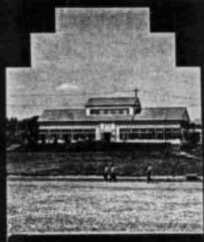


a clean, well-lighted place

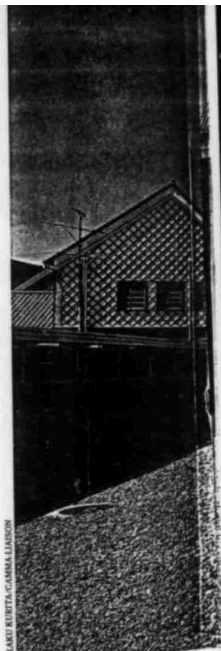
BY JON KRAKAUER



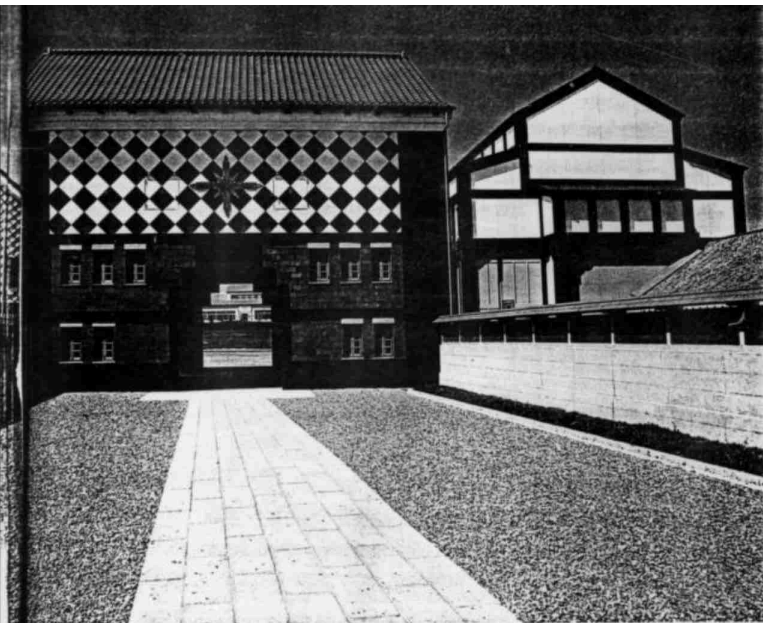
It is the kind of blustery March morning that feels about ten degrees colder than it actually is. A light drizzle is falling. The wind, sweeping in from across Puget Sound, turns the sea off Washington's Whidbey Island the color of lead. Christopher Alexander, iconoclastic architect of international repute, author of what some consider the most important ideas in architecture of the last century, is perched on a tree stump on a wooded hilltop, pondering the layout of a house that is to be built there. Yellow tape has been strung between poles stuck into the ground to form a rough, three-dimensional outline of the structure-to-be, and he is staring at this flimsy skeleton intently, trying to figure out where the kitchen doorway should be located.

Alexander is a large-framed man, with a workingman's broad hands and the face of a good-natured cherub; dressed as he is in a rumpled yellow shirt, stained corduroys, and a jacket lined with polyester fleece, he looks more like a cabdriver, say, or a hot-dog vendor than someone accustomed

Jon Krakauer is a freelance writer who lives in Seattle. His article on the Nature Conservancy appeared in the September issue of New Age Journal.



Over the ages gateways have served as passages to inner realms—in this case to Alexander's largest project so far, the new campus for the Eishin Gakuen, a combination high school and university west of Tokyo. As one approaches, the dining hall (left) is framed by the main gate (above) with its patterned plasterwork.



