

SACRED BUILDING

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I want to talk this morning about "sacred building" rather than "Sacred Building", as I have and claim no credentials as a "Sacred Builder". Indeed, for every theory of Sacred Building I've heard propounded, I've found buildings and places that break such rules yet are unquestionably sacred, and places built following such rules which are without soul or wholeness.

Yet the act of making and holding places sacred does hold great power. Its power lies both in its ability to marshal our own inner resources and in how our places reflect our dreams and fears back into our lives. Making places sacred has never required spiritual or intellectual prowess, wealth, or power. It requires only focused attention, love, and willingness to give.

I've told a story for a number of years of a talk I had with a friend years ago who had just returned from Europe and was very concerned with the destruction of their cathedrals. He said that the cathedrals were being destroyed by tourism. It's hard to consider a camera more destructive than bombs, but the more we talked and thought about it, the more we realized how true that is. We began to understand that every tourist coming and taking a picture, as the Pomo Indians were saying last night, is taking something away. Every tourist that comes and stamps through the cathedral is taking something away. They're taking something of the sacredness - they're taking something, because that's what they came for - to *take something* ! They came to *take* a picture, to *take* a tour, to *take* a trip through it,with never a thought of giving something or leaving something or contributing something to it. There is usually a box at the cathedral door requesting donations "for the building", but that is not *giving*, only paying for what you take.

Last night while we were watching the Indian dances, there were some people near me who appeared to be videotaping the dances they were asked not to record. It bothered me. I asked if they were aware that they were asked not to record. It seemed that they were still recording after that, and it made me wonder what I should do. Should I get in front and block it, stop it, or what? What was my responsibility? Then I realized that what was happening was that I was getting angry, I was not able to participate in receiving the dances that were being given in the way I should. It brought me back to this cathedral issue and tourism, and the destruction of taking. I realized that what other people do may not be the most important thing. My anger may have been more destructive than someone taking pictures. The question to me was what could I give to improve the situation, and it felt that *giving* my attention, support, and energy for the dancers was more important than what was being *taken* on the videotape. I offer my apologies if I did wrong.

What can we all give, in a cathedral, in any place we go, in any exchange or situation we're participating in, to make it better? With cathedrals and tourism, it wasn't the number of people that was the problem. I've been in places in Japan and India and even Europe where pilgrims come by the thousands. It's not numbers. *There is something totally different in a pilgrimage*. Think for a minute what "pilgrimage" represents.

When somebody comes to give, to receive, to honor, they leave something positive behind. The image came to me of people going into the cathedrals in France and lighting candles, coming out, and in the process leaving behind them flickering lights which said, "someone has come and received something and given something here. Something has been left which enhances the spirit of the place, which says someone held this place sacred and got

value from it. That value is passed on from person to person through the ritual of candle lighting and prayer. In Japan there is a tradition at some of the shrines of leaving prayers written on paper tied on a tree. In Tibet pilgrims add a stone to a pile left by others at a shrine. Such things are an indicator that someone has come, in a good way, and given something, shared something rather than just taken something away.

I'd like us to think about that while we're here. It may be hard, down in this tomb under the sanctuary which doesn't feel like you're underneath a cathedral. Try to visualize in your mind what this place ought to be and *might* be. What is the significance of a crypt underneath a cathedral? How does it differ from how we build things today? What can we do in a place such as this which would express a feeling of sacredness? I remember one church in Barcelona, Spain, designed by Antonio Gaudi, where the crypt underneath the church was supported by huge columns of columnar basalt. Single crystals, twelve feet high, four feet in diameter. The sense of these things, revealing some of the order within the earth beneath, transformed the space into something which was magic. There are thousands of other ways to express that specialness that should permeate a place such as this.

My own work over the last 25 years has been a search for what *feels* right in the making and use of places. When I first graduated from architecture school, I was quite frustrated with my own design abilities. I quickly realized that what we make reflects what we are and what we are feeling like inside. Our buildings *are* mirrors. What I recognized as lacking in my architectural work came from a similar lack within myself, and as I've grown inside, my work outside has reflected that growth. I also realized that the nature of our surroundings is severely limited by cultural factors such as the concepts of energy and money which we allow to direct our decisions. Air conditioning energy was priced so low that architects could not afford to plant trees. Overdependence on short-term financial returns meant that our surroundings could not be given the generosity, richness and love which are essential ingredients of long-term thinking.

