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In the center of Kyoto, Japan, the Kamo River flows from the mountains to the north of the city center, winding its way south through the dense urban fabric that has risen around it. In many places, and for much of the year, the river is quite shallow. It flows in a meandering channel that filters through rocks and small patches of grasses before it flows out of the city and down to Osaka Bay. The broad banks that shoulder the river provide wide paths for walking or enjoying the river.

The first time I saw the Kamo-gawa from a bridge as I crossed, I was amazed to see such a generous floodplain protected within the confines of the city. My experiences of rivers in urban areas in the United States and Europe mean that I'm more familiar with watercourses that have been engineered and constrained to the degree that they hardly resemble natural ecosystems any longer. The Chicago River, for example, in downtown Chicago, flows for a significant stretch between major streets, corseted by steel and asphalt. The Mississippi, perhaps an even clearer example, funnels along its lower run into an ever tighter system of levees, floodwalls, and channels that speed the water along the current rockets out into the Gulf of Mexico over the continental shelf. In Kyoto, I felt like the floodplain in the middle of the urban fabric was a tacit acknowledgement of the limitations of living near a river.

This same acknowledgment (and embrace) and material properties and inherent constraints showed up in other places, as well. Nara yielded several

examples, one more humble but no less illustrative than the other. The first caught my eye at the *Nandaimon* or the great Southern Gate of the Todai-ji temple complex. The 24 aged wooden pillars that support the complex roof of the gate are so worn that their hard grain stands out like the skin of a raisin. The bases of several of these columns where they rest on stones to prevent rot have been trimmed and filled with newer pieces of wood. The intervention is simple and straightforward, but it suggests a practical humility that surprised me.

Further along in our tour of Nara, we moved up the hillside toward the Hokke-do, in front of which we saw small structures that served as storerooms. The horizontal members that constituted the walls of these sheds had been hewn so that their section was roughly triangular, as seen in the photograph above. This shaping is carefully calibrated so that in warm temperatures or in high humidity, the timbers can swell and close the gaps between them, keeping water and heat away from the stores inside. The builders understood the limitations and properties of the



material, and rather than fighting it deployed it to their advantage.

As I saw these things I kept comparing them to my experiences in New Orleans. In light of what I'd seen in Japan, New Orleans began to look like an act of hubristic defiance. Before I moved to Louisiana I thought of New Orleans as a city with a symbiotic connection to its river, like it must have had in the heady boom days of cotton and sugarcane just before the American Civil War. When I arrived, however, I found a city almost totally cut off from the river, with few sightlines connecting the city to the river that built it. As I began to know the city better, I learned about the complex and vast system of levees, dams, locks, canals, and flood walls that claim to tame the river. Conceived many decades ago, this vast monument to postwar 20<sup>th</sup> century industrial thinking now actually creates the problems it hoped to solve. By restricting the river channel, this system virtually guarantees that any future flooding will flow faster and crest higher, creating the need for stronger, higher walls that would only perpetuate the cycle.

I learned about these things in a beautiful early 20<sup>th</sup> century building just off of New Orleans's famous St. Charles Avenue. Built before air conditioning, Richardson Memorial Hall has a long, narrow footprint with great high windows that flood the studios with light. In the building's early days these windows were opened to generate cooling breezes, flushing hot air and ventilating the entire structure naturally. When the building was modernized with modern HVAC systems, it began to fight itself. Now the building is full of noisy ducts straining to condition a building that was built to leak, attended constantly by gelid air and a lecherous damp. The building, which was designed to handle the climatic

constraints of the deep, riverine South, now struggles against its own ventilation system.



*Richardson Memorial Hall, 4<sup>th</sup> floor studio with retrofitted sprinklers and HVAC ducts. Image by Flickr user Anthony V. <http://www.flickr.com/photos/downtownblue/396911222/>*

This incredible tour of Japan made me acutely aware of the generative possibilities of embracing inherent constraints of systems, climate, or materials,

which probably stem from Japan's traditional, cultural respect for nature. On the heels of the era of the "starchitect" and in competitive and sober atmosphere of practice, I think the tide is shifting away from the mindset that technology can overcome nature. Young designers more and more speak about relationships – between a building and its context, between buildings and transportation infrastructure, between construction processes and the environments they may affect. An attitude of humility and pragmatism may allow us to use constraints as solutions to problems, and not obstacles to be overcome with brash spending or brute engineering. As I begin to build my career as a designer and a creative person, I hope that in my practice can incorporate these principles of simplicity, practicality, humility, and service, accepting constraints and using them as guides toward effective, frank solutions.

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*All images taken by the author unless otherwise noted.*