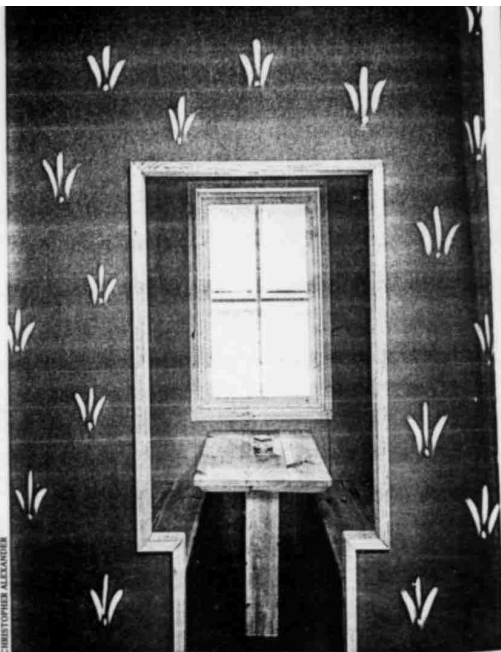
Christopher Alexander is shaking the foundations of modern architecture by insisting that form should follow feeling, not just function.

to the rarified aesthetic atmosphere of architecture's loftiest reaches. In fact, Alexander considers himself no mere architect, but the modern equivalent of a master builder, who is reintegrating the functions of architect and builder that, in his opinion, have become dangerously segregated in the present day.

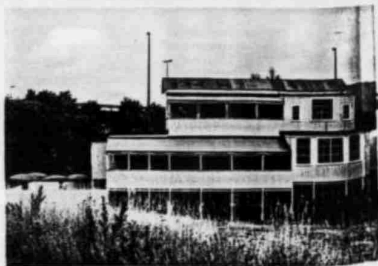
Other architects would determine the location of the kitchen doorway by sitting down at a drafting table with a pencil and paper. Alexander believes that to make a building right you must do a large part of the designing at the construction site itself, working out the details and continually modifying the design as the building is erected. He creates a building in the manner of a sculptor shaping a piece of clay: add something here, stand back and assess the effect, take a little off over there, keep fine-tuning the elements until the form feels just right. Guiding him is a body of generic—and generative—design rules he's derived from building forms over the ages.

For this particular project—a two-story house of eleven or twelve rooms and about three thousand square feet, planned for clients who will both work and reside here—Alexander and one of his associates first spent a few days just sitting at the site, trying to determine what physical configuration would make it come to life. The little clearing at the top of the island knoll, rising as if from a sacred grove, was the obvious spot; but after spending some time there, Alexander says he realized that the clearing had to be preserved intact, with the building curling around it at the edge of the forest itself. Later, with the building's basic volume and placement in mind, Alexander spent a week on the site with his clients, staking out the building and brainstorming about its interior. At one point, when the exact configuration of kitchen, living room, and dining room was at an impasse, Alexander asked his clients to close their eyes and describe exactly what they could see upon entering the house: "very clearly and beautifully," he says, the husband began to describe "a long, endless chain down to a particular spot in the forest, with the rooms like beads on a necklace."

That's the feel it will have, enhanced by the "patterns" that Alexander feels are universal, as well as by some



Large scale, small scale—
it is the interplay
that makes architecture
humanly comfortable. In
the dining nook (above)
for the Linz Cafe he built
in 1980 (below), as well as
in the columned arcades
of the Eishin Gakuen
(right) Alexander designed
intimate spaces to
contrast with larger, more
open ones.

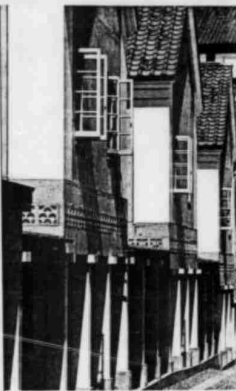


CHRISTOPHER ALEXANDER

unusual construction techniques of his own. The master bedroom will have an eastern exposure—because for centuries the gradually building light of sunrise has been the most natural and comfortable way to wake. Although the house will be sixty feet long, it will be only about sixteen or seventeen feet wide, partly because of the site, but also because the longer and narrower a building is the more beautiful the light that suffuses it. On principle, there will be light entering from two sides of every room. Ceiling heights will be varied. And the accoutrements that personalize an interior—the window seats and benches, the alcoves, shelving, and such—will be added not as final touches but will be part of the structure from the beginning, so that the building evolves as much from the inside out as vice versa. "Like a cocoon," Alexander says. All through the process, as the building progresses and changes, Alexander will be working not from detailed blueprints, but from sketches and full-scale mock-ups of critical parts of the structure, made out of cardboard, scrap lumber, tree limbs, pieces of string.