It was clear we had to make some basic changes in our cultural thinking before we could make places that were sacred and able to move our hearts and have the feeling we wanted to have in them. The first need was to get balance back into our building. So the first things we worked on, back in the late sixties and early seventies was energy. We found ways of understanding and changing our thinking and changing the tools we had. We did and are learning to build in ways which do not make us dependent upon overpowering things, and which do not destroy our balance with the world around us.

I also realized we had to deal with economics, as the economic concepts we accept put very numbing constraints on our dreams and on the physical world which grows out of our dreams. We often let the mumbo-jumbo of numbers unduly shape our decisions even though we know that all major choices really need to be, and are, decided on a gut level of emotions and dreams.

Several years ago, affordable housing became a major issue. This seemed crazy to me. If modern technology didn't produce housing at lower cost, why couldn't we back up into more traditional ways of building? That obviously wasn't happening. So if housing was suddenly unaffordable, construction costs (which everyone was pointing at) couldn't be at the heart of the problem.

I found that no one had even put together a picture of the overall cost of housing a family over its life, so I made a broad-brush stab at it to see what I could learn. The sales price of a building, as my gut had guessed, forms only a small portion of the overall cost. Finance costs are the largest item - running twice the selling price and consuming up to ten years of a family's income. Energy use was second largest, also larger than initial cost. With this broad-brush overview, I tried to figure out how we could rethink things. First, in terms of financing, I realized that we are merely borrowing back and forth from each other for our initial housing purchases. So why do we pay vast finance charges to others to accomplish

this? A no-interest Revolving Loan Fund could in one stroke reduce overall housing costs by almost 60%!

Similarly with energy, we have now clearly shown we can reduce household energy use by 75%, while increasing comfort and convenience in the process. People laughed 15 years ago when I first proposed this, but now it is written into the building codes in half of the country. And most interesting, we found by looking at *economics* (the real labor and materials and energy consumed in a project) rather than finance, that *durability* plays an extremely vital and unmentioned role in the cost of housing. The true economic cost of housing built to last 200 years is *only one-fourth as much* as for the same house which lasts only 50 years.

Durability is essential. It's role was forcibly brought home to me earlier while looking at photos of a somewhat crude stone bridge in China. My eye was first caught when I realized the scale of the bridge. Built of a series of single granite slabs 60-70 feet long, the engineering was within a few percent of the ultimate strength of the material. The effort of quarrying and placing the stones must have been immense. But then I looked at the date of the bridge and realized it had been in use for over three thousand years! Figure out the amortization of that project!

The same is true of cathedrals and houses. Gothic cathedrals in use now for 20 generations have proven far cheaper per generation than the cheapest construction we throw up today. The real mushrooming of housing costs in California and elsewhere turns out to be a combination of finance and scarcity costs. Getting enough housing onto the market will drop costs closer to the real economic costs, and into affordability by anyone's measure.

I did another study quite recently, looking at financing. We finance cars all the time, one after the other, yet we never look at the *overall* patterns which are occurring. The logic of financing is that in exchange for the substantial cost, you get to use the purchase while you are paying for it. The problem is that when you play that scenario through, *not once but several times*, the picture is totally different. Compared to saving to pay for the cars, you only avoid going without a car once, while you pay finance charges five times! If you go without, or buy a junker, or bicycle, or hitch-hike while you save for the first car, you would end up totally differently in the end. Out of this I put together an entire approach called "Endgame Strategy" which looks at where we end up with alternative options instead of just considering carrying costs. Again and again we find significant advantages to alternatives to which we currently give little consideration.

The moral of the economic story is that we have the wealth and resources to do anything we really put our minds to. If we put more into a building to build for the environment, to build for ourselves, to build in a sacred way, it is going to cost more initially than building the half-buildings we construct today. Yet we squander so much on all sorts of inessentials, it is clear we have the wealth to make major changes in our patterns to achieve important ends.

The third area we needed to deal with was the spirit of things - the spirit of place, the sacredness of building, the attitudes we held towards what we were making, towards ourselves, towards everything that was outside of us as well. With a new sense of energy and economics, it is possible now to get close to the spirit and sacredness of place and *know* we have the means to build right, to build in balance, and to build wholly.

