the *only* architect who can be named by virtually every first-year student entering American universities, and the number of books published on Wright and his work continues to escalate. In today's newspaper, Jeff MacNelly's nationally-syndicated cartoon "Shoe," depicted a young schoolboy answering the exam question "Name the Wright brothers," with "Frank and Lloyd." Wright's influence also extends to his own profession, American architects having named Wright's 1936 Kaufmann House, called "Fallingwater," the most important building in the United States of the last 150 years.

But what exactly is it that we "know" about Wright? The vast majority of us know Wright's work only from photographs, usually showing the exterior of a building. What is perhaps the most famous photograph of a house, the one showing Wright's Fallingwater as seen from outside and below, is taken from a viewpoint that can be obtained only by standing in the middle of the stream! In fact, of those who claim to "know" the architecture of Wright, only a minuscule minority has ever actually been inside any building that he designed.

Yet for both Wright and Kahn, the concept of inhabiting a building, our experience of its interior space, of the rooms within, was the beginning of all architecture — and it was only from this interior spatial experience that a building's external form was to be unfolded or projected. Through our contemporary insistence on engaging architecture only from the exterior view, as an object in the landscape, the

Frank Lloyd Wright, Robie House (exterior), Chicago, Illinois, 1909. Photograph by Robert McCarter.

tradition of Wright and Kahn has become almost totally divorced from the typical notions of what is traditional architecture in America today. The idea that we can know a building from simply driving by and peering at whatever exterior forms can be seen from the street runs counter to everything that Wright and Kahn

believed about architecture. If we are to engage their work, we must reject any suggestion that what is today called "traditional" has anything at all to do with the American tradition of architecture.

In 1914 Wright wrote, "I deliberately chose to break with *traditions* in order to be more true to *Tradition* than current conventions in architecture would permit," distinguishing between plural traditions (the ever-changing styles in vogue during his day), and singular Tradition (the great monuments of the past). Radical though it appeared to his contemporaries, Wright argued that his architecture conserved and reengaged the timeless disciplinary principles underlying the great historical buildings. "Principles are not invented by one man or one age," Wright said, and he held architecture to be the discipline of principled place-making. Kahn followed Wright in this understanding, maintaining that tradition was neither a habit of design nor a whim of fashion, but rather an inheritance giving insight into the fundamental nature of mankind.



Wright's importance to American architecture may be said to begin and end with his evolution of the uniquely American contribution to world architecture — the single-family house, starting with the Prairie Houses of 1900–20, continuing with the Concrete Block Houses of 1920–30, and finally ending with his immensely influential Usonian Houses of 1930–59. The Usonians, by far the largest number of houses that Wright designed, were

- modest in size (1200–1500 square feet) and affordable (cost-per-square-foot consistently below market housing), being designed largely for the American working class;
- energy-efficient, using a small fraction of the energy required by a similar-sized house today;
- oriented to the sun to give the inhabitants daylight throughout the day and year, solar warming in the winter, and cool shade and through-ventilation in the summer;
- and constructed with modular, standardized components and labor.

These amazing houses were characterized by both astonishing quality of interior space and intimate relations to courtyard gardens, and they set a standard that has never been matched by the universally similar and experientially vacuous developer products that have typified the American homebuilding industry since Wright's death.

It is one of the bitterest ironies of American pretensions to having developed an indigenous “culture” that Wright, without question the first modern architect, and arguably the greatest architect in the modern world, was given so few public commissions in the United States — barely 10 percent of his 470 built works and more than 1200 designs. Proving the adage that “a prophet is never honored in his own country,” Wright in his seventy-two-year career never received a single commission from the American government. Yet the relatively few public commissions that he did receive resulted in buildings that now stand among the greatest monuments of architectural history, among which are the Larkin Building of 1902 in Buffalo, New York; the Unity Temple of 1906 in Oak Park, Illinois; the Bank and Hotel of 1909 in Mason City, Iowa; the Midway Gardens of 1913 in Chicago; the Imperial Hotel of 1919 in Tokyo, Japan; the Johnson Wax Building of 1936 in Racine, Wisconsin; the Florida Southern College buildings of 1938 in Lakeland; the Beth Sholom Synagogue of 1954 in Elkins Park, Pennsylvania; and the Guggenheim Museum in New York, unfinished at the time of Wright's death in 1959.



Frank Lloyd Wright, Jacobs House (interior), Madison Wisconsin, 1936. Photograph by Robert McCarter.

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## LOUIS I. KAHN

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In one of the ironies of history, it was in the same year as Wright's death that Louis I. Kahn first began to gain international attention for his work, which was to be almost entirely comprised of public commissions. In 1959 he received commissions that would result in his influential built works, the Salk Institute for Biological Studies in La Jolla, California, and the Unitarian Church in Rochester, New York; his first major unbuilt works, the U.S. Embassy in Luanda, Angola, and the Fine Arts Center in Fort Wayne, Indiana; and Kahn saw completed his Richards Medical Laboratories at the University of Pennsylvania. Having realized his first major built work, the Yale Art Gallery, in 1953, Kahn, in a building career of only twenty years' duration, would nevertheless become the most influential architect in the world during the second half of the twentieth century — this despite the fact that he did not live to see the century's final quarter, dying in 1974.

Kahn was influenced in his student days in the 1920s by Wright's great Unity Temple, with its square-and-cruciform plan and cubic central volume, and from this building Kahn developed his practice of starting every design with the square in plan. However, in the 1950s Kahn had grown more distant from Wright, disturbed by many of Wright's larger late projects, which Kahn felt were “arbitrary, personal, experimental, and disdainful of tradition.” Yet

in 1959, upon learning of Wright's death, Kahn felt obligated to pay homage to this greatest American architect and visited the Johnson Wax Building (1936) for the first time. The great central workroom, with its grid of concrete columns supporting circular roof elements that floated in a glass-tube ceiling, the whole flooded by sunlight from above, was the most astounding revelation for Kahn — he was, “to the depths of his soul, overwhelmed,” as Vincent Scully recalls.

It would be Kahn's destiny to fulfill the promise and potential to be found in Wright's few public buildings, and Kahn's legacy is that he is the greatest modern architect of public buildings in the world. In addition to the four buildings mentioned earlier, Kahn's works around the world — most notably his Indian Institute of Management of 1962–74 in Ahmedabad, and the Bangladesh National Capital Complex of 1962–74 in Dhaka — are complemented by his great later works at home, including the Exeter Academy Library of 1965 in Exeter, New Hampshire; the Yale Center for British Art of 1969 in New Haven, Connecticut; and his masterwork (if one must choose), the Kimbell Museum of 1966 in Fort Worth, Texas. In all these buildings, light from above illuminates an introverted world within — the architectural definition of public space so powerfully established in Wright's Unity Temple, Johnson Wax Building, and Guggenheim Museum.

A brief review of the major ordering principles that Kahn shared with Wright reveals the true measure of Wright's inspiration for Kahn:

- the room, and its interior experience, as the beginning and generator of all architecture, complemented by the expression of this interior volume in exterior form;
- the central, top-lit, noble room as the focus of all public, institutional buildings;
- design always beginning with the square and cube, the most primary, ancient, and fundamental of geometric forms;

Louis Kahn, Kimbell Museum (interior), Fort Worth, Texas, 1966. Photograph by Robert McCarter.



- the concept of “servant” and “served” spaces, where the servant spaces house structure, mechanical systems, and service spaces, so as to free the spaces that house the primary spaces of occupation;
- the plan as a society of spaces, interlocking and interacting so as to make possible both the planned activities and the unplanned meetings that engender cultural and social development;
- expressing “the nature of materials” to develop the poetics of construction, reengaging the architecture of mass and structure (as opposed to the modern cult of lightness), and employing natural light and its shadow as the primary means to characterize interior spaces;
- challenging the instrumental, dehumanizing, and universalizing effects of industrialization and modernization;
- regarding the history of the discipline of architecture as “a friend,” as a source of inspiration and principles, not as a source of forms to be copied;
- resolving paradoxes through design as a way of embedding each building in both the unique opportunities of its time and in the timeless and eternal aspects of the human condition;
- and, finally, a profound commitment to architecture conceived as being an ethical framework for the daily life that takes place within it.



Louis Kahn, Salk Institute (exterior, courtyard), La Jolla, California, 1962. Photograph by Robert McCarter.

### STIFLING THE AMERICAN TRADITION

Yet the depth of Kahn's debt to Wright has rarely been acknowledged in the writings of professional historians, much less in the popular press, and has most often been intentionally underestimated if not entirely ignored. Why is this relationship between America's two greatest architects, and the manner in which their work constitutes an American tradition of modern architecture, so difficult to perceive for both those within the discipline and the public at large? And, more importantly, why has the architecture of Wright and Kahn not had more influence on what we see being built around us today? I would argue that a partial answer is to be found in three successful attempts to curtail the development of an indigenous American modern architecture by introducing a ready-made style from Europe — and in what these events say about the way we think about architecture and its relation to fashion.

In 1893, at the height of the indigenous "Chicago School" of architecture, which included Wright and his mentor Louis Sullivan, the organizers of the Chicago

Columbian Exposition selected the pseudoclassical style of the French Ecole des Beaux-Arts for the "white city" that they built on the shores of Lake Michigan, at the time the largest collection of buildings of this style in the world. In 1932, during the Great Depression, when most American architects, including Kahn, were unemployed but nevertheless organizing to provide volunteer housing design, based upon modern European models of social housing, the Museum of Modern Art selected examples of many of these same European projects. It exhibited them as exterior photographs only, emptied of

their political, social, and cultural meanings, and reduced them to a formula that the curators called "The International Style." Wright, then sixty-five years old, was included in the 1932 exhibit, but excluded from modernism by being called "the greatest architect of the nineteenth century."

Because the first was "classical" and the second "modern," most architectural histories do not suggest any relation between these two events. Yet they are more alike than not, having in common the intention of defining a uniform interpretation of architecture, completely disengaged from the specifics of place, program, or history, and intended to be the same irrespective of where in the world it was built — a universal, international style; a formula ready to be applied across America.

As I would hope is amply evident to the reader by this point, the architecture of Wright and Kahn and the American tradition of modern architecture that they established stand in direct opposition to this concept of a universal, international style. This brings us to the third event, which took place in 1988, after the deaths of both Wright and Kahn, when the Museum of Modern Art held another architectural exhibition, this time entitled "Decon-

structivist Architecture.” At that time and since, some have held that the work represented in this exhibit, literally drawn from early modern Russian architecture and subjected to dismemberment (“deconstruction”) by way of contemporary French literary criticism, should be welcomed as an alternative to the recently dominant style of historicism. Yet, when examined from the point of view of the tradition of American architecture founded by Wright and Kahn, “historicist” and “deconstructivist” post-modernism are exactly the same: international styles ready for application throughout America.