ALEXANDER'S METHODS are not only unusual; they are seditious. He believes that the architecture-construction establishment is riddled with conceptual dry rot, that it should be razed and completely rebuilt. For the past fifty years, he declares flatly, "architects have been screwing up the world." His colleagues, he says, have abandoned what should be at the core of all architecture—the creation of buildings that not only provide shelter but strike a soothing chord deep in the psyche—in favor of "concept-ridden structures that seize your mind, but which lack feeling altogether."

Of course, Alexander is not alone in his dislike of the austere boxes of glass, steel, and concrete that have been springing up across the land since the '30s, when Ludwig Mies van der Rohe's aphorism "less is more" was embraced as unassailable architectural scripture. But most other critics of what has come to be known as Modern architecture—the so-called Post-Modernists, the Whites, the Los Angeles Silvers—believe that there is nothing wrong with the state of architecture that can't be set right with a few innovative strokes of a mechani-



KAKU KURITA/GAMMA-LIAISON

Alexander believes
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cal pencil, backed up with some fancy new language. The glass boxes can be given curved walls, perhaps, or "historically evocative ornamentation," or striking colors, or "highly articulated" shapes; they can be adorned with "ironic references" to classical architectural forms. Alexander, however, regards such efforts as cosmetic tinkering that in no way addresses what's really wrong with our buildings. Crowning an imposing 648-foot, granite skyscraper like Manhattan's AT&T Building with a pediment the shape of a gargantuan Chippendale highboy might be a wry architectural statement when the building is viewed from afar, he argues, but it does not fundamentally alter

the fact that, for those who must spend their days inside it, the building is still an imposing 648-foot box.

For Alexander, the answer does not lie in ever more clever shapes contrived at the drafting table, or in new architectural fashions. "What we are really talking about is changing the processes by which buildings are made—not the 'things' but the processes by which they are conceived and funded and regulated and constructed." What is required, he believes, is nothing less than "a shattering revision of our attitude to architecture and planning."

Alexander has dedicated much of the past quarter-century to formulating the precise form that these shattering revisions should take. His conclusions have been set forth in a body of work published by the Oxford University Press: *The Oregon Experiment* (1975), *A Pattern Language* (1977), *The Timeless Way of Building* (1979), *The Linz Cafe* (1982), and *The Production of Houses*, released this year. These books have won Alexander a following both within his profession and outside it. His ideas are well represented in the curriculum at three important United States architecture schools—the University of Southern California, the University of California at Berkeley, and the University of Oregon—and there are bastions of young Alexander disciples in such cities as Bern, Tokyo, and Hanover, West Germany. He and his associates at the Center for Environmental Structure, the think tank/architectural firm/construction company that Alexander founded in Berkeley in 1967, have applied the ideas to more than sixty projects since the early '70s. Largest among them is a ten-million-dollar campus just built for the Eishin Gakuen, a university-affiliated high school outside Tokyo.

Among his prominent supporters is Sim Van de Ryn, a former California state architect who has designed work for intentional communities such as Findhorn in Scotland; he calls the ideas in Alexander's book *A Pattern Language* "the most important contribution to thinking in design and architecture in this century."

But Alexander's messianic tone and utterly uncompromising stance have ranked not a few in his profession. For Alexander, understand, does not say his methods are one way to create good buildings; he insists, without

equivocation, that "there is no other way in which a building or town which lives can possibly be made."

