TRIPPING THE VOID

ARCH 384: Competition Elective
Essay Component

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Spring Term 2005

The Precedent and Initiative in Architectural Design Statement:

> *"The works of the past always influence us, whether or not we care to admit it, or to structure an understanding of how that influence occurs. The past is not just that which we know, it is that which we use, in a variety of ways, in the making of new work…. The typology argument today asserts that despite the diversity of our culture there are still roots of this kind which allow us to speak of the idea of a library, a museum, a city hall or a house. The continuity of these ideas of type, such as they are, and the esteemed examples which have established their identity and assured their continued cultural resonance, constitute an established line of inquiry in which new work may be effectively grounded."*
> The Harvard Architectural Review. Volume 5. Precedent and Invention. Between History and Tradition: Notes Toward a Theory of Precedent. John E. Hancock.

The success of the proposal lies in the initial approach to the design that we took; as we involved ourselves with an understanding of the underlying intentions competition as well as the historical developments of the site. Combining each of our strengths in design and illustration, we were able to demonstrate a clearly contemporary design proposal while respecting the site specific environment.

The SSEF 4th Annual Student Awards Design Competition, *Tripping the Void*, basically challenges students to "design a single span pedestrian bridge, on a site of the designers' choosing"[1], using structural steel as the primary material. By understanding the fundamental purpose, we were able to develop it into more advanced possibilities. Possibly the earliest engineered structure of civilization, the pedestrian bridge has a fundamental programmatic purpose of spanning a simple passage from point A to B over unfavorable terrain. A primitive example of this concept is the picturesque natural image of a fallen log over a rocky stream, allowing passage of hikers to cross from one side to the other. In a more modern interpretation of this scenario, the competition focuses on the artistic and innovative qualities of the structure as "bridge design is one of the most pure

areas for testing architectural ideas".[2] From this standpoint, we began to focus our proposal on the possible replacement / re-design of the King Street Bridge located in the heart of London, Ontario.

The city of London has continually attempted to revitalize the area in and around the Forks of the Thames; this became the central focus of our competition proposal. Not only did we intend to improve the community but also create a dynamic form that could act as a contemporary landmark within the downtown core. Over the last decade, the area once known as the heart of London has become void of activity and life. Such neglect, we felt, symbolized a discontinuity between the past and present; a void between city and nature that should be reconnected. The site chosen has full potential to prosper, as it is surrounded by pro active developments such as the Covent Garden Market, John Labatt Centre and the seasonal splash park. It is the proposal that will unite the area as a functional aesthetic landmark. Researching successful examples of iconic bridges, we analyzed the form and function relationships of SHoP Architect's Rector Street Bridge, Wilkinson Eyre's Floral Street Bridge and dECOi's Ether/1.

> *Structural design lies not just in the realm of the engineer, but can be a means for architects of arriving at a meaningful realization of architectural ideas. It is when theory meets physical necessity that architecture can become really interesting.*[3]

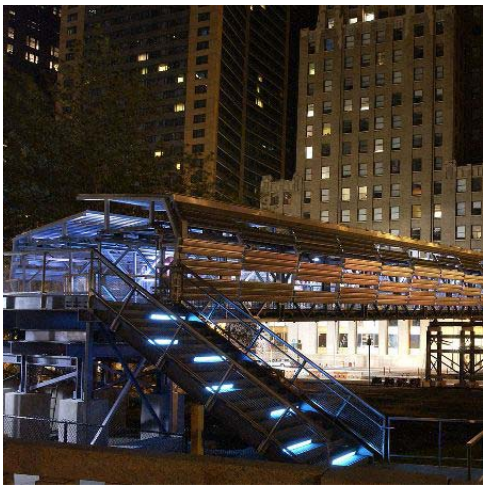
Our approach to the re-design of the King Street pedestrian bridge became a 'response' to filling the inactive void with a community unifying iconic pedestrian bridge. Perhaps the most profound initiative came from Wendy Talarico's criticism of pedestrian bridges for, "they are closer to the landscape and the buildings, the people who use the bridge must feel it is part of the community"[4]. In fact, the site chosen links the multi-use (pedestrian, bicycle, rollerblade, etc.) pathway trails from the east bank to the west bank that run across the entire city of London. Focusing on the orientation of the site, we decided to treat the north

and south faces respectively. The south side of the site faces towards the busy York Street vehicular bridge and the rest of downtown London, while the north is more scenic and overlooks the Forks of the Thames. Recognizing the theoretical impact of the proposal, we set to accomplish a suitably designed realization of the concept.