Designing is like playing a musical instrument made like a woven cloth. What I want to do this morning is to pluck some of these strings out a little bit so we can look at them. But remember that every time we pluck one and look at it and let it go, it is still touching all the others, and as it goes back, everything is connected and resonating making music together. We'll try to be touching a number of ways in which I've found we can either change our thinking or change the way we can do things - not necessarily things you may want to go

and do, but which may give you the idea that whatever we touch can contain that sense of sacredness.

We don't have to have multi-million dollar budgets. Some of the most wonderful places I've ever seen have been nothing more than a pile of stones, a sacred cord around an empty space, saying, "Stay out, don't disturb. This is something special. We need to stop our bulldozers here. This is something that needs to be left as it is." So it's more *how* we do things. It's more the feeling of love that goes into someone taking a scruffy apartment, washing and polishing it till it gleams, and filling it with song and flowers. It is the spirit within us and how it inevitably expresses itself outside of us - either in the making of spaces or in the using of them.

There are exceptions to every rule we set up. I remember back in the Sixties, tipis, sacred circles, and hogans were praised. The circle was promoted as THE way to build - it was wrong to live in rectangular buildings. There is an internal logic to this, of course, and a lot of people got excited about it. But stop for a moment and think about Japan. Japan has the most rectangular buildings in the world. They don't follow any of the rules of sacred circles, yet there is equally a sense of sacredness inherent within their way of building. Every means we have to build has the capability to reach toward a variety of ends. It is how we take them and how we create within them which determines the sacredness or profaneness of what results.

We also have to think more deeply about the rules by which we design and build. Gothic cathedrals, I remember from architectural school, were upheld as one of the great icons of architecture - the inherent beauty of structure taken to its utmost. There is still on the architectural registration exams a question which says, "If you wanted to learn about structure, would you study Persian architecture or Gothic cathedrals?" Studying both Persian and Gothic architecture, you quickly realize that Gothic architecture, the answer they wanted, is *not* a pure expression of structure. The incredible color and surface geometry of Persian domes specifically conveys their sense of the mathematical unfolding of diversity from a central oneness. But beneath their dazzling impact, the shape of the domes themselves follow a catenary curve - the shape of a weighted chain. - which follows precisely the structural thrust of the masonry of the dome itself. As a result, it requires only a very thin membrane to support vast domes.

In contrast, the Gothic cathedrals are a demonstration of how ignorance and mistakes can be made into something esthetically acceptable. Their vaulting, following spherical geometry, kept bulging the walls outward, requiring more and fancier buttressing outside to keep them from collapsing. The cathedrals were also originally often beautifully ornamented with color. We look back at them now, with their colors faded and vanished and see the beauty in their pure stone and soaring "structural" lines. But this is not the only beauty they have had in their lives, and we often read into them an intent and purpose which exists only in our own projections upon them.

Japanese architecture also is often spoken of as a prototype of how to build today, cited as beautiful expression of structure and module and repetitive design. But digging a bit deeper again, we discover that the beautiful cantilevered Japanese roofs are often pure ornament. Ninety percent of the visible part of the roof structure is a fake soffit, made to look structural, like thin rafters cantilevering out incredible distances. Yet behind that light, elegant "roof structure" is the more massive and less elegant real supporting structure.

Our first perceptions, our first understandings of things, whether what we've been told or what we see, are not always what is going to give us the deepest understanding. I find it is essential to get a deep knowledge, a deep knowing, of something in your life, which becomes a touchstone by which you can test and understand other things in a totally different way than flitting from the surfaces of one thing to another. That deep knowing brings a love. We get excited about and get to love anything we really get involved in. This also works both ways. Once you really love something you really know it. Either results in good things!

Looking at these slides, I would like you to think about how we can find ways to express feelings we have, to express a sense of place, a sense we have of the world within us and around us. What about time and change? This eroded stone, from a teahouse garden in one of the outer islands of Japan, talks to us about what is more powerful over time - a trickle of water over stone or the solid stone itself? What is the interaction of things? How do things change? The stone is a remnant of stars formed billions of years ago, which died and reformed into new stars and after those stars died, the fragments became swept up into this planet and into these rocks. And yet the water is again dissolving and changing these things.

