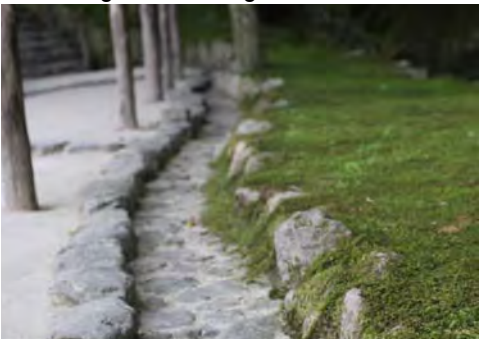




New Orleans flood wall<sup>1</sup>



Slit and grate drainage in Naoshima



Rock-lined gutter



Terraced drainage



A New Orleans home w/ French doors<sup>2</sup>

Studying architecture in New Orleans, one of the first things I took note of in Japan was how Japanese design deals with water. The “water problem” is probably the biggest challenge facing designers in New Orleans. The city not only has water on three sides, but experiences heavy and frequent rainfall, and is sinking. Historically, New Orleans has dealt with the “water problem” by pumping it out, covering it up, or building walls to keep it out. These “keep out” tactics may in fact be exasperating the situation. Japan seems to take a completely opposite approach. Instead of fearing water, they revere it. Much traditional and contemporary design embraces and engages water. This is in strong contrast to New Orleans, where the tendency is to avoid it.

During a heavy rainfall in New Orleans, street flooding is common. When the water clears, I have often noticed that the heaviest flooding occurred along a blocked or backed up sewer drain. The rainwater is channeled to this area, only to have nowhere to go. In Akasaka, Tokyo, I noticed that the drains were slits running along the side of the road, emptying into a channel below. Along other streets, I noticed a similar approach to street drainage: multiple points of entry to get water off of the street as quickly possible. This is a much more practical approach than in New Orleans, where the rainwater goes along the side of the road to the one or two drains on the block. Not only is it more practical, it is frequently more artfully done.

In dense Akasaka, the need to remove street water quickly is a result of urban living. In parks or gardens, rainwater management can be not only practical, but also experiential. At *Ginkaku-ji*, the Silver Pavilion, the grounds had several different approaches. Next to the walkways, there were rock-lined gutters which one can imagine as little streams when filled. Going through the garden was a terraced path, which ended at a bamboo-covered drain. This indicated that after heavy rain, the path would likely be filled with water. The sound of water dropping from one terrace to the next adds to the experiential quality of water. Such careful handling of water occurs not only in temples, but also at the residential scale.

The design of the Japanese *machiya* would work well in New Orleans. The courtyard gardens would provide shaded outdoor space in the summer. In fact, New Orleans’ French Quarter is dotted with many courtyard gardens. The large overhangs that protect the open *machiya* from rain are similar to the deep New Orleans porch. The open *shoji* blur the line between indoor and outdoor space and bring in fresh breezes, much like French doors in New Orleans homes. Both housing types are connected to the outdoors. However the *machiya* has a stronger connection to water. Runoff from New Orleans homes typically goes directly into the streets and the sewer system. During a stay at a Kyoto *machiya*, heavy rains in the night caused one courtyard to fill with water from the downspout. Rather than the water going directly into the sewer, it was first released into the courtyard. With a slight cant and a drain, the courtyard was designed to receive the water and create a pool during rainfall. The other two courtyards of this large *machiya* were connected by



Reflection at the Silver Pavilion



Itsukushima Shrine



The Times Building



Gallery of Horyuji Treasures<sup>3</sup>

Image Sources:

1. <http://www.rnw.nl/>
2. [http://kathyprice.typepad.com/dispatch\\_from\\_new\\_orleans](http://kathyprice.typepad.com/dispatch_from_new_orleans)
3. <http://www.obayashi.co.jp/>

a dry stream, much like those are the Silver Pavilion. During this rainfall, a trickle of water ran from one courtyard, under the machiya, into the other courtyard. The use of rainwater to heighten the sensory experience in Japan is contrary to New Orleans' quick dismissal and removal of it.

The different approaches to water most likely stem from historic events. Outbreaks of yellow fever in the 1800s have led to New Orleans' systematic removal of water from the cityscape. A fear of standing water and mosquitos developed and remains to this day. Despite economic and ecological benefits, public policy continues to prevent residents from collecting and storing storm water onsite. Floods also contributed to New Orleans' fear of water. High floodwalls were built along the river to keep the city safe, effectively disconnecting it from the Mississippi. The physical disconnect affected the way New Orleanians interact with the river. Despite the Mississippi being the reason for and livelihood of the city, the lack of interaction likely created the image of a river that was a threat, rather than an amenity.

The historic use of water has a design element allows for the careful handling of it in infrastructure and building design. Looking again at the Silver Pavilion, the pavilion itself faces a pond. The still waters of the pond reflect the pavilion and the landscape, an effect that inspired Monet. The Itsukushima Shrine is built on the shore. The changing tides are a part of the experience at Itsukushima. At low tide, the shrine is elevated above the wet sands. The shrine appears to be floating in the water at high tide. The inclusion of water in traditional design creates an image of water that is opposite of that in New Orleans. This may also be due to the accessibility of water in public life. In Kyoto, for example, the Kamo is not nearly as deep or the currents as strong as the Mississippi. The banks are accessible and lively. Restaurants have balconies overlooking the river. The Kamo is a part of the everyday lives of Kyoto residents and not something to be feared. This history with water continues in contemporary design.

Tadao Ando's Times Building in Kyoto has a narrow street front and goes deep into the block. Along the side of the building is a canal, no lower than 18 inches below the building's lowest floor. The Times Building opens up to the water, with a lower level walkway that doubles as outdoor seating right along the canal. Yoshio Taniguchi's Gallery of Horyuji Treasures faces a pool, reminiscent of the Silver Pavilion. To enter the building, one walks along a walkway that appears to be floating.

Contemporary design in New Orleans does not have the opportunity to engage water in such a way. While designers talk about "daylighting," or unburying canals and streams, the city is spending millions on increased underground canals. In New Orleans, open water is something to be feared. This fear of water stems from a series of historic disasters such as disease and flood. In contrast, Japan has historically integrated water into design. From temples and parks to traditional homes, water creates a sensory experience through sound and reflection. As New Orleans designers work to change the image of water in the city, they can learn from Japan on how to incorporate water in their designs.