“Today the difference between a good and a poor architect is that the poor architect succumbs to every temptation and the good one resists it,” Ludwig Wittgenstein rightly held. The only real possibility for change in the abysmal state of contemporary American building will come by way of our supporting the work of the new generation of architects, most still in their forties, the great majority of whom have chosen to reject the temptation of the stylistic formula and to engage the tradition of American architecture to be found in the work of Frank Lloyd Wright and Louis I. Kahn.




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Louis Kahn, Exeter Academy Library (interior), Exeter, New Hampshire, 1965. Photograph by Robert McCarter.

“The theoretical considerations set out below are based on many years of practical experience on building sites.

Theory demands concise formulation.

The following points in no way relate to aesthetic fantasies or a striving for fashionable effects, but concern architectural facts that imply an entirely new kind of building, from the dwelling house to palatial edifices.”

— Le Corbusier, “Five Points Towards a New Architecture,” 1926

Kim Tanzer

## When Practice Leads Theory

Curtain Wall House, Shigeru Ban Architects,  
© Hiroyuki Hirai.



In normal times, architectural theory precedes practice. But in the 1920s, Swiss architect Charles-Édouard Jeanneret, known as Le Corbusier, used “many years of practical experience on building sites” to craft a revolutionary set of inter-related architectural principles. Le Corbusier’s famous Five Points established a symbolic language that modern architects have followed consistently for the last three quarters of a century.

The Five Points are, in Le Corbusier’s shorthand: the supports, the roof garden, the free design of the ground-plan, the horizontal window, and the free design of the façade. Taken together, these principles precipitate buildings that are built on columns, with non-load-bearing walls that often contain large expanses of glass. The primary living area is typically raised above grade, and the ground plane runs beneath. Interior partitions are freely arranged according to use, without the obligation to provide structure. Twentieth-century buildings throughout the world provide evidence of the architectural community’s conformity to Le Corbusier’s powerful proposal.

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### THE WORKS OF SHIGERU BAN

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At first glance, the “Curtain Wall House” (pictured on facing page), designed by forty-five-year-old Japanese architect Shigeru Ban, is no exception. A centerpiece of the noteworthy 1999 Museum of Modern Art exhibit entitled, “The Un-Private House,” the Curtain Wall House is literally that — a house closed on two sides by a double height curtain. Set in the Itabashi district of Tokyo, the Curtain Wall House offers its occupants visual privacy when the drape is drawn, or acoustical and thermal protection through a series of glass doors that extend to close the corner of the house’s two living floors. Ban argues that his project continues Japanese residential traditions of *shoji* and *sudare* screens and *fusame* doors. But it does much more.

The Curtain Wall House is a canny, built argument that simultaneously extends and challenges the chain of twentieth-century architectural theory begun by Le Corbusier. First, simply by naming it the “Curtain Wall House,” Ban makes an overt reference to a signature element in the work of twentieth-century master architect Mies van der Rohe, who refined Le Corbusier’s idea of transparent non-load-bearing walls with extraordinary technical finesse. In its naming, Ban establishes the terms of his built theorem.

A curtain wall is an exterior wall built mostly of glass. In the early part of the twentieth century, it came to symbolize the remarkable structural capacity of then-new materials such as concrete and steel to

carry the building’s load, freeing up walls to separate inside from outside. In the deft hands of Mies, the curtain wall reached its most sophisticated expression in projects such as Crown Hall on the Illinois Institute of Technology campus, the Seagram Building, and the Farnsworth House.

Ban compares his own Curtain Wall House to the Farnsworth House, citing both similarities and key distinctions. Both houses are built using a modern vocabulary of abstract, planar elements (walls, floors, flat roofs), with minimal enclosure and no references to pre-twentieth-century typological or stylistic elements. Both raise the primary living space off the ground. Both limit fully enclosed rooms to bathing. Both are white. Set side-by-side, as Ban has chosen to present them in public lectures, the Curtain Wall House is at first glance a sincere homage to Mies’s Farnsworth House.

But Ban is quick to point out the differences, too. Whereas the Farnsworth House, set in a pastoral midwestern landscape, is hermetically sealed against the elements, using glass to allow visual but not acoustical or thermal exchange, the Curtain Wall House allows complete engagement with all aspects of its urban context. By adding a layer of fabric and making the full-height sliding glass doors operable, Ban reinforces the structural principles that Mies and Le Corbusier advocated, while dramatically changing the relationship between the house’s occupants and their neighbors. As mentioned, Ban also refers to a series of Japanese architectural traditions, reconstructing a link to his heritage overlooked by the western architects who borrowed Japanese forms more than a century ago without adopting their culturally specific utility.

The Curtain Wall House’s physical appearance and Ban’s public explanations, when taken together, confirm most of Le Corbusier’s Five Points, but with significant redirection. Rather than accepting a physically impermeable barrier as others before him have, Ban takes the concept of the curtain wall literally. This redirection affirms an energy-conscious model for the house of the future, with flexible options for private and public exchange.

Had he designed only the Curtain Wall House, Ban would have attracted the architecture world’s attention. But he has also built architecturally compelling projects using cardboard tubes, an extremely lightweight and potentially sustainable material. And he has devoted a portion of his energies to designing and building various types of disaster housing.

One of Ban’s first forays into temporary disaster housing came in 1995 when he designed and built Paper Loghouses for victims of Japan’s Kobe earthquake. These houses were built of large cardboard



Paper Log House, Kobe, Japan, Shigeru Ban Architects,  
© Takanobu Sakuma.

tubes aligned side-by-side vertically, and set atop a foundation of donated plastic beer crates stabilized with sandbags. The materials were cheap and recyclable, and construction was easy.

In another instance, his emergency shelters for refugees of the Rwandan civil war replaced the United Nations's standard-issue tents' aluminum structure. Previously, refugees had sold the aluminum and then cut trees to replace the structural elements, inadvertently contributing to the region's drastic deforestation. Ban's structural solution, a combination of cardboard tubes and plastic connectors, was again cheap, recyclable, and simple to assemble. Ban traveled to Rwanda and worked with other volunteers to assemble the shelters.

While he minimizes his ethical intentions, claiming that he is interested in paper tubes for their aesthetic properties, Ban confidently presents his emergency shelters alongside other projects that are clearly designed to appeal to elite architectural audiences. By example he presents a practice dedicated to forging a new relationship between architect and natural resources, and between those with skills and those who need assistance. Shigeru Ban has mapped an inclusive territory connecting his traditional heritage with his modernist training, seeking to equalize resources by reducing energy and materials usage, and integrating the act of compassion into his professional portfolio.

Ban's is an example of a new type of practice. While he skillfully positions his work within current theoretical parameters, he simultaneously addresses pressing social and ecological issues through bold action. In this way he has allowed his empirical experiments to emerge as new models. Like Le Corbusier, he has cultivated a practice directed toward producing new theory.

As noted architect Emilio Ambasz says in his introduction to Ban's work, "His project for housing using cardboard tubes to shelter people displaced by civil unrest in Africa is a reminder to us all that the architect's ethical obligation is to propose alternative architectural models" (Ban, Shigeru. *Shigeru Ban*. New York: Princeton Architectural Press, 2001, vii).

When Ambasz directs his ethical reminder "to all of us," he is referring to a specific group of architects whose work establishes the dimensions of theoretical discourse that shape much of the architecture produced around the world. These are the architects and theorists whose work is mostly widely disseminated, through the publication of writing, built and unbuilt projects, and, importantly, through teaching the next generations of architects.

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## SHIFTING PARADIGMS

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Thomas Kuhn, in *The Structure of Scientific Revolutions* (The University of Chicago Press, 1970), defines "all of us" as a disciplinary community. While his study focuses on the physical sciences, the structure of scientific change that he articulates can be applied to the discipline of architecture. Kuhn describes a disciplinary community as the producers and validators (through the peer-review process) of scientific knowledge. He says that this community shares a disciplinary matrix which includes several key features.

First, a disciplinary community shares important symbolic generalizations — principles that all members of the group accept without question, such as the "architectural facts" Le Corbusier proclaims in his Five Points. These are the principles around which all members of the community organize their problem-solving. These shared generalizations are telegraphed to community members through a series of sanctioned metaphors and analogies. These metaphors, Kuhn argues, provide templates by which to include or exclude certain types of problems that a community member might want to address. A disciplinary community's shared beliefs form a matrix —

a set of coherent theories, into which all potential problems must fit.

As Kuhn sees it, a crisis occurs when too many features of reality are excluded from a discipline's matrix of beliefs. As members of the community attempt to alternatively include or exclude previously unexamined circumstances, disciplinary disarray results. Not surprisingly, those most invested in the existing belief system are most resistant to efforts to replace it, while the youngest and those otherwise marginalized are less willing to support the prevailing belief system. Occasionally this disarray results in a shuffling of key beliefs, a circumstance Kuhn describes as a shift of models, or a paradigm shift.

According to Kuhn's research, such a shift is not always evident when it occurs. In fact, it may take decades for a new map of reality to become accepted. In some cases, a compelling explanation satisfies newly identified criteria, allowing a new paradigm to emerge quickly, as did Le Corbusier's Five Points. At other times, a new paradigm becomes evident only as defenders of the old paradigm retire. Sometimes a new understanding of reality is perceived as "neater," "more suitable," or "simpler" than the old one. Such a new paradigm might appeal to a disciplinary community's sense of the appropriate or the aesthetic.

The need to seek alternative architectural models, as suggested by Ambasz and others, indicates perceived shortcomings within our disciplinary matrix. In seeking a new ethical response, Ambasz appeals to our sense of the appropriate.

Kuhn argues that the teaching process plays a key role in the transmission of a discipline's primary symbolic generalizations. He suggests that paradigms are not overarching principles but rather specific examples — exemplars as he calls them — that give empirical weight to the otherwise theoretical concepts. These exemplars — the laboratory experiments that students of science do early in their training — communicate core beliefs to students in a manner more tacit than explicit.

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## THE RURAL STUDIO

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This ability to communicate is the beauty of the Rural Studio, a decade-long intensive studio experience set in rural western Alabama. Invented by the late Samuel Mockbee, winner of a 2000 McArthur Foundation Fellowship (often referred to as the "Genius Award"), and D.K. Ruth, then chair of Auburn University's School of Architecture, the Rural Studio immerses young architecture students in the process of designing and building architecture for people in need. The Rural Studio conflates the appropriate with the aesthetic. The exemplar offered by the Studio is holistic: Unlike most architecture studios, where students learn to design buildings in isolation, intent on pleasing only their professors, in the Rural Studio architectural design and construction are fully integrated with clients' demands, and their budgetary and legal constraints. Students recognize that they are learning, according to one participant, by doing "neck-down work," deriving theoretical principles from practical experience (Oppenheimer Dean,



Class held by co-director Andrew Freear at the Rural Studio Morisette House Mock-Up area. Photograph by Kyes Stevens, External Affairs Coordinator, College of Architecture, Design, and Construction.



Second-year students working on "Music Man" house, 2002–2003. Photograph by Kyes Stevens, External Affairs Coordinator, College of Architecture, Design, and Construction.