Rock and dirt are one thread that ties us to the cosmos, and something to value and hold sacred. When we were coming into San Francisco the other day, one of our sons was looking at people in business suits and asked, "Why do people dress so funny down here?" I said, "Well, this is a different world. They spend almost all of their time in buildings, where there is almost no dirt. When they go outside, there is almost no dirt there either. They have paved it all over." We live in mud all the year around - it's a different world in Oregon, one where we've learned to love and keep the earth.

Here again, stone, wind and time - the rock wall of a canyon which the wind has eroded the sandstone which was laid down over millions of years. Water or wind brought the sand. The weight of its accumulation and the sea above it over time turned it to stone. The wind now is dissolving it again, into beautiful shapes, into beautiful things which can convey some of the wonder and meaning in patterns around us.

Let's look for a moment at ornament, something which has not been part of our architectural tradition in modern days. It can be a wonderful thing. It can express sense of giving, of going beyond what is required to keep us warm or dry; a sense of exuberance, a sense of the way which nature builds, putting every possible bit of wonder and beauty into even the most insignificant thing. The most minute form of life, which lasts only hours or days is so incredibly beautiful. Why don't we put the same joy and love into the things we build?

I talked last year a bit about Winter Cities - a movement which started in Canada and which has gone around the world. Arni Fullerton had gone through a pile of tourist brochures and realized that all of Canada's tourist brochures contained only one picture of winter! How are those people feeling about where they live? As a result, Arni founded a series of conferences and forums which have brought together people from Hokaido, Alaska, Canada, China and Scandinavia. They talked about snow removal and locating buildings and roads to prevent snow drifting and aid sun melting of snow and ice. They talked about merchandising - about creating "winter cars" and seeing what the worldwide market is for such products. But more importantly, they talked about making peace with where we live.

Almost all of us have moved, in recent generations, into a different world from where our ancestors lived and our culture originated. And almost everywhere there is an awkwardness and sense of ill-fit between us and our new homelands. Winter Cities has dealt wonderfully with this. They have established winter carnivals, snowmobile and dogsled races, and ice sculpture festivals. Ottawa, Canada had miles of canals through the city which had lain dormant all winter. As a result of the new "think winter!" perspective, they set up a program to plow the canals for ice skating, installed restrooms and warming sheds, and now have an exciting and enthusiastically used city-wide ice skating system.

In spite of talking about them for a number of years now, I have yet to see real winter gardens. How do you take advantage of the magic of frost flowers on a window pane? Our building windows are now so super-insulated that they don't frost up. I remember waking up in Minnesota and seeing totally different ice magic on the windows each morning. What if we leave just one window single-glazed, to be our ice garden every morning? I have yet to see northern buildings built with windows to the sky - with windows to the night, the stars and the aurora borealis. We were talking about feng-shui last night. Part of the geophysical basis of

feng-shui is the emissions from the sun - the solar wind - and its interaction with the earth's magnetic field. The aurora borealis is one of the most dramatic visual manifestations of this incredible interplay, and worth a window to the sky. It suggests one first step in how we can begin to touch on these invisible worlds of the spectrum into which our society and minds are moving more and more deeply.

This is a wonderful stairway in Japan. Walking down these stairs is like walking down a river. There are drainage channels on the side between the stone steps and stone retaining walls. The first time I came upon these stairs was during a rainstorm. I almost got vertigo starting down the steps. Water rushing down both sides of me, echoing off the walls, made it feel like walking down a waterfall. That is part of the spirit of place, of a wet place, as opposed to the spirit a desert. We need ways of getting that kind of intense experience to break through our everyday eyes, our everyday sense of the world, and bring us fresh into experiencing, seeing and feeling things around us.

At Glacier Park, Montana, I once discovered a wonderful silent waterfall. Water falling from one moss-covered rock face to another, landed silently on the moss, sparkling like diamonds with the sunlight reflecting in it because of the darkness behind it. It takes very little to create magic. It takes little space, it takes little other than our own perception, our own discovery, our own sense of wonder and wanting to make something to share that wonder.

