

Dot.edu & Dot.com: Architectural
and Cultural Sensibilities in Japan

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It is by knowing where you stand that you grow able to judge where you are. Place absorbs our earliest notice and attention, it bestows on us our original awareness; and our critical powers spring up from the study of it and the growth of experience inside it. It perseveres in bringing us back to earth when we fly too high. It never really stops informing us, for it is forever astir, alive, changing, reflecting, like the mind of [wo]man itself. One place comprehended can make us understand other places better. Sense of place gives us equilibrium; extended, it is sense of direction too.

Eudora Welty from The Eye of the Story

Eudora Welty, an American writer living in Jackson, Mississippi, wrote this elegant paragraph more than 40 years ago, just before the notion of place became popularized and, regrettably, trivialized. She was both way ahead of her time in understanding that the surface of the earth that we stand on is an intimate part of our spirit, and way behind the times in not really grasping that, since then, more and more of us perceive the world abstractly through our computers. In this essay I try to reconcile the aesthetic and sensuous aspects of place with contemporary technology. I want to provoke my

audience into considering the art of environmental design alongside the efficiency, accuracy and other clinical attributes of computers. (Hawaii is a good place to do this, for here we are surrounded by sensuous experience just by driving along the recently completed H-3 from Kailua to Pearl Harbor, to cite one example.) Let us all admit at the onset that it is no longer realistic to think that we can design anything of substantial scale and complexity without depending on computer technology. That said, in order to explore the past and the future together, I will fast forward, rewind and log on to some Japanese architectural and environmental projects completed in the last 10 to 15 years, ending with I.M. Pei's design for the Miho Museum.

First, let's fast forward to the 21st Century: In the continuing conflict between humans and machines, here is a glimpse of our fears in our electronic future. The architect's role is severely diminished as I, or anyone, can design preliminary schematics and control my detail drawings via computer while simultaneously distancing myself from the earth's (or any planet's) surface and from community context. Or, perhaps, I can simply download, free, anyone's design for my own use after a few technical refinements, in effect, obliterating the design's uniqueness and devaluing the original designer's creative wisdom, experience and knowledge. The old idea of architect/artist - that is, an architect who can draw - is long gone. The computer is now the expert, not human beings searching for design solutions. In the past, art and architecture helped us to understand life, to shape it, and to find aesthetic fulfillment. Now the rules have changed, values and ethics altered,

and time honored assumptions dismissed. Our notions of craft, skill, and their aesthetic impact are changing. In short, it is easy to design a house by mouse.

For the most part true, and yet, not. If this view seems slightly out of sync, consider the Luddites as we rewind to the 19th Century: Between 1811 and 1816, groups of British workers rioted because the knitting machine, power looms and wool shearing machines had taken away their jobs. Repeatedly, the workers tried to destroy the machines they felt were destroying their lives. The British elite called them Luddites after a mythical, many say real, person named Ned Ludd who in 1779, gleefully smashed machines designed to knit hosiery. The word “Luddites” recently returned to late 20th Century language via cyberspace. According to one of Bill Gates’ Microsoft lawyers, today’s Luddites wish “to arrest the march of progress driven by science and technology.”ⁱ Ironically, should we yearn for more information regarding Luddites and their rejection of technology, we can log on to the internet at www.nmc.edu/~kovacsj/luddit~1.htm.

I’m not sure that smashing machines, or totally rejecting technology enables us to experience our earth any better. Fear coupled with anger only encourages more aggressive behavior. Even restraining technological advances can be problematic (note the current debate on the pros and cons of cloning.) However, in Japan, giving up guns and returning to swords (1543-1879) is one good example, perhaps the only example in history, where a sophisticated culture deliberately reverted back to a less advanced technology for complex and insightful reasons.ⁱⁱ Simply stated, guns didn’t quite fit in with Japanese

culture, specifically samurai culture which valued sword etiquette. As guns increased in early 16th Century Japan, soldiers no longer felt the need (nor was it safe) to exchange courtesies before the battle. Dying began to lose its honor and dignity.