"Lucy House" or "Carpet House," 2001 Outreach Program project, sponsored by Jesse Ball duPont Fund. Photograph by James Michael Tate, outreach student.

Andrea, and Timothy Hursley. *Rural Studio: Samuel Mockbee and an Architecture of Decency*. New York: Princeton Architectural Press, 2002, 3).

The Rural Studio enables students to generalize from their own specific experiences in several ways. By working back and forth between design and construction, they realize that their designs must refer to realizable full-scale constructions — that their drawings are indications toward another goal. By working with extremely limited budgets, they recognize the value of materials. By living in their own constructions, students become more responsive to materials' practical properties and phenomenal qualities. Perhaps most important, students learn that their clients — typically among Alabama's most economically disadvantaged citizens — are similar to them in more ways than they are different. Mockbee intended that the Studio would provide a way to heal stubborn social wounds that run deep in the rural South, and he asked students to take on this challenge as a legitimate part of their architectural education.

Both Mockbee's holistic, learner-centered approach to teaching and Ban's multivalent practice demonstrate compassionate action as a key part of their disciplinary agendas. Both emphasize the careful use of scarce resources. Both demonstrate a commitment to learning through doing — finding principles through practice. The Rural Studio proposes a new exemplar for architectural education, one in which practice leads theory and caring is part of the curriculum. Ban's model of practice, sophisticated without being wholly elitist, provides an exemplar in which good design can coexist with good deeds. In part because of

the quality of their efforts and in part because of the paucity of competition, both are receiving a great deal of national and international attention.

But as Kuhn's study cautions, we may not know for some time whether the paradigms that they offer will prevail. If they do, they will help to coalesce the discipline's shared beliefs around a more sustainable environment, shifting architectural theory through compelling, engaged practice.

"The way architects serve society, particularly minorities, may be an important factor in determining the character of this era."

— Shigeru Ban (Ban, xi)




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### *For Further Reading*

Le Corbusier and Jeanneret, Pierre. "Five Points toward A New Architecture." *Programs and Manifestoes on 20<sup>th</sup>-century Architecture*. Ed. Ulrich Conrads. Cambridge, Massachusetts: MIT Press, 1991.

Bruce Lindsey

# Sambo Mockbee (1944–2001) and the Rural Studio

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## PRE:TEXT

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Daniel Kemmis, former mayor of Missoula, Montana, in his book *Community and the Politics of Place*, describes a beautiful analogy put forward by Hannah Arendt in her book *The Human Condition*.

To live together in the world means that a world of things is between those who have it in common, as a table is located between those who sit around it; the world, like every in-between, relates and separates men at the same time.

The public realm, as the common world, gathers us together and yet prevents our falling over each other, so to speak. What makes mass society so difficult to bear is not the number of people involved, or at least not primarily, but the fact that the world between them has lost its power to gather them together, to relate and to separate them. The weirdness of this situation resembles a spiritualistic séance where a number of people gathered around a table might suddenly, through some magic trick, see the table vanish from their midst, so that two persons sitting opposite each other were no longer separated but also would be entirely unrelated by anything tangible.

The table, the landscape for Kemmis and the people of Montana, architecture for Samuel “Sambo” Mockbee, his students, and the residents of Hale County, Alabama, is being rebuilt, reestablishing some of those things that have the capacity to gather us together.

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## ROLL CALL

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Hale County, Alabama: 100 miles west of Auburn, 100 miles south of Birmingham, 40 miles north of Selma, is in the center of the state. Home to the Black Warrior River, and the photographs of Walker Evans in James Agee’s 1939 book *Let Us Now Praise Famous Men*. Agee writes:

. . . the question, who are you who will read these words and study these photographs, and through what cause, by what chance, and for what purpose, and by what right do you qualify to, and what will you do about it?

Sambo Mockbee, a fifth-generation Mississippian, along with D.K. Ruth, both professors in Auburn University’s School of Architecture, answered the call in 1991; they knew what to do. They planted a seed, the “redneck Taliesin” Rural Studio, in the Black Belt of Hale County, Alabama, that has



Sambo with hat and cane.  
Photograph by Janet Store.



The Marion Pavilion. Photograph by Bruce Lindsey.

brought forth a tree, the branches of which have literally reached around the world.

Sambo Mockbee was a husband, a father, a teacher, and a *citizen architect*. He knew that buildings, like the Montana landscape and Arendt's table, had the capacity to connect people to people, and people to places, so that they know where they are. Knowing where you are is important. It is easy to forget the other people and the shape of the land that make up where you are. Sambo knew that architecture is a way for non-pilots to elevate themselves so that they can see where they are, and hence know a little better *who* they are.

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### DEPTH

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The waters of the Black Warrior River run deep with the history of a part of the United States that W. E. Du Bois proclaimed would be haunted by the fact that Reconstruction was prematurely stopped,

states Andrea Oppenheimer Dean, in her book entitled *Rural Studio: Samuel Mockbee and an Architecture of Decency*. As a young man growing up in Mississippi, Samuel knew African Americans only as maids, caddies, and manual laborers. Later, when working on his first charity house, he described the invisible presence of *their* houses as a “taboo landscape” for a white man. “And here we are in the twenty-first century . . . still ignoring the problem and Southern blacks are still invisible,” stated Mockbee.

One day in 1966, as a young draftee at Fort Benning, Georgia, Sambo fell asleep at the rifle range. “When I woke up, I was in the middle of all these black trainees who were also from Mississippi, and I was fine, in a nest of equals.” Going back to sleep he said, the “race thing had ceased to exist for me.” It was not long later that he literally stumbled across the grave of James Chaney in Mississippi. Chaney, a martyred Southern civil-rights worker, risked and lost his life to accept responsibility for who and where he was. Sambo asked himself a question inspired by the



Graduation 2003.

Photograph by Bruce Lindsey.

teachings of the Renaissance architect Leon Batiste Alberti: “Do I choose fortune or virtue? Do I have the courage to make my gift [as a citizen architect] count for something?”

Thirty years later, two months after Sambo’s death from leukemia, Lerone Smiley, Rural Studio crew hand, a.k.a. “Big Selma,” six-feet, four-inches tall from Selma, Alabama, resident of the State of Alabama Correctional Institution, offered the following eulogy:

I only knew Sambo for a little over a year, yet he taught me things that will carry me the rest of my life, and he would always teach me by example.

So many times when I meet people and they see me in my state whites, they automatically draw their own conclusion. Not so with Sambo. He allowed me to present to him who I really was. He taught me to think “outside the box.” But most importantly, he taught me to pay attention to myself. He saw something in me that I still don’t see, but I know that if he saw it, it must be there. I just have to find it . . . .

Now, isn’t that something for me, a black man from Alabama, to say about a white man from Mississippi? What’s more than that, is that I love him. Now that’s what Sambo would call, “outside the box.”

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### “PROCEED AND BE BOLD”

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Sambo was first a teacher, second an architect, and always an artist. He loved Mississippi, Auburn football, and barbeque. He left a celebrated architectural practice with Coleman Coker to co-found the Rural Studio in Hale County. He believed that it was important to rediscover the ethical dimension of architectural practice. He said:

It had become clear to me that if architectural education was going to play any socially engaged role, it would be necessary to work with the segment of the profession that would one day be in a

position to make decisions: the student. The main purpose of the Rural Studio is to enable each student to step across the threshold of misconceived ideas, opinions and to design/build with a moral sense of service to community.

The education and the design/building began with a small group of students and the Hay Bale House for Shepard and Alberta Bryant in Mason’s Bend, one of the country’s poorest communities. In a bend of the Black Warrior River, the one hundred residents are all part of four extended families. Shepard is a fisherman, and he taught his grandson what he knew. The grandson helped the students in building the house, and it was a point of great pride for Sambo that he was the first in the family to attend college. He hoped that the students and the house had something to do with that. Four other major projects have been built in this community, along with a number of “neck-down” projects that include wheelchair ramps, trailer repairs, and even a constructed-wetland septic system. The most noted are the Butterfly or Harris House for Anderson and Ora Lee, and a Community Center that has an origami wall of glass made from salvaged Chevy Caprice car windows.

The most recent project, a house for Lucy Harris and her four children, granddaughter of Anderson and Ora Lee, was completed last July. The Lucy House is constructed from recycled carpet tiles shipped from Chicago by one of the country’s largest carpet manufacturers. While Sambo’s influence was present only in drawings and spirit, a team of eight students from the United States, France, and the Netherlands developed and built the house under the direction of D.K. Ruth. Lucy had two requests that the project fulfilled: a tornado shelter to hide in, and a window to the sky to pray through.

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### THE TEACHER

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“Teacher” is an ethical distinction, marked by the messiness and humanity of relationships. The Rural Studio stands unique in architectural education. The premise remains a simple one: The education of *citizen* architects. The method is direct: Build what you design. Build community as well as build-

ings. The students, in excess of four hundred in ten years, come from all over the country through the School of Architecture at Auburn University. With more than forty projects involving numerous local, state, and national organizations, with donations of materials and labor from thousands of people and companies, a generation of citizen architects has been trained. Sambo states:

For me these small projects have in them the architectural essence to enchant us, to inspire us, and ultimately, to elevate our profession. But more importantly, they remind us of what it means to have an American architecture without pretense. They remind us that we can be awed by the simple as by the complex and that if we pay attention, this will offer us a glimpse into what is essential to the future of American Architecture: its honesty.

The Rural Studio has been self-supporting through foundation grants and private gifts. Weekly, for the past seven years, the Rural Studio receives checks in support of the program, often in the amount of twenty-five dollars or less. Robert Sharpe from Los Angeles sent ninety dollars in the name of his sister and mother. He states: “Even though I’ve been out here for eighteen years, my childhood days on the farm in Alabama will always be a part of me. I am thankful that there are people out there like [Sambo] who want to help those less fortunate and who want to do their part.” The breadth of Sambo Mockbee and his work is not bound by disciplinary lines. While it is inspired by the soil of the South, it is clear that he has been able to show those from afar where they are and remind them of where they are from.

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### THE ARCHITECT

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Houses long since burned with only chimneys breaking the horizon, beautiful houses with great porches, trailers with big covering roofs, cotton bales in red dirt, and solitary white-clapboard churches — the South is not only a different landscape, but for an important time in our history, it was literally a different country. While that past is still present, it is tempered with a belief in the need to move forward. Seeing that much of modern architecture had lost its social conscience, Mockbee believed that through the *subversive leadership* of architects, academics, and students, architecture could reclaim its relationship to “education, healthcare, recreation, law enforcement, employment, and the political and environmental landscape.” This reclamation included for Sambo the dream of an authentic *American* architecture that was made where it is and out of what exists there. When architecture is practiced from a position of advocacy,

the formal, material, and expressive potentials expand. When architecture’s function includes the shelter of the soul, as well as of the body, we have rebuilt a little more of Arendt’s table.

