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Imagoe

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Christopher Alexander

THE MAKING OF A HOUSE

BACKSTAGE
AT THE
BIG SPIN



Plus, the Fine Art of Papermaking, Weekend Murders and Help for Lost Drivers.

COMING HOME

The Making of a House

BY NORA GALLAGHER

T

HE PIECE OF LAND IS A NARROW slope in Albany, ending in a thatch of eucalyptus and a wide view of the Golden Gate Bridge,

bordering a big piece of grassland empty so long people think of it as a park. When Christopher Alexander began to design the house that now rests there, he made a mock table out of plywood and crates and placed it, first parallel to the Bay, then perpendicular.

The owners of the land, Anna and Andre Sala, went to see Alexander on a winter afternoon five years ago. They had seen other architects that fall, had visited hushed offices in large buildings, peered down at tiny houses made of balsa wood stuck into modeling clay and been asked what sort of music they liked—classical? When they got to the place where they were to meet Alexander, they found a big faded pinkish house on one of the secret lanes in the Berkeley hills. They rang the bell.

The man who came to the door was tall; he had straight, dark hair cut in an English schoolboy's bowl. His face was wide. He had a broad nose, a big frame and a handshake that suggested the vigorous pump of a determined eight-year-old. He spoke with an English accent. They were led to his living room, which had what appeared to be fragments of oriental carpets mounted on fabric and hung on the walls. Anna Sala remembers that on the floor was a brightly painted music box in the shape of a carousel, a piano hugged a corner, a woman in yellow and blue framed in gold hung over a bookcase; she bore the signature, "Matisse, 70/100." They drank wine and listened to music.

Alexander walked over to a shelf and took from a row of hardbacks, all of which had matching pale yellow dust jackets and bore the mark of the Oxford University Press, a book entitled *The Linz Cafe*. In it were photographs of a coffee house he had designed and built in Linz, Austria. He showed the Salas no portfolio, no models; he told them he had yet to build a custom house in the United States. In the contract he would give them, he said, each part of the house, from the foundation to the trim, would be given a dollar value and to that value, Alexander and his partner, Gary Black, would hold. He and Black would not only design the house, he said, they would build it. You cannot, he declared emphatically, design a house on paper alone.

The Salas made the decision before getting into the car.

Nora Gallagher's work has appeared in California magazine, The New York Times Magazine and Playboy.

It was the "worst" presentation they had seen, they laughed, and Christopher Alexander was the man they wanted to build their house.

If you ask them what it was that convinced them to hire Alexander, they say it was partly the feeling given to them by *The Linz Cafe*. They remember a picture of a booth in the cafe, framed in light wood, with *fleurs de lys* scattered around its doorway; within it a single window divided into four panes, built-in benches, a plain wood table—a peasant's table, made for sitting beside, spilling on, talking over, your feet able to touch another's underneath.

They didn't know—Alexander is modest—that all of the pale yellow books were written by him—*The Oregon Experiment* (1975), *A Pattern Language* (1977), *The Timeless Way of Building* (1979)—and that his ideas are installed in major architecture schools across the United States. In some circles, the name Christopher Alexander produces voltage. Sim Van der Ryn, who was California state architect under Jerry Brown, called *A Pattern Language* "one of the most important contributions to thinking in design and architecture in this century."

But . . . Alexander had yet to build a custom house in the United States. The university in Oregon, the clinic in Modesto, the cafe in Austria, but not a house in his own backyard. His ideas are—or have the appearance of being—so unorthodox that it required two people who were willing to take a risk to make that first house happen.

"When we walked away, we realized we really had no choice," said Anna. "There was absolutely no choice at all because there was no way we could work with anyone else."

In the year ahead, Anna had moments of regret. She remembers how she stood at the window of her mother's house, next door to the land, watching Alexander and Black on the third floor of her framed-in house struggle with pieces of cardboard and yellow strapping tape, one of them standing on an old bucket.

They were trying to place the window in the master bedroom. I'm ready to jump out of this window, she thought to herself, just get it done.