Today in some academic and government circles it is considered politically incorrect to suggest that cultural sensibility and aesthetics play important roles in how we experience environment, yet we all know this to be true. I offer one small example:

In the late 1980's, I traveled by ferry from Aomori to Hakodate and back. Despite the cold December weather, I stood outside on the upper deck as the ferry pulled away from the dock. The skyline of Aomori, a small city located in the northern tip of Honshu, slowly receded into the distance. As the ferry slipped past Mutsu Bay into the Tsugaru Straights, it fought against the high, grey-green waves that were slowing its progress. Below deck, families with obentos, beer, green tea and other treats, sat on tatami mats eating, talking and laughing. Children played and ran around, and old people slept. I sat on a bench next to the window looking at the rough water, at the coastline whenever one appeared, listening to the sounds around me, smelling the salty air and the food being consumed by virtually everyone. I knew then that the opportunity to travel back and forth from Aomori to Hakodate on an old-fashioned ferry boat would soon cease. The Japanese government had almost completed a state-of-the-art tunnel linking the main island with its northern neighbor. As I dug into my obento and drank my hot tea, I pondered the notion of how sophisticated architectural and engineering technology frequently deprives us of our ability to experience the sensuous and sensual qualities of

environment. I imagined myself one year later inside the new tunnel, more or less confined to my train seat, seeing nothing but darkness out my window, and experiencing very little of interest inside. I felt buried inside the tunnel; I missed unanticipated, sensuous pleasures. All my senses seemed muffled. I, and others, sat like quiet little robots, immersed in our lap top computers or sleeping.

This is not a diatribe against tunnels or technology. Rather, I suggest what, at first, may seem painfully obvious, even trite: how we perceive and feel environment has a direct impact on how we design it. Environment, in the broadest sense, includes all aspects of life inside and outside our bodies. We live, environment lives; we die and our environment dies with us since, presumably, the dead no longer experience sensuous and sensual pleasure unless, of course, we believe in those wonderful Japanese ghosts who somehow materialize, albeit temporarily.

20th Century visionary writers, such as Aldous Huxley, George Orwell, and Michael Crichton, or even 19th Century ones like Jules Verne, managed to link environment and technology with imagination, creating literature that explored future technologies and their impact on human sensibilities. Today, our ability to fast forward and rewind or to log on to a virtual reality can be almost as intoxicating as the real experience, in a way displacing reality and, most certainly, displacing human sensations, although efforts are currently underway to provide us those experiences as well, including the sense of touch.

Permit me for a short moment to rewind. In 1924, German filmmaker Fritz Lang conceived the idea for his famous futuristic silent film “Metropolis” while aboard a ship sailing to the United States. As the ocean liner entered New York’s harbor, he stood on deck watching the tall, narrow buildings emerge into view. As the ship drifted toward the pier, Lang, like many before and after him, thought he felt the buildings scrape the sky. Their scale and beauty fascinated him, yet in his mind’s eye they all seemed like one giant machine devoid of any heart or soul.

For those not familiar with Lang’s 1926 film “Metropolis,” it can best be described as an essay on the misguided and overwhelming power of technology - a technology that subsumes all traces of those qualities which make our lives worth living. The story focuses on a large 21st Century city where a Platonic division has occurred. The wealthy live and work above ground; they reap the benefits of direct access to the sun (Plato’s metaphor for the “highest” form of knowledge). Thus, they bask in the comfortable environment that technology produced for them to enjoy. The poor workers live underground (the Platonic cave) where the sun never shines, servicing all the machines. Neither has contact with the other except through controlled administrative channels. The city is owned and ruled by a wealthy industrialist who is a technocrat - that is, a bureaucrat seduced by the promises of technology. Naturally, the city is a technological dream: completely urban, i.e., completely controlled and structured by humans. No animals or birds, no trees, and no flowers exist in Metropolis, except one small, carefully designed garden. No wilderness exists above or below ground.

Lang's architectural background and classical education clearly influenced the movie sets. His father had been an architect and Lang briefly studied engineering. In the film, above ground appears magical and fantastic, even to those of us viewing it today. A landing platform for airplanes tops a giant, 150 story tower. Delicate bridges supported by faceted truss "legs" span the spaces between the lower buildings. The technological maze below ground consisted of many levels, most far deeper and more complex than the New York City subway system constructed at the end of the 19th century which, during his visit in 1924, Lang undoubtedly rode. Workers spent their lives consumed by technological maintenance, never experiencing the surface of the earth, the sky, the sun, stars and moon, and, of course, the seasons. The largest underground chamber housed the enormous power center called *die Herzmachine* (the heart machine), which permitted everything above ground to function properly and efficiently. Most people living above ground took these benefits for granted not realizing that, if the heart (machine) stopped, everything stopped.