Sambo the architect is difficult to separate from Sambo the artist and the teacher. Before he founded the Rural Studio, his work with architect Coleman Coker was inspired by local materials, vernacular forms, and a gestural response to the site and the climate. Beaver-stick doors, screened-in porches, and deep overhangs became part of a vocabulary that was expressed with a modern insistence on the expressive potential of structure and a proportional sensitivity to the landscape. The buildings face the weather and make it physical. Through designs of private houses, churches, exhibitions, an award-winning tractor shed, and charity houses, their work was generated from regional typologies transformed through a rigorously modern sensibility that allowed them to transcend their local origins. His buildings look like nothing we have seen before, yet they feel familiar and through their optimism remind us that architecture matters.

Sambo received numerous national and regional awards for his projects, including two National American Institute of Architects (AIA) Honor Awards, seven regional AIA Honor Awards, fourteen state AIA Honor Awards, a Progressive Architecture Award, a National Honor Award from the National Trust for Historic Preservation, and the Apgar Award from the National Building Museum. He was elected to the AIA College of Fellows in 1989, two years before he planted the Rural Studio. In 2000 he was awarded the John D. and Catherine T. MacArthur Foundation (genius) fellowship. The guidelines state:

[the fellowship is] an investment in a person’s originality, insight, and potential. Indeed, the purpose of the MacArthur Fellows Program is to enable recipients to exercise their own creative instincts for the benefit of human society.

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### THE ARTIST

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Art is a lonely business. Architecture is an affair of collaboration. Sambo’s work as an artist provided another door to his architecture. His paintings are haunted by the mythology of snapping turtles, the innocence and emotion of color, the scale of catfish ponds, and children. The Italian architect Aldo Rossi is a prominent figure in the paintings, often in the guise of an African mask made of beaver sticks. Sambo told me it was because their drawings were next to each other on the storage walls of Max Pro-



tech, the prominent New York City gallery. His paintings have been described as “bearing witness.”

In his last painting, Shepard Bryant, looking a little like Sambo, stands defiant, wearing a turtle shell and holding a stick as a lance. The painting is located in a room of blue plastic. Through a hole cut in Sambo’s Newburn studio barn, the plastic casts an eerie blue light and *changes* the color of the *Black River Warrior*. The figure of Aldo Rossi looks on from above. Sambo joked that thieves, breaking in through the blue room, took some tools and left the painting that was headed for the Metropolitan Museum in New York untouched.

## NAMES

Architect Jason Young says that words have the capacity to gather things up: catfish, bird dog, horsefly, lean-to, moon pie. So do names. Dick Pigford, architect, classmate, and longtime friend of Sambo’s, says in a poem written after Sambo’s death:

To Know by Name  
is a different game,  
gathering every one  
under the mast

the we and the them;  
the we and the them;  
the we and the them;  
the day long

and the them . . .  
well you see . . .  
they’re  
Alberta and  
Lucy and  
Ora Lee

Sambo gave us the lightning bolts, jook joints, and fairy dust. He delighted in the awkwardness that his name presented to new acquaintances. He would say, “Call me Samuel, or Mock, or His Largeness, or Sambo, but never call me Sam” (he said to Oprah). From his hospital bed in December 2001, he designed a memorial for the site of the World Trade Center that appeared in *Newsweek* magazine.

With recent events debilitating our sense of the rational, a heightened sense of the ethical and the possible feels even more important. In Hale County, Alabama, through the Rural Studio, a place where the possible had nearly been forgotten, the ethical dimension of building builds both shelter and possibility, the beauty and audaciousness of the results reminding us of the childhood dreams of climbing great mountains,

building tall towers, and changing the world. Joseph Campbell said that we should praise the culture that has heroes, and in the same breath said that we should pity the culture that needs them.

In a 1998 interview Sambo said:

‘Love your neighbor as yourself;’ in so doing an architect will act on a foundation of decency that can be built upon. Help those who aren’t likely to help you in return, and do so even if nobody is watching!



**Bruce Lindsey is professor and head of the School of Architecture at Auburn University and along with Andrew Freear is the Co-Director of the Rural Studio. He was a professor of art and architecture at The School of Architecture at Carnegie Mellon University for fourteen years. He recently completed the book *Digital Gehry: Material Resistance Digital Construction* published by Birkhauser as part of the Information Architecture book series edited by Antonino Saggio. He received his Masters**

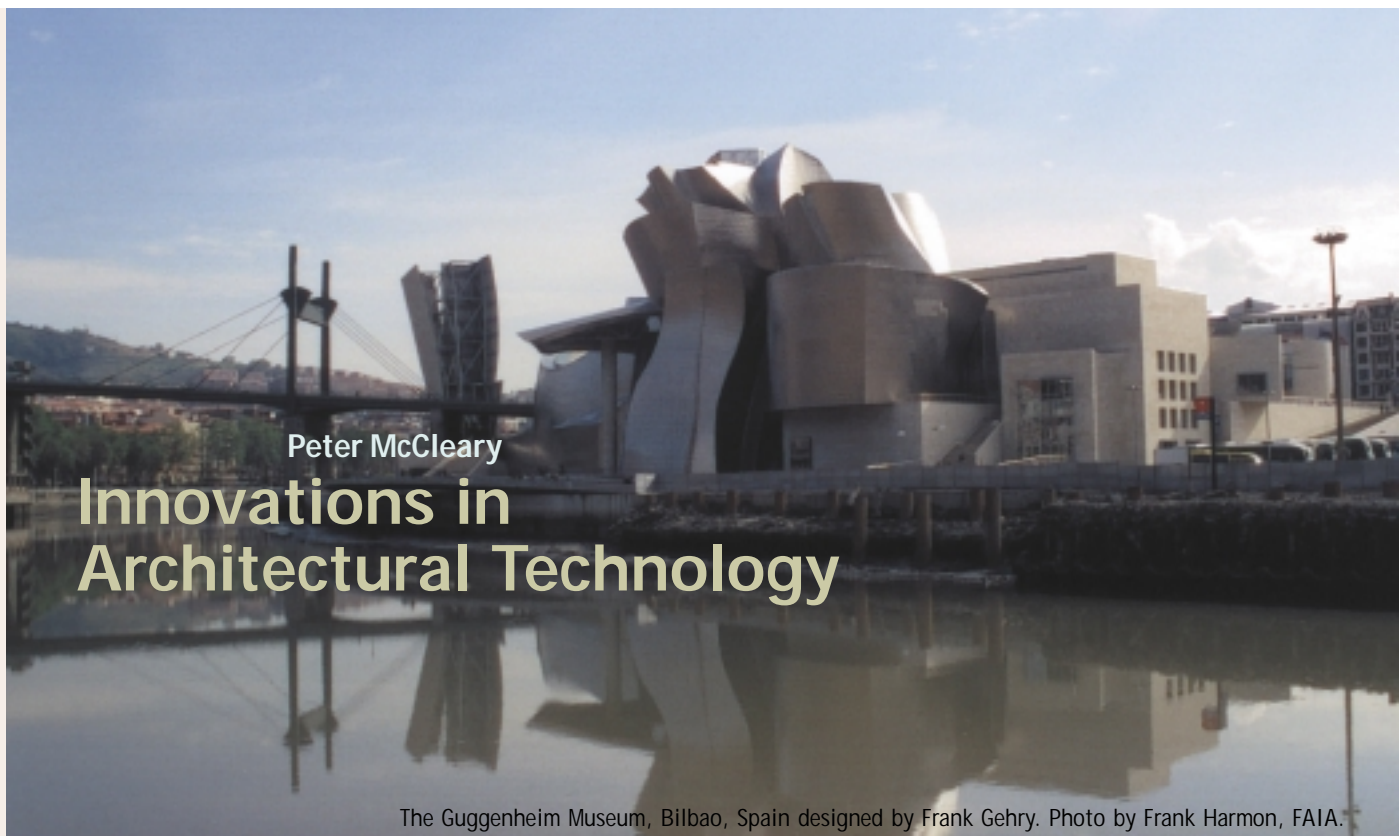
**degree in art from the University of Utah and his Masters degree in architecture from Yale. He is a practicing craftsman and architect who uses digital tools alongside power tools.**



The Lucy House. Photograph by Bruce Lindsey.

Halloween at the Rural Studio. Photograph by Bruce Lindsey, 2002.





Peter McCleary

## Innovations in Architectural Technology

The Guggenheim Museum, Bilbao, Spain designed by Frank Gehry. Photo by Frank Harmon, FAIA.

**M**ore so than other professions, the discipline of Architecture struggles with the relative importance of deriving its processes of design and construction from imitations of its past, conventions of the present, or the invention of its future.

Most practitioners derive their normative models from present practice.

The role of the retroguard, even rearguard, is interpretive copying of the order of yesterday's archetypes. Among its expressions are the alleged retrogression of retrograde neo-Classicism, post-Modernism, neo-Modernism, and "New Urbanism." Interpretations of the antique are labeled "new."

The avant-garde, pioneers and innovators of a forward movement that embraces progress, devises its creations to express tomorrow's forms. It is a movement that favors the development of continuous change over the flux and reflux of functioning systems, and it totally replaces the stationary state as a reference datum for designing, building, and living.

To a large extent, the innovations of the avant-garde are inventions or contrivances rather than discoveries of some fundamental or emerging principle. Their advancements in theories and practice are in response to a search for order or "principles of form."

Today, in every field of human production, the emphasis is on changing environments and a concomitant search for a novel response. To cope with these changes, architects attempt to formulate new hypotheses. They replace their older theories of order

(cosmos) and reexamine recent experiments with the disorientations of deconstructivism (with its instabilities, displacement of equilibrium, and chaotic order). Today, as in several other disciplines, architects speculate on the implications of chaos, catastrophe, or complexity theory with its identification of formal archetypes that represent discontinuous changes in systems.

Whether cosmos or chaos, any system-of-order or order-of-systems in architectural technology must examine the continuum (whole or fractured) that relates matter and materials, systems of production and structure, space and place, the natural environment, and finally the role of technical equipment, processes, and theories in both designing and building.

Let us examine a few aspects of each part of that continuum.

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### MATERIALS

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**T**he architectural vanguard continuously adjusts its "style of expression" in response to the newest building materials of its era. Greek temples were structured with stone columns and beams; Roman basilicas used brick walls, arches, vaults, and domes; Gothic cathedrals had limestone ribs and panel vaults; train stations, market halls, and so on of the Industrial Revolution are of cast, wrought, and "puddled" iron; the Chicago School's high-rises are rolled-steel frames; the mid-twentieth-century Modern Movement espoused reinforced concrete; early-twentieth-century Russian constructivists, mid-twentieth-

century British High-Tech, and late-twentieth-century U.S. deconstructionists adopted rolled-steel, braced frameworks. Since 1977, the focus has been on a dematerialization, or transparency, of the wall — and that is achieved by means of steel tension cables and rods supporting glass laminations with silicone joints; the end of the twentieth century saw the introduction of skins of aluminum, titanium, and polycarbonates; this new millennium began with a shift to composites of carbon fiber (“black metal”) impregnated with resin; and today some architects imagine that nanotechnology will be the basis of tomorrow’s achievements.