The doorknob on our house was made from a gnarled spruce root we found on the beach. You can tell, looking at it, that it led a rather tortured life, squeezing between rocks. The imprint is still there of all the pebbles it had to grow between, some are still trapped by the root growth around it. This root fascinated me. We put it on the door and it kept nagging at me, saying, "There is something here - what is it?" I finally discovered that it is like the face of an old person, full of battle scars, full of trophies, a record of all the life it has lived. All the materials we build with are usually so processed that there is nothing left with which to sense the life that went before, which was given up for our use in our buildings.

Think about honoring those past lives, the lives of the materials and people which went go our building. Think of the Japanese *tokonoma*, honoring the season, the occasion and the guest and the spirit of the day with particular and special things. Every culture has special ways of doing this. The English have the parlor, we have the television set.

How do we honor also the in-between places between the inside and outside? A window is a wonderful thing. It is more than just a hole in the wall for air and light. It is a *connection* between the inside and outside. It is a place where you can be in between. You can lean out and be part of something outside, yet not totally commit yourself to it. You can still be on home base, you can duck back inside when you don't want to be involved, you can be involved when you want to, or just watch the world go by.

The same thing is true for the rituals of coming and going, the places where we say hello and goodbye. They need specialness. They need to be honored. Yet few of our buildings have more than a narrow pane of glass or thin piece of wood as separation between the inside and outside. No in-between space, no awareness of the importance of those rituals and what they contribute to our lives, no awareness of the kind of places needed to encourage and enrich their occurrence.

Think about the differences of place and location. Paolo Soleri's Cosanti desert dwelling in Arizona gives us a sense of the differentness of desert life. It is hot in the desert, and contrary to our imported patterns, most life in the desert goes on at night. During the day, life goes underground, and stays where it is cool and shady. Why do we build our boxes up on top and roast? You can tell by the way they sit so awkwardly on the land that there is something odd about this. Soleri listened to the earth, dug in, and created wonderful sun-filled hemispheres concrete for warm outdoor spaces in the winter and shade-filled hemispheres for cool spaces in the summer. In the extreme desert conditions, he showed how

we can create livable environments without air conditioning, without disconnecting us from the world around.

In Persia or India, we find in the desert pavilions raised to catch the wind, bringing awareness of distance and time, and a sense of far away places. Again, finding ways to express the specialness of a unique place.

The most wonderful thing in the desert is a drop of water. It is a precious thing, something not to be squandered. Some of the most wonderful places I've been, the sense of welcome is given through offering of that preciousness.....of shade, a trickle of water, a gift to meet the urgent needs of visitors arriving off of the desert.

Think about the materials unique to a place - the kinds of wood, stone, earth which are native and special to each place, and which convey a sense of the history of that place over millions of years. I've always loved geology, and have recently discovered more of the wonderful things learned from rocks. In Glacier Park, there is now an exciting geologic tour you can make on the Going to the Sun Road. You see where four and a half billion year old rocks are lying on top of one hundred thousand year old rocks. You can curl up and take a nap touching life which existed millions of years ago. You see the whole history of a place over eons - the gradual change and the cataclysmic events which occurred when our current West Coast arrived across the ocean and crashed into what was then the Pacific Ocean coast of Montana. You get a sense of the difference between basalt which wells up out of the earth in fire, and the sandstone which is laid down with the dust of mountains ground down ages ago. All these give specialness to place.

We also need to think about how we deal with our interactions with the world around us - whether we replant trees, whether we recycle our own waste, what impositions we make through our uses of energy. We look at our buildings, but we rarely look at their connections outside, and what they require outside. The Kohler Company just came out with a new standard toilet which uses only 1.5 gallons of water per flush - an item which until now has been a high-priced specialty item. It uses one-quarter the water of conventional toilets of ten years ago. It reduces our expenditures on water and sewage treatment, and the environmental impacts connected with both loops of our water and nutrient cycles. It is a small and hardly visible item, yet illustrates that consciousness has to come first. What are we flushing down the drain? That is our food, the nutrients that are needed to grow our food for tomorrow. Many of our patterns are crazy, yet we *are* starting to change them.