The heroine of the film appears as a female human and also as a robot that is modeled after her physical appearance. Although the human character is responsible for inciting the workers to riot and demolish the machinery, in the end it is the robot that is destroyed by the technocrats, not the human heroine. Lang deliberately choreographed the masses of people above and below ground in such a way that the audience could immediately grasp the nightmarish plot without necessarily reading the captions.

Fritz Lang's wife, Thea von Harbou, wrote the script. Both clearly foresaw the kinds of ethical and aesthetic values that might perish in a world too narrowly focused on technological victories. They warn of the perils of existing in an urban area replete with technological triumphs, yet devoid of any sense of personal place or environmental interaction. Leaving aside the issues of social justice for the underground workers, its more subtle message suggests that the power of architecture affects our very being. It also suggests that those assigned to the underground (Plato's cave, where those in all the arts, except music, were assigned) can still exert influence to initiate changes that incorporate a more balanced relationship between above ground and below ground, between technocrats and artists, between the built environment and the natural environment, and between the past and the future.

Today, research in the various sciences confirms that environment, technology and behavior are intertwined, a seemingly obvious conclusion. What may be less apparent is why this is so. Sherry Turkle, professor of the sociology of science at MIT, suggests that when a new technology permeates society, we tend to view it selfishly; that is, what can it do for me? "Only with some time and distance do people tend to turn to its subjective effects, what it does to us as people," Turkle notes. She feels that we are just at that point now with the computer. "We make our technologies and our technologies shape us in turn," she explains.ⁱⁱⁱ

True, yet, in some ways, I think we unburden ourselves on technology. Computers enable us to come to design conclusions quickly and accurately and, despite their dexterity and proficiency, certain human design skills and ingenuity sometime get displaced or even lost in the process, as in the following example: A few years ago, just as the economic bubble was about to burst, a Japanese colleague took me to see what was then called the new Makuhari Business Park, soon to be part of a new town project called Makuhari, all on reclaimed land on Tokyo Bay. Located near Funabashi, midway between Tokyo and Chiba City, Makuhari was one of a number of satellite centers under construction along the Tokyo Bay area. The Chiba Prefectural government funded the project, in part due to its optimum location directly next to the expressway leading to Narita airport. Some sections near the outskirts of the site were still under construction. Patios II, a group of low and mid-rise housing units designed by Steven Holl Architects, was not yet in the ground.

My friend explained that a number of architects were invited (and many more competed) to create a new urban environment with state-of-the-art structures that would pave the way into the 21st Century. I use the double meaning of the word “pave” deliberately, since everywhere I walked and as far as I could see, the ground was paved. The centerpiece of the new development is Fumihiko Maki’s elegant convention center that swooped along the skyline. It is surrounded by office buildings, a hotel, and parking areas, that form a heavy, vertical counterpoint to Maki’s light, airy and wonderfully curvy structure. Large scale footbridges criss-crossed over the expressway. Outdoor

escalators efficiently carried us to different levels. Each building was conceived by a different architect using sophisticated technology. All were impressive, imposing, and important looking. Potted plants, some unintentionally whimsical, were strategically placed along circulation routes. A carefully contained, rectilinear mini-park was bisected by a shallow, narrow artificial waterway that led into a circular pool. Soldier-like trees, evenly planted, stood at attention flanking the waterway. Finally, in case we couldn't find the entryway to the convention center, a massive red painted steel and concrete portico, large enough to drive a small truck through, provided us with an overwhelming clue. Looking up, we were welcomed by oversized, bright-red, steel, parasol-like flowers on the soffit, perhaps an attempt to lessen its formidable, overpowering scale.

