Christopher Alexander

The Making of a House

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The Making of a House

BY NORA GALLAGHER

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-time-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 hung on the walls. Anna Sala remembers that on the floor was a brightly painted music box in the shape of a tiny house, 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.

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 Alexander 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 unyielding 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 note, “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
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 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 book is a hefty thousand pages, divided into simple chapters, each 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 become 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 the meeting rooms, 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.

“And 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 blueprint 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
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, phantasms 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 grassland 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 underscoring, 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.

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.

“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 (Continued on page 50)
The bathroom could be larger; she asked. Is there anything you don't like about it? I know... She shook her head.

If you can buy any windows by the foot and you don't measure, you just know it'll be too big. The scaffold is placed slightly behind the bathroom, which is a practical issue. Our job is to make sure that you can function.

My most important contribution is to make the house liveable. This is a practical matter. Our job is to make sure the house is usable. If you move a window, it will make the house unlivable. If you move a scaffold, it will make the house unlivable.

I asked, "Do you ever imagine selling it?" She said, "I have."

She said, "The house is very nice."

"You have a view on the house," I asked.

"Is there anything you don't like about it?"

"My most important contribution is to make the house liveable. This is a practical matter. Our job is to make sure the house is usable. If you move a window, it will make the house unlivable. If you move a scaffold, it will make the house unlivable."