I'd like to share with you a couple of projects of mine which are in various stages of development. They're not anything wonderful, but they will show what I've been trying to accomplish in my own work. The first project is a house recently constructed on the Oregon coast, in which we were trying to get at a fresh sense of the four elements - earth/air/fire/water. The location gave part of the tools. The ocean is there, we get our eighty inches of rain a year. We never forget about the water. In this case we tried to use water to develop a fresh sense of the heart of a house. In some cultures it is the hearth, others the table, others the sacred center pillar or ancestor's shrine.

Here we wanted to take the bath as the center - a place of peace, rest, communion with the elements, a place to shed the world and seek inner peacefulness. By placing the fireplace between the living and bath with cast iron doors on the bath side, we could combine fire and water, without the self-consciousness of a special and separate fire. The sense of fire and water together is a wonderful experience, one which opens our eyes to some of those archaic, elemental forces which have made our lives possible, and which we so often put out of sight and out of mind.

The bath formed both the physical and spiritual center of the house. Above it was to be a skyroom - a sleeping and sitting space whose entire roof was a single ten foot diameter skylight opening to the wheeling of the night stars, the wonderful darkness of our coastal

nights, and the drama of winter rain and summer fog. There *are* times on the Oregon coast when the clouds aren't there and the stars are - millions and billions of stars. To be able to lie up there and take that in, to open your eyes and be in the midst of that universe made a wonderful place to be. With a mattress floor, back pillows, and windows on four sides to the ocean and mountains, the upper center of the house gave a private place for being with the outside elements. Below, the rest of the house clustered around the bath and accommodated the conventional everyday activities of living. The skyroom got dropped, unfortunately, from the final plans, but it got far enough that we can envision what such a place could be.

The second project is the Chamber of Commerce building now under construction in Cannon Beach, Oregon. It is interesting in the recognition spirit of place was given by the owners and the community. It is also significant in the support we were able to gain from business, tourism and foundations for expressing spirit of place through architectural crafts in the building. The former Chamber building was a surplus WWII recreational barracks, and acted as an ad-hoc community meeting hall for many years. The new structure was planned to carry on that tradition, to enhance the community space with the architectural crafts, and to share it then with visitors to the community. We got an arts consultant excited enough about the project to apply for and get an \$84,000 foundation grant to incorporate architectural crafts into the building. She had been trying to convince the state to incorporate arts into their welcome centers to demonstrate that people seek different and uniquely local experiences when they travel, not more of what they have at home. She was more than interested in using our project as a demonstration.

The outside lights are to be in the shape of jellyfish - whose beauty I didn't fully appreciate until a few weeks ago I was able to watch them pulsing through the water in the San Juan Islands. The water off the roof will be celebrated instead of running hidden through pipes. The stained glass in the dormers focuses on the phases of the moon and the tides. The floor in the Information Center, of local basalt, will be have brass inserts in the pattern of the Pleiades - with starfish instead of stars. The fireplace will be of native beach rock, with sculpture inserts showing forms emerging out of the stones themselves.. Truss brackets on the roof trusses are in the shape of leaping salmon (the fabricators call them steel-heads). Art (with a capital A) may not be the best way to express spirit of place today, but in this project I feel we have shown in an initial way what is possible and what we can go beyond to a deeper expression.

In closing, I'd like to mention an article Michael Ventura wrote in last winter's Whole Earth Review, called "Dreamtime". He talks about the loss of space and time in the modern world and about the powerful yearnings inside us that make us generate the incredible and often nightmarish things which we see expressed in the surreal and irrational urban world around us and the imagery of TV, videos and advertising. The urgency with which we go after such things in spite of all our structures, ethics and morals which say we shouldn't, shows that there are some incredibly powerful drives inside our psyches that are trying to be resolved, born and manifested. Ventura shows what our physical world has to compete with today in terms of imagery, how it expresses the invisible worlds around us, and the dream forces which will our physical world into being. He makes it clear that we have to deal with new things, a sense of the new universes we are coming into and becoming.

We can't build a church today whose height can compete with the financial towers in any city. To make a sacred place today, we have to jump outside of past logic, reach more deeply into our own inner forces, and create new ways of doing it. That is the wonderful challenge we are faced with in the next twenty years - creating surroundings which are sacred, in which *everything* is sacred, not just the capital "S" special and isolated places. This is even today beginning to happen, as we realize the vital importance to us, psychologically, of holding things special, sacred, and wholly, and begin making everything we touch and do manifest that sacredness.