Originally, building materials were found raw in nature (logs and mud). Later, natural materials were reshaped (cut stone, lumber) and even later were reformed by pressure and/or temperature (brick, steel). More recently inorganic chemistry’s composed materials (concrete) are being replaced by organic chemistry’s fusions (polycarbonates) and composites (carbon fiber and resin), and some believe that building materials of the future will be produced morphogenetically.

Until recently, the architect used a limited palette of materials. Louis Kahn regularly composed with a reinforced or prestressed concrete structure, a travertine infill to complete the walls, conventional glass windows, and oak flooring and furnishing. The contemporary architect does not speak of materials, but of “materiality,” which means that only after the performance of the building envelope is specified can the material composite be “invented” and then produced in a much larger range of forms.

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**PRODUCTION PROCESS**

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The production process transforms natural materials into building materials through the processes of extraction and manufacture while consuming energy, and under the control of equipment (ranging from hand-tools to machines and robots) designed for that purpose. These building materials, fabricated into sub-systems and then assembled into a whole, are thus transformed into complete buildings. The impact of labor and capital (materials, energy, and machines) on the final shape of the building, and the structure of the society that constructed it, is better known than the equally profound effect on the form of buildings that

results from the temporal and spatial characteristics of the equipment itself. “Machines” or equipment, like bodies, have oriented directions of movement and concomitant rhythms, or metric measure, in time and space.

The equipment of yesterday and today has provided economies through mass production of repetitive parts. That type of equipment engenders the belief that low cost results from the maximum number of combinations of assembly from the minimum number of parts. Today, the concept of mass production is being replaced with a belief in the possibility of mass customization, that is, where the parts need not be replicated and where each part can have a unique

**Today, the concept of mass production is being replaced with a belief in the possibility of mass customization, that is, where the parts need not be replicated and where each part can have a unique shape. Mass customization is made possible by the link between computer-aided design and computer-aided manufacturing, in which “rapid prototyping” of complex shapes (but topologically similar) is transmitted from the computer designer to the digital fabrication machine that shapes through laser cutting, rapid milling, and so on.**

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Just as materials are transformed by the hands that “mold” them, buildings are shaped by the equipment that assembles them. Thus the composition (aesthetics) of today’s buildings results from its materials and methods of production (poetics), and the

new methods of production will shape anew tomorrow’s buildings. Yesterday’s poetics is today’s aesthetics, and today’s poetics will become tomorrow’s aesthetics.

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**STRUCTURAL SYSTEMS**

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For several millennia, up to the end of the nineteenth century and the mass production of wrought iron and mild steel, durable and large build-

ings were constructed of masonry (stone or brick). The structural systems of the column, pier, wall, arch, vault, and dome were in compression. During the same period, less durable (fire, water, termites) wood was used for internal structures (floor and ceiling beams, stairs) and lightweight moving structures (ships, carriages). The twentieth century saw the growth of structural systems in flexure or bending. In this era, braced frameworks in steel (bolted, riveted, welded) and concrete (reinforced or prestressed) replaced those earlier masonry and wood systems. Late twentieth-century experiments with tensile fabric roofs of planar textiles and linear ropes, in steel or polycarbonate, have become one of the preferred structural systems of the technological avant-garde — another is the combination of tensile cable-trusses and glass skins.

In the change from heavy, compressive masonry structures to lightweight, tensile-steel or carbon-fiber systems, there is a reversal of the proportion of the self-weight (gravity) of the structure to its applied external loading (wind, snow, earthquake, heat, and cladding). As a result of this reversal, the shape of the building changes from a structural expression of mass, inertia, or force to an environmental expression that derives from bioclimatological concerns. In the jargon of the field, the “blob” replaces the “box.” While it has always been a necessary part of the engineer’s credo, architects have only recently developed an interest in the ratio between a material’s strength and its weight, and in least-weight structural configurations. The resulting forms are not only much lighter than before, but also they can experience much larger movements, and the concomitant static and dynamic vibrations.

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## SPACE

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What the nineteenth-century theorist of architectural form classified as the space of the Egyptian cave, the Greek temple, and the Chinese tent, the contemporary engineer would characterize as structural systems of compressive masonry, flexural stone, wood or steel, and tensile textiles. For some time there has been a schism between the architect and the engineer in their perceptions of the logic of physical existence. While architects focus on the flow of space, or isotropy, and engineers emphasize the flow of matter, or rheology, neither discipline studies the dual or mirror relationship between both types of flow, that is, their interdependent degrees of freedom and restraint.

Each new concept of matter, material, system of structure, or construction makes possible or “opens up” a new direction and magnitude to the flow of space.

Thus we find an ever-changing set of spatial types. Among such types are: Classical bounded and centripetal; Modernism’s free plan; F. L. Wright’s open plan; A. Loos’s “raumplan”; Russian deconstructivism; M. Ginzburg’s vector flow; U.S. deconstructionists’ disorientations; filmic space with its deconstruction and reconstruction of space and time; G. Deleuze’s “smooth,” homogeneous or flowing space

**The spaces of the immediate future will be characterized by “complexity.” They will derive from “catastrophe theory” and its language of structural stability, phase transitions, and continuous change, and with its basic types of discontinuities in the form of the fold, cusp, swallowtail, butterfly, and umbilic hyperbolic, elliptic, or parabolic.**

of the nomad in contrast to the “striated,” heterogeneous space of the village dweller; and so on.

The spaces of the immediate future will be characterized by “complexity.” They will derive from “catastrophe theory” and its language of structural stability, phase transitions, and continuous change, and with its basic types of discontinuities in the form of the fold, cusp, swallowtail, butterfly, and umbilic hyperbolic, elliptic, or parabolic. While the geometry of these new complex surfaces can be drawn or digitally represented, they will be fabricated only with difficulty — using the new material composites — and it is not certain that they will have the requisite material strength and structural stability to serve in a building.

The Roman barrel (half or semi-cylinder) vault and dome (half or hemi-sphere) were “pure” geometrical surfaces, but “impure” structural shapes. Much later a new theory of structural behavior identified the catenary and other funicular shapes as more appropriate than the semi-circle for efficient use of materials in transmitting forces. Similarly, builders of Gothic groin vaults found it easier to construct a semi-circular diagonal rib than the more appropriate catenary-shaped one. The twentieth-century development of membrane-reinforced concrete shells introduced the geometry of conic sections, elliptic parabolics, and so on. Tensile fabric structures brought to

the fore the anticlastic shapes of sections of the hyperboloid of revolution. And recently the discussion has been on geodesics and “buckyballs.” Similarly the geometry and the physics of the umbilicus will be scrutinized.

Forever there has been a knowledge gap among what can be drawn, geometrically represented, structurally validated, and finally constructed. That gap can be seen today in the complex surfaces generated by the computer programs of “complexity theory” that do not differentiate between theoretical and practical geometries.

As each innovation in technology led to a new type of architectural space, the human’s relation to that space has become less and less anthropometrical and more disembodied or less tangible.

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## ENVIRONMENT

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Intermittently, the concern for energy efficiency and “sustainability” are major concerns of the profession of architecture. Not only do architects intend to maintain the human-comfort zone within buildings, but also to limit the energy to be consumed in the production of materials and in the construction of the building itself. Much has been done and written about life-cycle-costing with the result that both passive and active systems of energy reduction and production continue to improve in performance. Improvements range from more efficient building shapes and orientation, through multilayer skins, to more efficient photovoltaic cells.

The comparison between New Age music and its architectural equivalent illustrates more innovations. Whereas such music reproduces sounds from the natural world and is characterized by light melodic harmonies, “New Age” architecture of biomimetics reproduces the natural environment on many levels. For many years, biomechanics — the study of the mechanical laws of the movement or structure of living organisms — has been a source of forms for architects. Recent attempts to reproduce the logic of nature have shifted from static, mechanical representations of natural systems to dynamic, organic biotechnological — even biogenetic — systems. For the present these imitations of living and open, rather than dead and closed, systems are speculative design proposals and may remain so.

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## DIGITAL DESIGN

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Perhaps the most significant change for the architect is the relentless expansion of the role of digital media in the design process. What began as a representational tool of great speed, memory, and geometric versatility, manipulated by designers who could compose at the screen, has become a tool that can superimpose levels of reality (light, sound, heat, and so on) — an augmented reality — and also act as a generative tool. In the latter role, the computer generates changes or mutations to an assumed genetic structure. The genetic algorithms transcribe the architectural DNA into building molecules and protein structures that become an architectural music of simple rhythms. These organic organizations of the new genetic determinism offer the New Age “evolutionary architecture.”

It is a paradox that the sources of technological innovation in architecture begin in the realm of the applied science of materials, structural, construction and environmental systems, the praxiology of production, biotechnology and genetics, and computer logic; and that the evaluation of the results is firmly embedded in the concerns of composition and the fine arts.




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Donlyn Lyndon

# The Sea Ranch: Dwellings in Place

photographs by Jim Alinder



Condominium One (MLTW).

Forty years ago, Oceanic Properties Inc. began development of a beautiful ten-mile stretch of the Northern California Coast to be named “The Sea Ranch.” They called on a team of consultants, led by Lawrence Halprin, to prepare a bold plan that would give prominence to the natural setting, incorporating the existing ecology of the place. Halprin, already a leading landscape architect (who in 2003 received a Presidential Design Award honoring his outstanding contributions to the American landscape), championed the creation of an architecture that would be suitable to this particular place. Oceanic constructed a series of exemplary buildings designed by Joseph Esherick Associates and our firm, MLTW (Moore Lyndon Turnbull Whitaker), to illustrate what the potential of such an architecture could be. These buildings became widely influential and were published around the world. In 1991, MLTW’s Condominium One at The Sea Ranch was given the 25-year Award by the American Institute of Architects.

In the four decades since its founding, The Sea Ranch has evolved and changed, yet it remains informed by the original intentions. It is a site that has grown up with a plan and a set of objectives that have given it special character. The essence of that personality is a managed relationship between the land and the buildings, a set of arrangements that gives dominance to the landscape yet allows the formation of beautiful dwellings within it. Approximately half of the land is held in common ownership — meadows, forests, trails, and roads maintained by The Sea Ranch Association.

When The Sea Ranch was started, traveling up the coast 100 miles north of San Francisco was still something of an adventure. We assumed that the people who would come here, who would seek respite on the Sonoma Coast, would be drawn to the particular qualities of this place, to its ruggedness and relative isolation, its sense of a territory that had once been more active and was now dormant, waiting to be explored. We imagined that they would seek, in buildings which they would buy or build, qualities that were closely aligned with this character — ready to join in the adventure and distinct from those that were designed for more conventional domestic settings — buildings that would become part of the spirit of this place.



"Four-Poster" Area,  
Condominium One (MLTW).

Bed loft,  
Condominium  
One (MLTW).