Technically this imposing, almost stately, environment functions beautifully. Most of the site, including the rigid, unyielding mini-park, was computer generated. Everything existed in static monumentality within its pre-assigned place. Makuhari fulfilled the role of icon to economic wealth, to political prestige, certainly to late 20th Century technology and even, I suggest, to a kind of continuing architectural machismo. Was it, perhaps, too orderly, too designed, too domineering because it was fairly new? I don't think so. Noriyuki Tajima and Catherine Powell call it "a sanitized pastiche of a western urban model" and note that "the drawbacks of the 'prefabricate-and-lower-into-place' style of city building were apparent."^{iv} My friend, an engineering professor, wanted me to see this project precisely because it reminded him of the grim, oppressive images in Lang's "Metropolis." Leaving aside, for a moment, the initial sense of distance one

frequently feels when examining contemporary large scale architectural projects, Makuhari seemed to rebuff the very people it was attempting to entice. Everywhere we walked, we were encircled by what I call “dour space,” that is, surroundings devoid of any sensuousness, humor, wit or weeds.

Having just roundly criticized Makuhari, I feel compelled to mention that, during the late 20th Century, Japanese architects and engineers produced some of the best projects in the world, projects that express grandeur without pretentiousness, stateliness without ostentation, wit that avoids absurdity and, frequently, both overt and covert sensuousness and sensuality. Bridges exemplify these ideas. They tend to dominate the surrounding land and seascape, and the aesthetics and sophisticated clarity of their structure is exposed for all to see and experience. Between Honshu and Shikoku, seven of ten planned bridges incorporating three different routes are now complete. The most recent and now the longest suspension bridge in the world, the Akashi Kaikyo which connects Awaji Island to Kobe, opened in April, 1998. The Seto Ohashi which opened in 1988, consists of six individually designed bridges which hop from island to island in the Inland Sea, beginning in Sakaide and ending overland as an elevated expressway near Kurashiki. Consisting of five suspension bridges and one truss bridge, each reflects the specific geography and ecological conditions found along the route. Jiro Tajima and Kazuo Sugiyama note that, in Japan, aesthetic considerations play a large part in contemporary bridge design. Moreover, they suggest that in the future (as in the distant past) bridges will exceed their primary function of transporting traffic. Future designs

will include more possibilities for people to actively participate in the bridge experience which, already, is quite an exhilarating adventure. Tajima and Sugiyama remind us that bridges are a measure of civilization and thus..." bridge engineers will be required to design and construct bridges with high enough aesthetic values to satisfy the aesthetic requirements of society."v

Every island along the Japanese archipelago boasts superb examples of the successful merger between technology and aesthetics. In Okinawa, the University of the Ryukyu's currently sits on a new campus rather than on the site of the old Shuri Castle (now reconstructed). One of their new buildings houses computer technology facilities for faculty and for students in the field. The structure is beautifully sited on a wooded bluff overlooking the river. Its round design, seemingly simple, incorporates its hidden technology, while the rough texture and color of the facade suggest traditional Okinawan tiles minus their gleaming white, ground coral and seashell mortar. The building does not scream TECHNOLOGY!, yet that is its purpose.

Another building that doesn't scream TECHNOLOGY! is located near the small, remote city of Muraoka in Hyogo Prefecture. On the surface, Tadao Ando's wood museum appears almost vernacular. Upon closer inspection one can only admire the sophisticated role of technology. I call the museum Tadao Ando's "tree stump" building, because from afar it appears to be an enormous decapitated tree. Again, the siting is wonderful but, of course, there is little architectural competition, since it is surrounded by nature. Most of

the trees on the site were saved, and more trees and other plants were added to enhance the relationship between the museum and the forest. The forest moved inside the building in the form of a complicated support system deliberately designed to look like tree trunks and branches.

From the mid-eighties onward, the Japanese economic boom encouraged considerable museum construction throughout Japan. It seemed that virtually every city, small or large, reaped the benefits. Many were solely dedicated to one local artist or collector. In Sapporo, for example, a crisply designed, modest white brick building houses the paintings of Migishi Kotaro, who died at 31. This museum successfully mixes 1970's passive solar ideas with late 1980's low key technology. Generous amounts of natural daylight penetrate selected areas of the museum, a sensible idea, since, in winter, Sapporo's days are short. The large glass portions of the museum reflect the surrounding trees making the museum an intimate part of the natural environment in all seasons. The interior spaces are spare, yet welcoming, and the state-of-the-art ambient lighting (which is more intense during the cold winter months) is uplifting to visitors, especially during the many grey, snowy days. Here, the architect combined low-tech with high-tech, resulting in a structure sensitive to its particular place.