She walked into the framed-in kitchen one day to find Alexander on his knees in the midst of black and green construction paper—he was considering colors, he told her, for the terrazzo floor. "Those colors are horrible," she cried, imagining her kitchen reduced to a smoking black and green ruin. But Andre Sala had an undying faith in this architect. He came to believe that building this house with Alexander was the most important thing he had ever done in his life.

From the start, a certain faith was required. Early on, Alexander asked them what they wanted in their house. They replied, by rote, "a living room, a dining room. . . ." To their dismay, Alexander said he didn't know what they meant. Could they go home and move some furniture around in their apartment or do whatever they needed to do to give him a better sense of what "living room, dining room" was—to them? The couple retired. When they came back, Andre said, "We have just realized that the whole structure of our lives, our notions about life, are being put on the line." He confessed that they had no idea what "living

H is house, their

house. Architect-builder Alexander and the Albany house he made for Anna and Andre Sala.

George Steinmetz



room, dining room” meant at all.

“OK,” said Alexander, “Let’s start with no assumptions. Simply tell me about the most beautiful and comfortable room you can remember. Close your eyes. Once you have gotten clear about where the place is and you have walked around in it for a while, start telling me.”

Andre shut his eyes. Quietly and clearly, he described a kitchen in a farmhouse he had often visited as a child in France: a fireplace with a long table in front of it, a garden outside and a door leading into the kitchen from the garden.

This is the room that now exists on the slope near the eucalyptus trees. It is a long room, big enough to be living room, dining room and kitchen; it has a small pantry and a booth like those in the cafe. It has a fireplace with a long wood table in front of it and an arched window. It is a room that puts a person all at once at rest.

“That’s the first thing that sounds authentic,” said Alexander. “Let’s assume that that’s what you’re going to have. What we will do next is try to imagine how such a room might exist on the site.”

CHRISTOPHER ALEXANDER WAS BORN IN Vienna in 1936, the only child of two

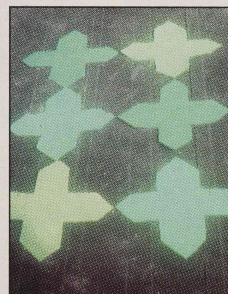
classical archeologists. His parents, forced by the war to move to England two years after Alexander’s birth, became schoolmasters. A prodigy in mathematics, he went first to Oundle, a science-oriented prep school in England and then to Cambridge University. To please his father, he completed an undergraduate degree in math, but his heart was already in architecture. After finishing the math degree, he took another, this one in architecture. Unsatisfied with what he had learned, or rather, not learned, he went to Harvard.

“My only purpose really was to try to figure out what was going on in architecture,” he said, at the round table in his living room, as he cut balsa wood for a model. “Which had never been articulated; in fact, had never been mentioned while I was in school in England. I began to work in a very formal way, almost as a mathematical problem. It seemed to me that a building had to do all kinds of stuff. I was trying to grapple with all the things it had to do. There were hundreds of things a building had to do, even a small building, from being able to have a kitchen where it was nice to cut up onions to the fact that the rain shouldn’t be dripping on you while you stood on the front porch.”

He became fascinated by the possible



A garden corner at the Salas’ (left), and (below) the evolution of the floor-tile hues—“horrible” green and black in one experiment and the version that finally seemed comfortable.



relationships between the different things a building had to do. He was already thinking of a building as something that did, not something that sat. Using mathematics and a computer, he developed a procedure that took the web of things—cutting up onions, shelter from rain, waking to sunlight—and collected them into subsystems, “chewable pieces,” things that belonged together. “And the interesting thing was, the subsystems were often quite unexpected.”

(Years later, using this method Alexander discovered how the problem of rape in BART stations is related to the problem of overcrowding in the middle of a train, a connection that is not immediately recognizable. It turned out that the subsystem of which the two were a part was the concentration of people in a station. Where there are too few people, rape can occur; where there are too many, you have a crowd stuffing itself into a train. Thus, you must design a station in such a way as to get the best chance of evenly distributed numbers of people everywhere in the station at all times.)