The first buildings built at The Sea Ranch, which included the Hedgerow Demonstration Houses designed by Esherick and Condominium One, gave us (Charles Moore, me, William Turnbull, and Richard Whitaker) the opportunity and the mandate to think about architecture in a way that would be particularly suitable for this place. They were meant to show a fresh approach to the forming of buildings, an approach that would respond to and take advantage of the special characteristics of this astonishing, beautiful site. This project also allowed us to further explore ideas that we were working with both in practice and in our teaching at the University of California, Berkeley. (Moore, Whitaker, and I were then all teaching there, as was our colleague, Joseph Esherick.)

### CONDOMINIUM ONE

Halprin's office developed a detailed ecological analysis of the site, assessing the wind and sun patterns that would guide our attempts to form an appropriate partnership with the site. Our preeminent concern was with siting buildings in a way that would complement and draw great advantage from the beautiful land. We did not expect that this could be a hands-off relationship. We wanted each building to engage the land, to become part of the way in which people could accommodate to this extraordinary and often chilled and windy terrain. We also wanted to have the relation between buildings and land be complimentary, to use the buildings to make the land more habitable, without destroying the very qualities that attracted people to this segment of coast. We were conscious of the insistent wind and the desire for sun. Our charge was to make buildings that would relate to the land, vegetation, the winds, and the need

for solar radiation in both indoor and outdoor living spaces.

These considerations, combined with the specifics of the ground conditions on the site, led to the refinement of Condominium One into a large, simple form sloping up from the cliff-edge along the slope of a mound. It is built mostly on rock, and it rises in consort with the land to a pair of towers at the crest that marks this place in the landscape. Its large wood-board siding emphasizes the big forms in a way that echoes with the surfaces of the barn a little to the north on Bihler's Point. The units of the condominium are joined together, mostly under one roof that follows and connects to the force of the wind and the slope of the land. The walls also interlock, and carports, entries, and terrace screens become a connected part of the whole.

What the designs for the condominium demonstrate is respect for the force of the wind, pleasure in the eastern and southern sun, and an interest in views along the coast that connect land and water (not simply panoramic views out to sea). Borders of the buildings are creviced and extended with small niches and projections that invite and reflect personal inhabitation, and they are sheathed in redwood boards. These structures derive from a conviction that buildings can and should become a part of the larger encompassing landscape. This connection to a larger order was not to be achieved through pretending to disappear from view, but through developing forms that are sympathetic to the forces that have shaped that environment. The buildings embody, too, a certainty which we shared — that no single repetitive building form could be adequate to the environmental complexity inherent in this place and in the varying circumstances of specific sites within it.



Hedgerow House  
(Esherick).

Lichter-Marck House  
(Lyndon).



The Condominium, like the edge between land and sea, records a dynamic balance in the interaction between differing life forces — in this case the transactions between shelter and exposure, and between simplifying ideas and the enriching potential of difference. The relation of the building to the land is not one of visual emulation; it is rooted in the basic organization of the plan and the diversity of its adjustments to the particular conditions of the site. The adjustments are erosions of an initial geometric order. We looked to the landscape as mentor, learning from its forces what an architecture of the place could become.

Much has been made, in the architectural press, of the relation of The Sea Ranch Condominium to the vernacular barns and structures of the region. The farm buildings of this coast, with their direct but dignified ways of building, were certainly in our minds, because we admired them always on our way to and from the site. We also greatly admired nearby Fort Ross, the restored compound with a redwood palisade and small towered chapel that had first been constructed by the Russians in the early nineteenth century. In a similar mode we determined that the way in which the building would be made should be an active element in forming the experience of the place . . . that its structure should not be hidden away as little wood studs concealed behind plaster board. This was timber-harvesting territory, and the forests and mills were nearby. The structure, we determined, could be made of heavy timber, its framing exposed, and sheathed with redwood boards that would be left to weather and change like the barns themselves.

In planning for the inside of the condominium, more diverse promptings took place. Fanciful two-story pieces stand about in the high main volume like oversized furniture, independent of its structure. In the terms Charles Moore and I formulated years later in *Chambers for a Memory Palace*, these are “Allies that Inhabit,” sculpted forms that seem ready to spring to life and become companions in our enjoyment of the place [Lyndon, Donlyn, and Charles W. Moore. *Chambers for a Memory Palace* (Cambridge: The MIT Press, 1994): 148–175]. Like big faceted cabinets which hold the bathroom and kitchen equipment, these inside forms are seen from many vantage points, are washed by changing qualities of light from skylights and windows, and they accept layers of paint and association, as well as the paintings and objects that are fruits of the owners’ acquisitive minds.

Even more important to the conception of these interiors was the notion of a “four poster”: a small square structure of four posts and a box of space that would stand independently in the larger room, holding the bed area aloft in the high volume while making beneath it a place of special intimacy and focus. We were encouraged in our thinking about this by the frequency with which a four-posted pavilion occurs in the history of architecture throughout the world, and specifically by an article titled “Heavenly Mansions,” written by Sir John Summerson. He writes eloquently of the way in which “the aedicule,” a miniature semblance of house, is a device that was used often in Classical and Mediaeval architecture and painting to enframe and give importance to a god or saint or, as in the case of Pompeian Wall Painting, to fill an area with images of places that





Brunsell House (Obie Bowman).



Miglio House (C.W. Moore).

could be inhabited [Summerson, John. *Heavenly Mansions* (New York: W.W. Norton and Co., 1963): 3].

Additional bays and projections were added to this fundamental structure, allowing each unit of the ten to develop individuality based on special outlooks or conditions pertinent to their position on the site. Because the height and direction of the plane of the roof inside were almost always determined by the shape of the larger building, and the floors were set as close as they could be to the unevenly sloping ground beneath them, each dwelling unit has a slightly different volume, resulting from the space left between the sloping roof and the flat floor. The pitch of the roof was set so that at its lowest end, near the ocean, it would still leave minimum headroom for a loft. In some units, on the other hand, the roof reaches higher above the floor.

The resulting building edge presents an array of differences: differences that allow choices in the way the units can be lived in; differences that are enfolded within or appended to the encompassing mass of the whole. It is a political image; each part has its individual identity, its particular advantages, but together they create a place of singular distinction, a common encompassing form that has sufficient presence to become a part of this majestic landscape.

Though the original plan called for a number of such structures, the development plan was unfortunately altered and no other condominiums have been built at The Sea Ranch. As it has evolved, The Sea Ranch has become primarily a community of individual homes, which poses a different kind of challenge: building in a place as unique as this one invokes another order of responsibility. Precisely because this place has grown up under the guidance of a plan and

design guidelines (and in accordance with legally binding purchase agreements that require a commitment to support that common environment), Sea Ranch houses need to be sited and designed in ways that enhance, rather than detract from, or dismiss, their surroundings. It is not enough to build a house that suits its owners and is economical to build. A house at The Sea Ranch should reinforce and add to the qualities of the place — should return benefits to the place from which it draws so much of its value.

## HOUSES THAT FIT

To illustrate how houses can contribute to a sense of place, we have identified differing ways that houses can work in their setting. In *The Place of Houses*, Charles Moore, Gerald Allen, and Donlyn Lyndon noted that there are four ways of siting houses: merging, claiming, surrounding, or enfronting [Lyndon, Donlyn, Charles Moore and Gerald Allen. *The Place of Houses* (New York: Holt, Rinehart and Winston, 1974): 188–89]. Here, more closely tuned to The Sea Ranch, these might better be expressed as Houses that Connect to their environment, Houses that Settle in their place, Houses that Enfold a place of their own, and Houses that Inhabit and enliven their sites. Houses considered this way are active agents in the creation of environments, for the people who dwell within them, for the neighbors who live among them, and for The Sea Ranch as a living place that embodies distinctive values.

Almost every good house, of course, relates to its site in several ways, yet describing houses in this way helps to clarify the importance of having a strategy for how the house works within the larger landscape, and how it gives pride of place to place.



Yudell-Beebe House  
(MRY).

Whitaker House  
(D. Vedensky).



**Houses that Connect** are houses that are formed so that they are a part of something larger. They may become part of a cluster of houses that all take their forms from the same set of circumstances; they may be houses that merge directly with the immediate landscape that surrounds them. Houses may also connect directly to the environmental forces of the site, taking their form from the wind, the sun, the earth, and the vegetation. Sometimes houses connect in our perception simply from the similarity of forms, materials, and sizes that they use. Fences and plantings and subsidiary structures such as sheds and carports can also make connections that bind a group of houses together, creating a larger perceptible whole.

**Houses that Settle** are houses, usually on a relatively large plot, that settle the landscape — that claim their immediate territory in an effective way. They are usually capped by a gable roof or a hip roof, with forms that slope down towards the ground in several directions. When the land is lightly rolling they literally settle into the ground, becoming a sympathetic part of the rolling open landscape. These forms were the ones most often used by early settlers. They are building forms that in their self-sufficiency are easy to conceive and build. They can be adapted effectively to the wishes, desires, and special conditions of the people who build them by adding bays and smaller gables, settling further into the landscape with particularities that register human use. In harmonious houses these additional elements are formed in a way that respects the original image and visual structure of the house.

**Houses that Enfold** a place of their own are ones that are shaped to create sequestered places that separate from the more general sweep of the landscape. Their parts surround a space that serves as the imagi-

native center of the house or compound, the space from which all others take their cue, and which serves as a measure for the positioning of activities, or of more particularized, intimate spaces. Houses may encompass such imaginative centers within themselves; their forms may fold to wrap a segment of outside space; or they may be fashioned as a compound of rooms arrayed around a common garden or inhabited court.

**Houses that Inhabit** and enliven are especially effective in bringing their sites to life. They make the most of the varying conditions on the site (exploit them, if you will) to provide for an extended and varied experience of being in place. Many of these houses exist where differing site conditions come together — at the bluffs, or facing a draw through the meadow, or edging the borders of the forest. They take full advantage of all conditions, establishing a choreography of movements and outlook — with station points, vistas, and internal landmarks that amplify a person's experience of the place.

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### THE MCKENZIE/FRANKLIN HOUSE

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When I returned to design again for The Sea Ranch in 1989, after an extended period on the East Coast, the particular challenge was to make single dwellings that could be both individually spirited and appropriate for their place. The McKenzie/Franklin house (the first of a number of houses that I have designed for The Sea Ranch) was initially designed for and with Dianne McKenzie, who was committed to the ideas of place that had been outlined in *The Place of Houses*. While this house may most readily illustrate the way in which a house can connect to its site, it also enfolds a courtyard within



McKenzie/Franklin House  
(Lyndon).

Interior,  
McKenzie/Franklin  
House (Lyndon).



its volumes, has decks that extend into the surroundings to more fully inhabit the place, and uses in part the vernacular form of a barn that settles into the landscape.