Combining low-tech with high-tech can present some amusing problems, especially when designing a traditional movie set, such as the one located in Kyoto, which actually looks like one of Japan's many outdoor museums. It is difficult to make samurai films for TV

or movies by shooting only on location, thus, an elaborate outdoor vernacular style town containing all aspects of urban life, including brothels and decapitated head displays, was carefully constructed to 8/10 mm. scale. By making the building a bit smaller, the actors appear bigger on screen. Lighting is so carefully hidden that I was not able to discover it, either indoors or outdoors. Virtually all building materials used are genuine not synthetic imitations which suggests considerable maintenance on the one hand, and natural aging on the other. The contrived outdoor studio/museum succeeded in evoking a sense of a busy town, a metropolis rewound back in time, perhaps. The place looked absolutely real, including falling leaves, dirt and roof tiles that needed repair.

Thus far, this essay has explored multi-layered paths in time and space which suggest that computer technology combined with substantial national and private wealth need not trample the aesthetic and sensuous sensibilities of those who design and those who live with these designs. Elegance appears in many guises. The Miho museum, designed by I.M. Pei, incorporates all the technological and aesthetic ideas I noted throughout this essay: the tunnel, the bridge, the vernacular, natural delighting, and most important, I think, the spirit of place.

Pei, who is now 81 years old, conceived this masterpiece the same way he conceived his other projects in other places. He tried to grasp the essence of place with initial design sketches in much the same way as Eudora Welty describes place using words. His triangle theme which is most apparent in the East Wing of the National Gallery in

Washington, DC, and in the Louvre Museum in Paris, appears in the Miho Museum as a subtle reminder rather than an obvious statement. This remarkable architectural, engineering and environmental commission enabled Pei to create a stunning testament to the value of design inspiration and intuition (some call this previsualization, i.e., the ability to visualize from the onset the complexity of the design in one's mind), and combine his personal vision with extraordinary technological innovations.

In order to reach the museum located just outside of Shigaraki, in Shiga Prefecture, one must first leave all public and private transportation behind.^{vi} From the small entrance pavilion, visitors first walk up a wide path lined with cherry trees, and then into a tunnel, in effect, leaving the outside world behind while simultaneously anticipating what lies ahead. Walking through this particular tunnel can be compared to cleansing one's palette before tasting a good wine. The light at the end of the 200 meter long tunnel reveals an elegant, asymmetrical suspension bridge and, beyond that, what initially appears to be a low-key traditional (almost) Japanese style structure, featuring *irimoya* hipped glass roofs. After crossing the bridge, three flights of stairs await us, flanked by contemporary Japanese lanterns.

This rather long, anticipatory walk engages all our senses, much like the long walks and ascents to reach Shinto shrines and Buddhist temples. We are drawn to both the landscape and the building, in part, because more than 80% of the museum is hidden underground and, in part, because tunnel, bridge and museum, plus the bell tower in the

distance, quite literally, merge with their environment. Since the museum is imbedded in a mountain within a nature preserve, the technical, logistical and ecological problems were overwhelming. Discussing his design in September 1998, at the Japan Society in New York City, Pei called this project his most challenging commission. He said that at one point near the end of constructing the building, the architect almost abandoned the project because the Shiga Prefectural Government seemed reluctant to grant permission to build the entry tunnel and bridge since the area was considered sacred. There was considerable frustration on everyone's part since, without any access, the museum could not open to the public. Fortunately, the government yielded.

Working with Japanese builders and landscape architects, Pei and his project architect Tim Culbert, successfully undertook construction of the project while maintaining the integrity of the site. Since no access road existed, a temporary one was discreetly laid out in the forest in order to bring in construction materials which were then placed on specially designed platforms to preserve the forest floor.

Landscaping was equally daunting. All the trees that were removed in order to blast into the mountainside needed to be replaced by hand with the same species, so that the side of the mountain looked as it did before construction. The official count is 7000 replaced trees plus hundreds of new ones. Pei chuckled when relating this to the Japan Society audience for none of his staff realized how steep the mountainside was and, thus, how exceedingly difficult it was to plant even one tree without careening down into the gorge.