He finished a thesis about his method, “Notes on the Synthesis of Form,” in 1962, went to India, built a small school and returned to the United States in the fall to accept a teaching job with the department of architecture at the University of California in Berkeley, a position he still holds. As he taught, he refined his thinking. He realized that he didn’t have to spend so much expensive effort on each and every building, but that he could develop a repertoire of relationships that would apply to similar



The room in Andre's mind (left) and (below) two tries at the booth opening. The final choice echoes the design at Alexander's Linz Cafe.



buildings. In 1977 he published this grammar of architecture, *A Pattern Language*.

The book is a hefty thousand pages, divided into simple chapters, each one only a few pages long. Belying its extremely abstract and intellectual origin, the book feels commonsensical and spontaneous:

Chapter 239: Small Panes: "When plate glass windows became possible, people thought that they would put us more directly in touch with nature. In fact, they do the opposite.

"They alienate us from the view. The smaller the windows are, and the smaller the panes are, the more intensely windows help connect us with what is on the other side...."

Chapter 151: Small Meeting Rooms: "The larger meetings are, the less people get out of them. But institutions often put their money and attention into large meeting rooms and lecture halls...."

"Therefore: Make at least 70 percent of all meeting rooms really small, for twelve people or less. Locate them in the most public parts of the building, evenly scattered among the workplaces...."

And so on, for 253 chapters, each one describing a problem found in architecture and then proposing a solution. It has been compared to a recipe book, a sort of *Joy of Cooking* of architecture, and that is a very good analogy. Like the Rombauers, who set down in print the things that women had passed to each other over backyard fences and kitchen sinks, Alexander came to realize that all he was doing was re-creating for our

time a language that had been present in the world for thousands of years.

"Even as I was writing this very mathematical book ["The Synthesis of Form"], my point of departure was: How come the architecture of traditional societies is so well adapted? There must be a mechanism that permits this, I thought. I realized finally that it was by having a repertoire of these things that traditional society was able to do what it did. Pattern languages are present in all traditional societies."

South Seas islanders, for example, have a song which describes the whole process of building a house, within it a series of very specific do's and don'ts. Eighteenth century English carpenters carried building manuals. The Japanese house, with its sliding walls and empty, serene spaces, was invented by Zen priests in the fifth century.

"I have tended, as time goes by, to get more and more respect for the explicitness of these traditional craftsmen," said Alexander. "The whole idea of Rousseau's noble savage sort of dumbly doing things, and look how beautiful it all turned out, is nonsense. Nothing I've found whatsoever confirms that. The craftsmen of just about any society of the world have been incredibly conscious of what they're doing, far more conscious than we are."

Shortly after they agreed to work together, Alexander gave Andre and Anna a copy of *A Pattern Language* and they took it home to read.

TO BUILD A HOUSE CLOSE TO THE SIZE ANNA

and Andre wanted and for the money they had, Alexander and Black decided to build a tower, its advantage over other types of buildings being a relatively small and therefore less costly foundation and roof, a feeling of size, and privacy bought by the separation between floors.

The tower would have three levels, the farmhouse kitchen on the bottom; the children's bedroom, a bath and laundry on the second and the master bedroom—with room for two small studies—on the third floor—1,150 square feet. Outside, a walled, south-facing patio would lead to a garden, a circle of grass with a low wall around it, suggesting a rounded champagne glass.

Not everything of what would finally be the house was known before they started. This was deliberate. The overall house, room by room, staircase by staircase, was planned and blueprinted just like any house. They knew how the roof and floors were to be constructed, how the beams were to be pinned together, where the plumbing would go, the wiring and the guts of the house. They decided to use an inexpensive and energy-efficient method of construction—a wood shell covered in wire mesh and then enclosed in a two-inch concrete shell.