AT THE CORE of Alexander's philosophy is the belief that architecture must not be approached as an abstract art form, but as a powerful social instrument—indeed, as the very framework of society. It is the architect's duty, therefore, to create unselfconsciously beautiful structures that bring harmony and order to the world. That not all architects share his ideas about the role of architecture or his definition of beauty—and some intentionally erect disharmonious structures on the landscape—makes Alexander "incredibly angry." "I find that incomprehensible," he says. "I find it irresponsible. I find it nutty."

Peter Eisenman is an influential New York architect whose ideas about architecture run 180 degrees counter to Alexander's. He designs extremely abstract buildings that have been called "explorations into pure form"—stark, complex structures that are intentionally "incongruent" and "antihumanist" to reflect the charged anxiety of the nuclear age. In 1983, in the course of a public debate at Harvard, Alexander told Eisenman, "People who believe as you do are really f...g up the whole profession of architecture right now, by propagating these beliefs."

Alexander feels strongly that real, honest-to-god beauty in a building—the kind of architecture that speaks to the soul—is not some slippery value that changes according to personal preference or the ebb and flow of fashion, but is a hard-and-fast thing. "The fact is," Alexander says, "that the difference between a good building and a bad building, between a good town and a bad town, is an objective matter. It is the difference between health and sickness, wholeness and dividedness, self-maintenance and self-destruction."

Good buildings, Alexander believes, "are alive." They have a "timeless quality, a sleepy awkward grace." When asked to cite examples, Alexander will mention Gothic churches, the old farmhouses of Norway and Colonial New England, the hill villages of the European Alps, the mud huts of Central Africa, the temples of Japan.

Not coincidentally, architects had little or nothing to do with the creation of the centuries-old structures Alexander

admires so much. Those buildings were shaped by masons and carpenters according to a repertoire of details that had been worked out, refined, and passed along over the course of many generations as a way to solve recurring design problems. Alexander calls these repeatedly used solutions "patterns"; a collection of individual patterns large enough to create entire buildings and towns becomes a "pattern language."

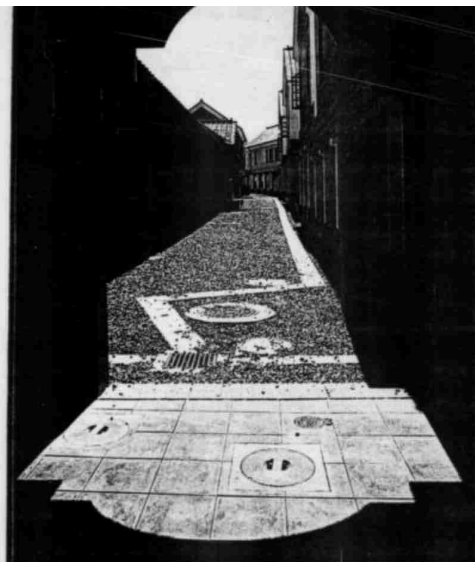
In a village in the Swiss Alps, for example, the solution to the design problem, What should the top of a building look like? might be a pattern consisting of a steeply pitched roof with large eaves, which would serve to protect the house from large accumulations of snow and heavy mountain rains. Over the ages, the theory goes, such a pattern becomes rooted in the psyche in an almost archetypal way, so that an Alpine house without large eaves ends up failing not only on a practical level, it just doesn't feel right either.

Although present-day architecture also is created by pattern languages, according to Alexander, those of this century have broken down. The language of the Modern movement, for example, is an amalgamation of patterns such as flat roofs without eaves; no colors except for white, beige, gray, and black; no decoration. These patterns have become so contrived and artificial, "so brutal, and so fragmented, that most people no longer have any language to speak of at all—and what they do have is not based on human or natural considerations."



JON KRKAUER

To right what's wrong with our architecture, we should go back to building based on a timeless, universally shared aesthetic.