He laughed again when describing how he would spot specific places for specially chosen old, twisted pines to be transplanted so that they could be seen from the inside by visitors appearing as though they had always lived there. For some reason, one of the trees could not be planted in the exact spot prescribed by Pei and so, with great difficulty, they planted it as close as possible and turned it slightly. Bets were placed to see if he would notice and, if he did, would he insist that it be replanted yet again? Of course Pei noticed and, realizing the impossibility of moving it a few feet, left it alone.

Those working on the tunnel exit were not so lucky. Originally, the tunnel frame was surrounded by a large rectilinear mass of limestone and concrete. Was it, perhaps, holding the side of the mountain immediately around the tunnel in place, preventing erosion? Wouldn't planting trees do the same job and look better, he suggested? At some expense the limestone and concrete were removed, trees were carefully planted on the steep incline and, indeed, it looks far better.

The museum itself is a technological wonder. The glass hip roofs are actually skylights fitted with adjustable sunshades to control light and glare. Traditional wood slats were not a viable option here. In order to create a warm, more traditional interior atmosphere, digitized film lamination simulating hinoki wood on thin aluminum pipes were designed to give the initial appearance of wood. Looking outside, first at the old pines, then at the forested mountains beyond, one knows exactly where one stands

I think of Pei as a passionate observer, a jubilant techno-aesthete, and a man who understands the power of the spirit of place and the sensibilities of a culture be it Japanese, French, Chinese or American. Hiroko Koyama, Chairwoman of the Shumei Culture Foundation, and president of the Miho Museum, strongly believes that nature and art touch our spirit and give meaning to our existence. Pei was selected, she suggested, because he understood and valued these ideas and, also, because those at the Shinji Shumeikai International Center loved the Bell Tower he designed for them a few years ago which can be seen from the museum. She compares his meticulous care and attention to setting, to technical design, and to aesthetic nuance with the art of tea, a gracious and genuine compliment, I believe. She says:

The art of tea is a carefully arranged ceremony designed to achieve harmony and satisfaction for all participants...through the creation of a beautiful and serene setting, the choice of flavors, textures and foods, and colors and shapes of containers - even the subject of conversation should be well chosen. The overall effect can be sublime.^{vii}

The completed project reflects these ideas and is indeed sublime. If it seems that I have taken you on a circular path leading back to Eudora Welty's thoughts on the notion of place, you are correct. It is important to know where we stand, and that the spirit of place is, to use her words again "forever astir, alive, changing and reflecting." Technology is an important part of the whole, in fact, so important that the project clearly could

never have been completed without it. When we experience the site we experience the technology. It is not hidden; rather it is more like a quiet, yet strong, partner.

A lot of money was spent on this project; some say too much. In this regard, I suggest that we heed the words of a British historian who in 1932, wrote:

The truly rich society is not the one that goes on piling up economic wealth as an end in itself, but the one that uses its wealth as the foundation on which to build a rich and many sided culture.^{viii}

Endnotes

ⁱ William Safire, "The Return of the Luddites," New York Times Magazine, Sunday, December 6, 1998, p. 34.

ⁱⁱ See Noel Perrin's Giving Up the Gun, 1979, David R. Godine Publisher, Boston.

ⁱⁱⁱ Katie Hafner, "At Heart of a Cyberstudy, the Human Essence," New York Times, Thursday, June 18, 1998, p. G9.

^{iv} Noriyuki Tajima and Catherine Powell, Tokyo Labyrinth City, 1997, Ellipsis London Limited, London, p. 28.

^v Jiro Tajima and Kazuo Sugiyama, "Historical Transition of Suspension Bridge Tower forms in Japan," Bridge Aesthetics, 1995 Transportation Research board, National Research Council, Washington, DC, pp. 133-134.

^{vi} A small electric car exists to help those who prefer not to, or are unable to walk.

^{vii} Hiroko Koyama, "Miho Museum," Connaissance Des Arts, 1998, Société Française de Promotion Artistique, Paris, p. 5.

^{viii} Christopher Dawson, "The Modern Dilemma" Religion and World History, 1975, Doubleday, New York, p. 237.