One of the first things they did, before completing the blueprint, was to go to the site and decide which way the kitchen would lie on the lot. Andre Sala, Gary Black and Alexander stood on the site and thought about whether they wanted the kitchen's longest side to run parallel to the Bay or perpendicular to it. In order to more easily "see" what the kitchen would look like, they built a mock table using a piece of plywood and crates. They moved the table around. The position of the table helped them to imagine the kitchen, and to find where the fireplace would go, because the table and the hearth were inextricably bound together in Andre's mind. They finally decided to make the kitchen run perpendicular to the Bay; the table would be at one end, also perpendicular to the water, with the fireplace behind it, facing south.

As they worked at the site, before starting the house itself, they tested other parts of the design. One day, for example, Alexander and Black took two-by-fours the height of the house and stood where the small patio outside the kitchen door would be. They were worried that the three-story unbroken face of the house might overwhelm the patio. As they held the two-by-fours, they talked together and decided to set back the third story of the house two feet. Finally, just a few days before they poured the foundation they decided to add six inches to it, because what was called for in the blueprints suddenly seemed too small.

They did not know where, precisely, each window would go and what its shape would be. They did not know the exact configuration of the master bedroom or how exactly



The children's bedroom (left), and (below) a styrofoam and plywood bracket experiment and the final, poured concrete version that holds up the second-story bay.



chief among them to make people feel either fragmented or whole.

It was this process that Alexander was going through when he knelt on the floor with the construction paper in the horrible blacks and greens. Originally, he'd had in mind red, blue and yellow. But once the slab for the floor was poured and the framing was up and he had a sense of the light in the room, then gray, black and pale green were the colors he felt were most harmonious with that room. He was as surprised by them as was Anna.

"A great deal of time one is surprised by what the thing tells you to do," he said. "It has very little to do with what you would like to do. The question of what the actual situation calls for in the way of color is different from the question of what colors you like."

Once again, Alexander found that his discovery was not new. "They did all of this in the past," he said excitedly. "The form of the experiments, I'm sure they varied, but there is no question that this was going on. The cathedral in Florence was started in the thirteenth century and finished in the fifteenth, for instance. It has a series of round windows on the exterior of the nave. I don't think there's another example of a church with those windows."

"The city of Florence discussed those windows for twenty years. There are records of some of the things they tried. Everything under the sun. The round window thing was very odd. It was odd at the time just as it is odd to us. It may have been a little like an act of desperation, the way we arrived at the platform raising under the bedroom window. You try these gothic arches, and they're getting passe anyway. You try colonnades, you try square windows. None of it seems to be making this wonderful church better. Finally somebody says, 'Look, this is nuts, but I'm going to stick some circles up there. Let's have a look at it.' The dome, every part was discussed and looked at this way. It's like the whole city of San Francisco taking twenty years to figure out what to do with the ground floor of the Transamerica building in order for the city to feel wholesome."

But people are different, I say to him: One will have one thing that makes her feel wholesome, while another will choose something else.

"I say—no," he replied. "The astonishing thing is that this is not true. The objective conditions under which people feel wholesome are the same for all people. I think this is one of the most important discoveries I've made in my work. It's a tremendous rock to build on. All you have to ask yourself is: In all the variations I can think of, which is the one that makes me feel most wholesome, most whole in myself? Don't even ask questions like, 'Do I like it?' This question will finally do the trick. If you keep asking this question

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they were going to build the bridge from the street to the entry. How to do these things, as well as hundreds of other details, emerged as the house was under construction. They were deliberately left unplanned, phantoms on the blueprints, because both men knew from study and experience that you couldn't make things right just by drawing them. You had to try out shapes, sizes and positions on the site, using cardboard, buckets, pieces of plywood, string and two-by-fours, whatever was at hand. You had to experiment to determine how each thing can be made so that it is adapted to the rest.