KARL KURTZ/GAMMA LIAISON

"There's no substitute for being out on the site with your own eyes and hands—every day," says Alexander (opposite page, on right), who often is joined by his longtime associate Gary Black (left). This is how both the Center for Environmental Structure's new offices in Martinez, California (left), and the Eshin Gokuen (above) evolved.



JON KRKAUER

To right what's wrong with our architecture, Alexander believes we should simply ignore all the clever new ideas of our architects—if not do away with the profession altogether—and go back to building from a simple, sensible pattern language based on a timeless, universally shared aesthetic. By 1977 Alexander had painstakingly compiled just such an animal, described in great detail in his book *A Pattern Language*.

A Pattern Language is a remarkable book that seeks not merely to explain good designs, but to generate them—it is a sort of architectural cookbook intended to demystify the design process and allow any layperson or group of persons to design any part of the environment for themselves. It applies equally to the design of houses, public buildings, neighborhoods, streets, gar-

dens, individual window seats. The book consists of 253 patterns, each outlining "a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem in such a way that you can use this solution a million times over without ever doing it the same way twice."

The book covers everything from the layout of entire cities to the "correct" dimensions for the trim boards that surround window openings. It is organized so that each pattern leads logically to the next, guiding ordinary folk through the design process step-by-step. A sampler of what is advocated: communities and towns should be designed and built in a piecemeal, organic fashion rather than by sweeping "master plans" and massive projects; buildings should be no higher than four stories; no more than 9 percent of the land should be devoted to parking spaces; buildings should be long and thin, with the most important rooms placed along the south side, and the rooms in which people sleep placed to the east; every room should have access to natural light on at least two sides; common rooms should have intimate alcoves placed at their edges; ceiling heights should be varied throughout a building; windows should be made of many small panes instead of large sheets of plate glass (if there is a beautiful view, it shouldn't be spoiled by large windows that gaze incessantly at it).

However, these patterns are not just a reflection of one man's architectural taste: Alexander arrived at them after more than eight years of objective experimentation and study, conducted both at Harvard's Center for Cognitive Studies and at his Center for Environmental Structure. Thus, each pattern, Alexander argues, may be looked upon as scientific hypothesis: all are tentative and free to evolve with new experience and observation. But he is confident that "many of the patterns here are archetypal—so deeply rooted in the nature of things that it seems likely they will be a part of human nature and human action as much in five hundred years as they are today."

According to Stephen Grabow, an architectural scholar from the University of Kansas who has written a biography of Alexander, architectural

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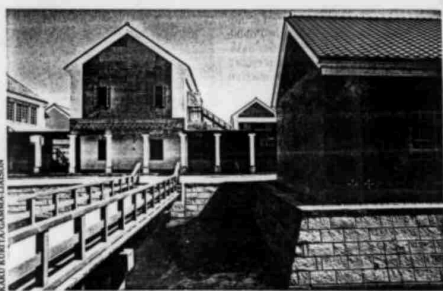
ALEXANDER (continued from page 45)

history records few, if any, instances of architects treating the question of design as a scientific problem. However, the strong empirical slant of *A Pattern Language*—Alexander's contention that good designs come from a set of objective rules and not the creative brilliance of individual designers—created quite a stir in architectural circles, no doubt partly because it poses a threat to business as usual. Perhaps the most often heard criticism of the book is that its 253 specific rules will produce buildings that look monotonously similar. To this, Alexander replies, "You could say the same thing about the human genetic code or the grammatical rules that operate on a language."

THERE ARE THOSE who might refer to Alexander's ideas in a not entirely kind way as being quintessentially Californian. Alexander has in fact lived in Berkeley since 1963, but most of the twenty-six years of his life before that were spent in Europe, and his thinking probably reflects the values of the Old World as much as it reflects the New World ideals of California.

Born in Vienna in 1936, Alexander was the only child of two classical archaeologists. As a child, he was something of a prodigy in math and science; he won top scholarships first to Oundle, the prestigious, science-oriented British prep school, then to Cambridge University. In 1953, shortly before embarking on his university studies, he happened to see an exhibit of architectural photographs that excited him so much that he decided then and there to become an architect. At the urging of his father, who was "horrified" at that prospect, Alexander studied math as an undergraduate, but after taking his degree he entered the university's architecture school.