The site is the edge of a meadow, on a cul-de-sac that is against the hedgerow. The house site is thus related to but not adjacent to the trees, with an intervening access road. Our response was to set the building complex as close to the road as setback regulations would allow and to make the gesture of the house's roof towards the trees sufficiently strong to visually bridge the gap of space, connecting house and hedgerow when they are seen from across the meadow. Setting the house close to the road, rather than pushing out into the meadow, also left clear lines of view for the lots farther east along the road.

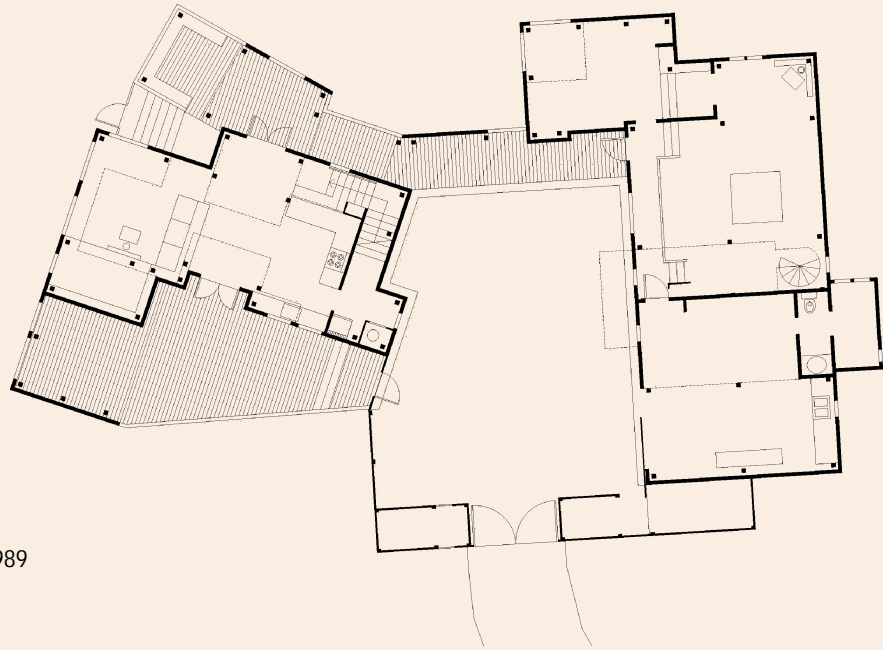
The house is built in two parts across a courtyard, with the everyday living spaces on the western, ocean side, and a studio/garage on the eastern side. The roofs of the two buildings rise from the meadow at the same pitch, as though cut from the same plane and bent just a little. The roof over the narrower house rises in a single slope up towards the southeast, with its peak at maximum height, bringing sun into the space. The roof on the studio starts in the same plane, then at its peak folds over into a traditional barn gable, the downslope encompassing the garage/work space and storage shed. The two buildings are joined by board fences tying the two forms together and enclosing the courtyard workspace. There is an additional fenced enclosure to the south, providing a private wind-protected sun deck with hot tub and a framed view of the ocean. On the meadow side the roof of the house extends down over an entry porch that is bent out slightly to amplify the view.

The house space inside is a long, high rectangle that steps down gently towards the sea and harbors a mezzanine above with the bedroom, shower, and toilet spaces. Large, tall windows on the ocean end give onto a meadow stretching towards the bluff; the opposite end is open, with concrete counters, a very long stainless-steel sink and drain board, and a powerful commercial stove. The dining table is located in the middle of the space. From this center of hospitality the action of the house moves off in all directions. On one side the kitchen equipment is ready to hand, the living area a few steps below on the other. Two pairs of French doors aligned across from each other create a cross axis through the space: one set of doors leads to the covered north porch and a view to the meadow beyond; the other pair leads to the walled sun deck on the south.

Overhead a bridge passes across the space and a large, tall window on the southeast brings ample welcome sun in for the morning. At one end of the bridge is an enclosed toilet room with gypsum board surfaces that Dianne McKenzie whimsically painted with faux marble patterns, and a freestanding shower completely enclosed with glass. At the other end of the bridging path is a platform that holds the master bed, with views out to the sea.

The studio, originally intended as a weaving workshop, is a large simple barn space that becomes very low on the meadow side to create a close nook for the wood stove, and rises up at the peak to cover an attic-like mezzanine study, with its own projecting balcony outdoors.

The McKenzie/Franklin house is built with an exposed Douglas-fir heavy-wood frame and plank walls and roof, a modified version of the construction system that we devised for Condominium One. Here



Plan of the McKenzie/Franklin House  
at The Sea Ranch, California  
Architect: Lyndon/Buchanan Associates, 1989  
Additions: Donlyn Lyndon, 2003

additional materials were informed by Dianne McKenzie's adventurous enthusiasms and her commitment to experimenting with surfaces. The living-area floors are slate tiles that have since been used extensively at The Sea Ranch; the counters for the kitchen are cast concrete on industrial kitchen-grade supports; the towel bars and accessories are fashioned of copper-plumbing tubes; and the lights and conduit are exposed, with industrial fixtures.

Winston and Laura Franklin, who now own the house, have invested it with another layer of interests. Winston carves big logs into furniture and figures; Laura has an intense interest in gardening. Buddhist objects and hangings inhabit the house, lodged on framing members, in nooks and ledges and on the walls. The most dramatic transformation has been in the walled court, which is now a lush, extravagantly vigorous garden that produces all manner of blossoms throughout the year, suggestive of a north-coast version of Le Douanier Rousseau's famous jungle paintings. It is so wonderfully abundant that it requires navigation to reach the opposite side, which was originally considered the entry. Great, beautiful chunks of wood, carved and in the midst of being carved, inhabit the garden.

Small additions, which I designed in 2003, extend the studio building and expand its bathroom. The roof continues down in the existing plane towards the meadow, but has a mini-tower on the corner fronting the view to the meadow and ocean, with windows on the corner that match those of the original ocean-facing side. A large skylight for its top bathes the walls below in light and softens glare from the low western sun over the ocean. Views out to the ocean continue to course through the added space and out the large corner windows. Materials match the original. The

main transformation in the role of this house in the larger landscape is the addition of the windowed tower at the center between the two buildings. It adds another vertical incident to mark the presence of people inhabiting the long stretch of wall that edges the meadow.

As The Sea Ranch has become more a place defined by individual houses, it has become a different place — still magical, but more settled, more domesticated, bred more with convention. Yet many excellent houses have been designed there that steward their sites well and are inhabited by many caring individuals who continue their commitment to honor its best qualities.

During the forty-year span of my professional involvement with The Sea Ranch, it has remained an invocation: a challenge to think freely yet with respect for the larger order; to imagine dwellings that give life to their settings and speak to their environment. More fundamentally, it is a call to join in taking care of places — here and elsewhere — that envelop lives with shared understanding, yet remain quick with the breath of imagination.



**Donlyn Lyndon, FAIA, is the Eva Li Professor of Architecture at the University of California-Berkeley.**

Excerpted and adapted from *The Sea Ranch*, by Donlyn Lyndon and Jim Alinder, Princeton Architectural Press, to be published in 2004.



Lyndon-Wingwall House (Donlyn Lyndon).



Photograph by David Young.

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## FIRE ESCAPE

Strings of white Christmas lights are twisted around the fire escape  
as if a piece of the black-and-white sky has tangled there.

I'm going to stay out here in the cold air, where my breaths  
cause icicles to prick the wet red bags of my lungs.

The ladder that reaches to the sidewalk is rusting to terra cotta.  
A foot would split it. I want to climb the one that goes up.

If it could go on, ladder to ladder, my foot bending around the rungs,  
up past my neighbors' rooms, warm red walls, striped curtains, a cat,  
plants with hothouse fronds, up, again, and up to the roof,  
the tarpaper plain where the wind is imitating pigeon songs.

The ladder turns, goes up again. In my coat with silver buttons  
I could climb till I was tired, and then sit, rocking gently

in the metal wind boat of atmosphere.

ELIZABETH SULLIVAN

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**Elizabeth Sullivan has lived in San Francisco since 1996. By day, she works as the director of an environmental non-profit. She attended the 2002 Squaw Valley Community of Writers poetry program. Her work has been published in *Fourteen Hills*, *Nimrod: An International Journal*, and in *Poems and Plays*.**

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# Book Reviews

**ANDREA OPPENHEIMER DEAN and TIMOTHY HULSEY.** *Rural Studio: Samuel Mockbee and an Architecture of Decency.* New York: Princeton Architectural Press, 2002. 170 pages. \$30.00.

Sambo Mockbee was not a coffee-table-book kind of guy. This is good because *Rural Studio* is not a coffee-table book. This is not to say that this volume, with its beautiful images, large format, and pleasant heft, would not look good on your coffee table. It would. Like a good coffee-table book, it is one that you may peruse casually or read with purpose. It is a book that my students and I often go to for inspiration. What makes it a Sambo Mockbee book are its focus on the process of creation, the photos of populated buildings, the sharing of credit with students and clients, and, in a very subtle touch, the soft-cover binding.

What Sambo Mockbee accomplished in his all-too-short life was to return architecture to the people. And while it is noble that many of Sambo's people live in Alabama's poorest county, the real message is that architecture is a social art. Those familiar with the work of Coker-Mockbee know that ideas and imagination are ever present — for clients rich and poor, young or old, black or white. Mockbee, like many of his extraordinarily talented classmates, could have made a career designing exclusively for the rich. That he chose not to do so speaks as much to his full understanding of the design process as it does to his roots in, and convictions about, the Black Belt of the rural South.

Although I do not know whether he knew or abided the words of Louis Sullivan, they are certainly appropriate in explaining some of the ideas evident in Sambo Mockbee's work. Sullivan said that architecture is not an art more or less well done. Buildings, he believed, were reflections of their peculiar social, economic, and political worlds. A false historicism, however neatly contrived and cleverly presented, was a betrayal of trust. And by and in whom was that trust placed? The people placed their trust in the professionals.

Most architects, and the public, have long since forgotten that relationship. Many of us see the practice of architecture not as a privilege, but as a right that we earned through years of physically and mentally trying education, more

years of difficult and too often unrewarding work, and ultimately, trial by examination.

Sambo's greatness was evident very early in his student career at Auburn. He never saw the work of the design studio as a means to an end — it was, for him, the great quest. The assigned projects were, however ludicrous or pedestrian, an emotional and intellectual adventure. At a time (the early 1970s) when students, and teachers, were searching for relevance, Sambo moved quietly through the verbiage, making drawings and models of extraordinary grace and insight. His quiet exterior contained a passionate personality always at the ready to try the new or unexplored. I can remember watching from a safe distance, late one evening, as the late Lewis Lanter, only a few years Mockbee's senior and perhaps Sambo's most influential Auburn teacher, tore through one of Mockbee's projects. That this effort was to be turned in the following day mattered little — either to Sambo or to

Lewis. Sambo understood Lanter's concerns. Both of them knew that the project could be better. Sambo simply started all over. That Lanter stayed with him through much of the night is no small part of the story.