This process went on throughout the building of the house. When they got to the master bedroom, they hit the biggest trouble they had. Anna and Andre had asked for "a marriage bed" right out of *A Pattern Language*—"a special bed, an intimate anchor point for their lives; slightly enclosed, with a low ceiling or a canopy, with the room shaped to it. . . ." The bed would be on the north side, with a window facing the grass-land park. On the opposite wall, to the south, there would be another window, to let the sun in. But this window faced the house belonging to Anna's mother. A mistake in the placement of that window could result in a couple's nightmare, the mother-in-law's windows staring straight into the marriage bed.

It took days, as Anna would attest. Each time they tried for a position, a size and a shape, using large pieces of cardboard and

strapping tape, the window was either too low—resulting in the nightmare—or too high, so if you sat by it you couldn't see out. In a final act of desperation the two men decided to raise the floor on the side of the room under the window. They tested their idea by putting a piece of plywood up on blocks, climbing on it, and then placing the window. By raising the floor, they raised the sill of the window just enough to provide privacy for the bed without losing the ability to look out when you sat beneath it.

Once they had the window in the right place, they had to decide what it would actually look like. Alexander remembers using at least five different pieces of cardboard before he got the width of each section of the window down. Even the final window was cut twice, before it had the right curves in its three arches. What Alexander was reaching toward was not an aesthetic; he was looking for what would make the spot under the window feel, as he puts it, "centered."

This is another Alexander discovery, the underpinning, finally, to all of his work. The placement of a window, for example, is not a purely functional matter; it is not only for privacy or for light. If it is placed correctly, it will make the people inside a room feel "wholesome," Alexander believes. If it is not, they will feel itchy, and they won't know why. The same goes for the color of tiles on a floor, the placement of a fireplace, the entry to a house. A building can do a lot of things,

ALEXANDER

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and you do the thing that comes closest to that, then you end up with a building that makes you feel whole and wholesome. Which is what," he said, sitting in the garden of the Sala house, "you experience here."

The house was completed three years ago in June. The house itself, plus the patio and the walled garden cost \$103,000. It was two and a half months behind schedule because they ran into problems with the exterior casing of concrete. ("We screwed up," Alexander said.) Alexander and Black absorbed the cost of the delay and took it out of their overhead, which still left, they point out, a healthy profit. "It's important that someone could read this and think, 'Well, my God, if those guys had the time and money, of course you can make something different. And it will cost the earth,'" Alexander said. "This building was delivered on budget to the dollar. It's crucial to understand this, otherwise it really is architecture for the idle rich."

Part of the reason for the low cost of the building, despite the amount of care that

went into its construction, is that Alexander and Black use a variety of building materials and methods, some of them costly and some inexpensive. Where they might make by hand a window in one part of a building, they will reduce the number of panes in a window in another part, or reduce the number of openable windows. Alexander values economy. In 1980 in Linz, for example, he spent \$35,000 to get 2,300 square feet of cafe, including furniture. And in 1976 in Mexico, he built houses for half what comparable homes cost there then.

"My most important contribution is to say, look, this is a practical matter. Our job is to provide models, to say this is an organization of activities, of money and of personnel and professionals. To say to other architects, this is how you can function, you can make money to live on, the same money you'd make any other way, but this time, you're doing it right instead of contributing to this awful thing that's been happening. The more explicit and clear that becomes, people are going to change at a colossal rate."

Anna Sala speaks of her house in terms normally reserved for human beings. She

says it has "character;" she says it has "integrity;" she says it gives her pleasure and joy. Further, she says it is so well insulated that they rarely turn on the heat. But more than anything, she says, her house is basically for living. "That's the main import."

"Our house to me is very real, the beams are there because they support the construction. Working with Chris, it made me think of what do you need and what do you not need. In terms of the way people live, what is real. The other architects we talked to said you can buy bay windows by the foot and you just insert them, or a fireplace insert, it doesn't matter, you just throw it in, put bricks on top of it and you'd never know. . . ." She shook her head.

Is there anything you don't like about it, I asked.

"The bathroom could be larger," she replied.

Do you ever imagine selling it, I asked.