His experience there was frustrating in the extreme. To Alexander's scientifically inclined mind, in order to carry on any sort of intelligent discourse about architecture one first had to be able to evaluate it in an objective way. He wanted to get right to the nub of "what made things beautiful," but found that nobody



When teachers at the Eishin Gakuen said they'd like to be near water, Alexander provided a lake.

seemed interested in exploring matters at that murky depth. So after two years he departed for the United States to continue his dogged pursuit of the essence of architectural beauty at Harvard. His doctoral thesis there was a now well-known work titled "Notes on the Synthesis of Form," an attempt to empirically determine exactly what was going on in a good building design. Pointedly, the examples of good design he chose to illustrate his thesis were not drawn from the creations of the hottest architects of the day—Mies van der Rohe, Charles-Edouard Le Corbusier, Walter Gropius, or even Frank Lloyd Wright—but from the traditional structures of preindustrial societies.

After Harvard, Alexander went to India for a year to take a firsthand look at preindustrial architecture and the forces that shape it. He built his first building there, a small school, and then in 1963 returned to the United States to take a teaching position with the architecture school at the University of California at Berkeley, a job he still holds today.

AT THIS POINT, Alexander is best known as an architectural theorist, as a thinker rather than a doer. This, he has said, "makes me immensely sad, because it is so far from the truth and because my heart is so much in the actual task of building." Although Alexander does indeed spend many hours not taken up by teaching in a dark and cluttered basement office, hunched over a Radio Shack

computer turning his ideas into words, he does turn those ideas into buildings. It is as a licensed general contractor that he, along with his crew at the Center for Environmental Structure, has created his sixty-plus buildings—among them the center's own new offices in Martinez, California.

The construction-based line of criticism against Alexander's "timeless way of building" is that designing a structure on site while it is being built is much less efficient—and inevitably more expensive—than giving a construction crew a detailed, finished set of blueprints and telling them to go at it. Alexander denies this. By eliminating much of the drafting work that goes into the blueprints, he argues, he is able to devote more time, and allocate more money, to the construction process itself.

Alexander's claim that he can design buildings that are both superior to and competitively priced with conventionally produced buildings is supported by a low-cost housing project in Mexicali, Mexico, that he designed and built in 1975 along with a group of Berkeley students and the families who were to live in the houses. Each of the thirty houses were built for about \$3,500, approximately half the cost of comparable buildings in Mexico at the time. According to the architecture critic Martin Filler, "The results at Mexicali are extremely simple in appearance, but have a special quality rarely present in housing for the poor... These houses have been made with real concern for how good

these rooms will be to live in and how they will nurture a sense of individuality, family, and community."

Alexander tries to keep costs down by cutting corners in materials and labor wherever appearance or quality is not crucial and by coming up with some very innovative construction techniques. He devises new ways of building, he says, by "deliberately putting myself out on a limb so that the pressure of having to get off that limb forces a solution." This also means that Alexander's clients have to place a great deal of trust in him.

Alexander's way of building does away with a valuable system of checks and balances that exists in the conventional building process: In the typical balance of power between architect and contractor, the architect makes sure the contractor doesn't try to pull any fast ones, and the contractor keeps an eye out for potential weak points—a roof design, say, that is likely to develop leaks over time—in the architect's plans.

A few years ago the American Institute of Architects forbade its members from becoming general contractors, believing that to wear both hats on the same project constituted a serious conflict of interest. Yet it is one of the most basic tenets of Alexander's methodology that the architect *must* wear both hats, that the benefits of having the architect serve as the builder outweigh the risk that the client will be taken advantage of.