Those who choose to work with people of low or moderate income find a special fulfillment. There is an old, and no doubt apocryphal, story of Frank Lloyd Wright's visit to his ancestral home in Wales. Having been taken to the office of the local architect, Wright endures an excruciating display of, and recitation about, the Welsh designer's long career. At the close of the presentation the local man turns to the world-renowned and often imperious Wright for affirmation of a life's worth of architectural effort. Wright pauses and says, "It can truly be said that we are both

doing God's work. You're doing it your way. I'm doing it his way."

The sarcasm notwithstanding, there is truth in Wright's attribution. To practice architecture the (W)right way involves the ability to see into the core of human nature and experience. That often involves great risk. Most of us, even if we have the insight, may balk at the reality. Whether our clients are rich or poor, it is to their world, their realities, their environment that we must look. There the talented designer will find most of what she or he needs to make not merely the beautiful, but the meaningful.

Meaning is at best an ephemeral concept. We are most at ease conveying meaning with words. Some have found other vehicles for communicating meaning. Given architecture's need to provide for basic human functions, the idea of meaning is often seen as superfluous or perfunctory. How



often has Louis Sullivan's own dictum of *form follows function* been used to promote the banal or excuse the irrelevant? How many buildings are reviled because they have the audacity to convey meaning in ways that are not easily understood?

Look through the images in *Rural Studio* and ask yourself whether you would feel at ease with the buildings if they were to appear in your town, or on your street. I would welcome them in my neighborhood because they speak to me in ways that, while different for those who inhabit and use them, are both provocative and comforting. Sambo and his students have created a legacy of work that is just that — thought-provoking and sheltering — in a world both complex and often unfriendly.

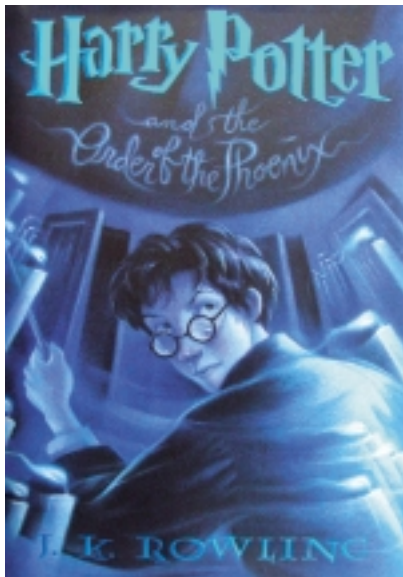
As you leaf through *Rural Studio* and read the testimony of students and clients, it is clear that Samuel Mockbee saw architecture as a profession in the most noble sense. Like other professions, it is a calling. As a calling there must be evidence of mutual respect, trust, and not a small measure of spirituality. Talent and hard work, though crucial, will not, by themselves, make great architecture. Make no mistake, Sambo's work — his paintings, his buildings, his teaching, his relationships — each and all are the product not only of a prodigious talent, but are a state of grace with which few of us are blessed.




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**Robert Zwirn was a member of the faculty of the Department of Architecture at Auburn University, 1970–80. He currently practices architecture in Baton Rouge, Louisiana.**

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**J.K. ROWLING.**  
*Harry Potter and The Order of The Phoenix.* Mary GrandPré (Illustrator). Scholastic Press, 2003. 870 pages. \$29.99.

“The hottest day of the summer so far was drawing to a close and a drowsy silence lay over the large, square houses of Privet Drive.”

So begins *Harry Potter and the Order of the Phoenix* (*OOTP*). But, let me warn you: even if this article is so witty and so intelligent (In which case, please mention it to my editor. Several times. Using different names.) that it makes you just want to run out and purchase *OOTP* (In which case, please mention it to Scholastic's PR man), **DO NOT BUY THIS BOOK UNLESS YOU HAVE READ ALL OF THE PREVIOUS BOOKS RECENTLY, AND IN THE CORRECT ORDER.**

*OOTP* is very different from the previous four books, yet the author remains true to the story. *OOTP* is more suspenseful, darker in a way, and although you can read it to five-year-olds, the story is more complex and detailed than they will pick up on, and they will not understand some of the plot. I'm not trying to criticize five-year-olds, but the story is just beyond a five-year-old's level of *understanding*. Also, you can't just be a fan who talks about *OOTP* all the time because everyone else does, or a fan who marked down the days before *OOTP* came out. Only people able to place themselves in the story and *feel* the excitement, joy, and even the pain that the characters feel can *truly* say that they have read *OOTP*. If you can place yourself in the story, then you will understand *OOTP* far better than Spock could. So if you tend to look at things as a Vulcan, this is not the book for you. If you are a human being, read on.

In *OOTP*, some plot points extend in new directions. Some characters you start to look at differently, while others show their true colors. Ginny Weasley becomes her own character and is very intelligent and brave. The Weasley twins make progress with their novelties, developing such things as Skiving Snackboxes, which, until you eat the antidote, make you sick so that you can get out of class. Some of the different Snackbox items include Puking Pastilles, Fever Fudges, Blood Blisterpods, Fainting Fancies, and Nosebleed Nougats. They also invent nonedible things, such as the Vanishing Hat, which makes your head vanish when you put it on, and the Extendable Ear, which you can slip under doors to eavesdrop.

Also in the book, Sirius Black, who just recently escaped from Azkaban and hid in a cave for a year afterward, now has to voluntarily live in confinement; Harry's leadership extends beyond Ron and Hermione; and Rita Skeeter's quick-quotes quill is finally put to good use. Cornelius Fudge and Percy Weasley show their true colors, and Albus Dumbledore is more distant with Harry, never speaking to him or looking at him. Also, there is a “war of reputations,” which forces Harry to face the unreliability of the government of the magical world, because Fudge has convinced himself that Dumbledore is after his job and that Dumbledore is using Hogwarts to create an army to overthrow the Ministry. Fudge turns power-hungry himself and takes total control, manipulating the Wizard High Court to cast Dumbledore out of his seat on the court altogether and to make himself the chief, leaning on the *Daily Prophet* to ignore Dumbledore's claims, and taking control of



Hogwarts by manipulating the ministry to pass laws that allow him to do so.

I think that this is J.K. Rowling's greatest work so far. As you progress through the story, you come to realize, more and more, that it is like she is weaving a blanket. She is weaving this element in here, sewing this plot point on here, and dying this chapter with this challenge, and as she starts to complete her blanket, you start to see it all come together. And after reading the *Order of the Phoenix*, I think that you will agree that her blanket turned out just fine.



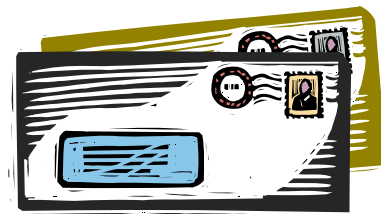
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**Emerson Smith resides in Emersonopolis, the ultimate Utopia. He has authored several witty and intelligent articles. He is handsome, rich, brilliant, and athletic. He also wrote the biographical note for this article. [In reality, Emerson Smith is an eleven-year-old, intelligent beyond his years, attending Drake Middle School in Auburn, Alabama. He is the son of Phi Kappa Phi member, Bret Smith. — Ed.]**

### *Disclaimer:*

This author does not claim (as if that weren't obvious) to have written, or have any hand in writing, the Harry Potter books, or to have had any hand in creating *Star Trek*, since it aired way before he was born.

# Letters to the Editor



## BALANCE AND CONTEXT: MAINTAINING MEDIA ETHICS

As a process-assurance director, my job is to ensure the accurate collection and reporting of facts. Errors and omissions disturb me, but I am even more offended by conscious efforts to distort the truth. That's why your recent article by Deni Elliott fell so far short of what it could have been.

In "Balance and Context: Maintaining Media Ethics" ["Professional Ethics," Spring 2003], Ms. Elliott went to significant lengths to chastise the American press, ostensibly because she feels they inadequately supported her views on our current administration. However, these sins of omission are nothing compared with the more blatant efforts of the liberal mainstream press to distort the facts. Where were the mentions of the mainstream media calling the results of the last presidential election before the polls had closed in Florida? This was irresponsible reporting at its absolute worst. Where was the mention of mainstream media parroting the story that George Bush lost the popular vote, when we all know that there is no such thing as a popular vote in our electoral system for the presidency?

There have been dozens, perhaps hundreds of statements happily reported by the major networks indicating that "people in the lowest income levels are cheated out of their fair share of the proposed tax cuts." The underreported reality is

that these people pay no income tax. Although one can find conservative bias in some stories, the mainstream media is absolutely rife with a more blatant and pernicious liberal slant.

Ms. Elliott picked a great topic. Clearly, the best reporting on controversial issues includes a real discourse, an active repartee between proponents on both sides. A little more balance in Ms. Elliott's own article would have been a very good thing.

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**John Thomasson, PhD  
Dayton, Ohio**

## COMBATING CANCER- DRUG RESISTANCE: THE CERAMIDE CONNECTION

I am writing about the article in the *Phi Kappa Phi Forum* regarding cancer-drug resistance ["Cancer Research," Winter 2003]. On page 24 in the paragraph concerning drugs that decrease GC production, Gregory Vogel refers to "the beta blocker verapamil." However, I wanted to inform you that verapamil is not a beta-blocker and, instead, is a calcium-channel blocker that produces its effects on the heart by blocking the transport of calcium into myocardial muscle cells, thus reducing excitability and contractility of the heart. I just wanted to let Mr. Vogel know so that he may correct this in the future.

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**Amy Hoffman  
Lock Haven, Pennsylvania**

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## twilight

*persiste* the bolivian poet reads *the fall of the evening persists* an ocher and lavender  
language distilled from desert evenings *crepusculo* echoes a sensuous bird in the  
smoky wood rafters *confundio* *I have confused you with the twilight* the translator says  
outside a stubborn glow slowly hauled out of the sky leaving the cool air a sheen like the  
skin of grape *crepusculo* acoustic guitar on the radio the road a seam a whisper over  
curving thighs a sudden veer escape of a fortunate doe *persiste* the drowsy town its  
dreaming tourists this cheap hotel its worn promises *confundio* blue light in the  
windows abandoned moon calling across an empty field *crepusculo* *sky of things and*  
*shadows* stars on your tongue *cielo de duendes* swallow me

MARK MOODY

Inspired by the poem "*Alquien Tendra Que Llamarse Crepusculo*" by Jaime Saenz  
("Someone Must Be Called Twilight" translated by Forrest Gander).

---

**Mark Moody began writing in 1998 in response to his first cancer diagnosis. He has participated in the Napa Valley Writers' Conference for the last four years, and his poems have appeared in *A&U Magazine*, *The James White Review*, and online in *Bent* ([www.bentvoices.org](http://www.bentvoices.org)). He lives in Baltimore.**

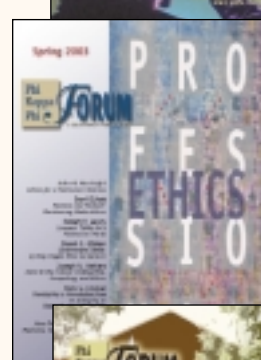
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