She looked stunned, as if I had suggested something obscene. Finally she replied that such a thing was actually beyond her imagination. Selling the house, she said, would be like selling her own hand. □

BIG SPIN

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even after that, the man in the bright red shirt could anticipate a check for over a quarter million dollars, every year until 2006.

John Long, an almost gigantic salesman from Bakersfield, took his place under the hot lights. "Third time's the charm," he declared to Edwards. "Let's go!" Less than a minute later he, too, was a millionaire.

The group in the briefing room was rapidly dividing into four distinctive, if unspoken, castes. There were the glassy-eyed big winners; the commiserating little winners, also known as "losers;" the frantic and jubilant contestants still awaiting their turns and the melancholy journalist. A very sweet germ had invaded the air, but he was ruefully immune.

Two of the grand prize winners sat in the back of the briefing room, gazing into space. Long would stare down at the floor, then explode into fits of laughter; Campos sort of hummed and moaned, occasionally lapsing into silly giggles.

I sat between the two, working something out on a small calculator.

"Listen to this," I said, leaning over to Campos. "The way I figure it, it's as if they're paying you \$16.72 an hour, in back wages, for every hour you've been alive."

But Campos was not listening. *Mister Campos*, that is. He was in another world, shell-shocked to the edges of the Twilight Zone. His branch of the family tree, in one immutable instant, had been pruned from mesquite and grafted onto oak. The wildest fantasy he'd had that morning would not even scratch such staggering wealth. His life,

as he knew it, had ended.

"Oooooohh . . . oooooh . . . do something . . . slap me . . . pinch me . . ."

Long was likewise numb. "It won't hit me until tomorrow," he promised himself, and lapsed back into a daze. "Oh, man—" he shook once, all over, like a dog. "It's beautiful."

Francisco leaned over toward him, nearly weeping, "It feels good to be over, eh?"

You could see the words slowly sinking in. "Oh, yes. Oh, yes. That's the best feeling of all."

Eight more contestants spun the wheel, but there were no more big winners. Even Edith Amos, who Schade and I were privately rooting for, had to conceal her disappointment as the unyielding ball awarded her a trifling \$10,000.

Low spins move the show along quickly; before we knew it the stage was being broken down, and the families of most of the spinners prepared to leave. McBride, Long and Campos were exceptions. They stayed on for photographs and a short press conference, and were chauffeured back to a reception at the Beverly Garland in presidential limousines.

I hung around with a few of the security agents as they loaded the wheel back into the truck. Inevitably, we found ourselves discussing the morning's events, and the almost cruel absurdity of the grand prize.

"I'd rather give ten people a million dollars each than give one person ten million dollars," said one of the men, riding the lift with the boxed and cushioned wheel. "Fifty thou"—what the one-million-dollar winners get a year—is manageable. More than that

and the money controls you.

"And even if these people can actually comprehend how much money they've won—which they can't—then what? A lot of them have all kinds of trouble: depression; they lose their friends. I wish we could just take all the contestants and say, 'Okay—whoever would agree to give up the spin and just take a million dollars, stand up.' We could have 'em sign on the dotted line and that would be it."

Maybe so—but then where's the horse race? Where's the drama? Where's the ecstasy of victory, the agony of defeat, the vicarious thrill of seeing a sign maker transfigured into a demigod? The lottery was not designed around a profit-sharing scheme; it sells tickets to a mass public ritual, shamanistic in intensity, during which a lucky few are levitated to flabbergasting heights.

Any other purpose the game might serve—funding state education, for example—is, at best, secondary. You could have asked every member of that audience, "Who won?" and nobody would have answered, "The schools."

Idrove back to the East Bay with six dollars and the little statue of Ganesh in my pocket, bent on a single task: to buy my first five lottery tickets, and to do it before sunset. The Palestinian lunch joint was closed; I was reduced to performing the rite in a 7-Eleven.

Hope springs eternal, even in journalists. I rubbed the graphite off each ticket slowly, lovingly, chanting elaborate prayers to the Hindu pantheon and San Martin Caballeros. Then I spent my last buck on a cup of coffee. □