In 1982 Alexander and his associate Gary Black designed and built a home in Albany, California, for a young couple named André and Anna Sala and their two children. Anna confirms that "one of the things about Chris is that you have a certain amount of blind faith, and that is very difficult. You're trusting him with your life fortune, with all your dreams." In fact the Salas' home, when it was finished, surpassed their expectations. By almost any measure the house possesses rare beauty. "Building this house," says André, "is the single most important thing I've done in my life."

NOT ALL OF Alexander's endeavors have turned out so happily, however. Alexander has designed buildings only to have the projects called off at the last minute when clients got cold feet about his unusual

methods. That, Alexander believes, is to be expected. "When, in the early stages of a project, the thing starts to have qualities that aren't exactly like what people are used to from working with conventional architects and contractors, it is easy for them to freak out," he says. His most dissatisfied client, Alexander openly volunteers, is a developer named Richard Erganian.

Impressed by Alexander's ideas about sensitive, human-scale building, Erganian initially hired him to build the first structure of a planned \$400,000 shopping plaza in Fresno, California: a giant redwood trellis to shade an open-air farmer's market. Erganian paid the Center for Environmental Structure more than \$4,000 in design and engineering fees, and another \$42,500 to erect the trellis—only to begin souring on Alexander, he says, because of the "loose ends" he felt the architect left him to take care of and because a concrete floor, which cost an additional \$12,000, was not finished to the standards he had expected.

Alexander says he had cautioned Erganian beforehand that "we are going to build you a very beautiful building for the price of a bland, unremarkable two-by-four construction, but you have to realize that in order to do it, you have to give up certain things. Some things are going to be finished a little bit rougher than if your average Fresno contractor had done them."

Cosmetic imperfections aside, the trellis is a handsome structure—a fact that Erganian acknowledges. And Alexander went on to design the rest of the shopping plaza. Concerned that any loose ends that might develop on this much larger project could prove prohibitively expensive, however, Erganian showed Alexander's preliminary plans to a contractor he had worked with before, to corroborate Alexander's estimates—only to find that it was impossible for a conventional contractor even to submit a bid from the sketchy plans that are part of Alexander's unorthodox design methods. When Alexander wanted to begin construction before his plans were complete enough to receive the building department's final approval, Erganian says, he began to "put the skids on" as a client. Alexander has yet to finish the plans and secure a building permit, according to Erganian; Alexander says he is unwilling to go on until he has a

building contract for the project from the developer. As things stand now, it seems doubtful that the shopping center—plans for which have cost Erganian, all told, close to \$50,000—will ever be built, although Alexander says he is still hoping to reestablish their relationship.

Alexander insists that if Erganian had only been able to suspend his doubts, the project would have turned out beautifully. That has indeed been the case with Alexander's most impressive accomplishment to date, the Eishin Gakuen campus. The first thirty buildings of the \$10 million project were completed within 10 percent of budget and on a very tight schedule, and show impeccable workmanship (thanks, in no small part, to the skill of Japanese craftspeople). But successful though it was, this project, too, had its rocky moments. Apparently Alexander's methods were so confounding and threatening to standard practices that midway through the job, one of the Japanese construction companies involved in the project offered the client \$80,000 in cash if he would fire Alexander. The manager of the school, Hisae Hosoi, turned down the money, kept Alexander on, and reports that the faculty and students are currently "very happy every day" with their new campus.

The title Alexander has given to the book he is writing about the creation of the Eishin Gakuen is *Battle: The Story of a Historic Clash between World System A and World System B*. For Alexander, it seems, getting his ideas accepted has always been something of a battle, and he expects that will continue to be the case for some time to come. But, he says with customary assurance, "I am quite certain that by the end of this century and in the next, when these facts about buildings are no longer considered to be idiosyncracies of any one person's theory but are indeed understood as the most fundamental facts about space, then all buildings will once more take their place in the three-thousand-year-old class of buildings that make sense. And at that point in the future," he goes on, "the peculiar shape of mid-twentieth-century buildings will in retrospect be seen for what it was—a temporary distortion, caused by willful refusal to grasp facts which are timeless."