Overall the proposal relies on three main ideas: the south / north face, the linking surface, and the landmark catalyst quality of the design. This design mentality was inspired by Wilkinson Eyre's "deceptively simple, yet immediately legible design"[5] of The Floral Street Bridge. Basic in concept, the south face of the proposal is composed of slightly obtuse-angled 'L' finger forms that are not only rudimentary in shape but also in construction. Meanwhile, the north side is free and uncluttered, open to the scenery of the Thames. Repeated along the bridge at 2.5 meter intervals, the forms are rotated along the bridge surface to provide structural support as well as an interesting dynamic wavelike façade for passing vehicular traffic and pedestrians. The effect of the simple 3 degree rotations of the fingers beginning at each end of the bridge and peaking at the middle is aesthetic but also programmatic.

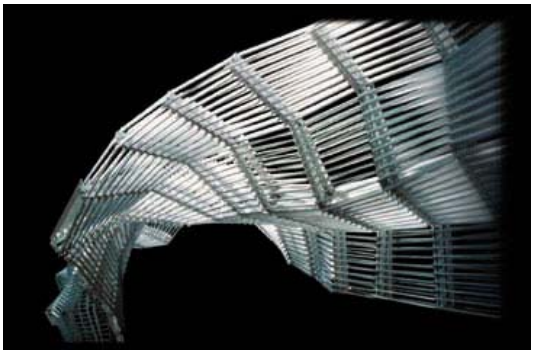
Traveling through the bridge becomes an experience of becoming part of the wavelike dynamic of the fingers which, at the centre, reach above and shelters the bridge surface. Covering the middle of the bridge, the user gets the sense that the bridge is opening outwards to the northern scenic view. Connecting between these structural fingers are benches that offer an added programmatic feature to the bridge surface. Resting points along the bridge provide an uninterrupted northern view over the Forks of Thames that encourage different paces of passage. Environmentally aware, the surface of the bridge is of recycled rubber and gives the pedestrian a different walking experience than the rest of the city's pathway trails. It is such minute details that aide in the project's intention to make a new space that people will want to experience. The Rector Street bridge is a prime example of providing pedestrians with more than just

passage. Designed by New York's SHoP Architects, it was the first infrastructural element built in Lower Manhattan after the attacks of September 11th and initiated 'a microcosmic illustration of the collaborative effort it's going to take to rebuild downtown'.[6] The new bridge crosses the multi-lane West Street that reconnects the community to Battery Park City. Linking residential neighborhoods and the World Financial Center to the rest of Downtown the bridge provides safe sheltered passage for commuters and offers occasional views to the surrounding area. By wrapping a prefabricated superstructure with perforated cladding, partial cladding enables the penetration of sunlight while providing shade during the day. At night, fluorescent light glows from within the light planks in the floor and the voids of cladding in the walls. "People traversing a bridge at night need enough light to feel safe.[…]not only to help pedestrians see the way and others crossing the bridge, but also to accent architectural features, including entry and exit points."[7] Thus, our attention shifted towards understanding how to create a more dynamic beacon-like quality to the bridge that would pronounce itself symbolically day and night as a catalyst for revitalization.



The lighting of the bridge at night was essential to the revitalizing symbolism for the city and downtown core, but the energy required became an environmental problem. Our solution became an important sustainable approach, by implementing solar panels atop each southern face of the structural fingers, energy could be harvested during the day and transformed into lighting the bridge at night. Maximum exposure during the day also eliminates the reliance on city power to light the bridge at night. The most influential project that aided in our design approach was dECOi's sculptural project, Ether/1. A sculptural piece created to commemorate the fiftieth anniversary of the United Nations in Geneva, it is a series of sculpted projects where 'image/surface/object are ambiguous in

their status'.[8] Developed with the use of a slender steel structure clad in an aluminum skin it allows the interweaving of its mesh to gleam along its length. Immediately, it evokes a dynamic sensation that we found was lacking in contemporary architecture and design. Consequently, the hollow aluminum tube skin detail was implemented into our scheme to allow the same gleam effect during the day is it would at night.



The success of any competition proposal requires an equal understanding of the intentions of the competition and how to best design a solution that focuses on how it is to be used, the specificity of the site, the historical roots of the actual idea, and the innovative contemporary position that one should build upon. Such understanding encourages the exploration of linking artistry and urban social intentions with engineering as seen in the projects by Wilkinson Eyre, SHoP Architects and dECOi. Combining each of our strengths in design and illustration, we were able to demonstrate a "signature bridge, a one-of-a-kind structure, is becoming popular as an icon that represents a community"[9] while respecting the site specific environment.

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[1] Tripping the Void Competition Guidelines
[2] Tripping the Void Competition Guidelines
[3] Tripping the Void Competition Guidelines
[4] Talarico, Wendy. "Crossing Safely to the Other Side"
http://archrecord.construction.com/resources/conteduc/archives/research/3_00_1.asp
[5] Hart, Sara. "Floral Street Bridge," June 2004
http://archrecord.construction.com/projects/bts/archives/bridges/04_floral/overview.asp
[6] Ringen, Jonathan. "Bridging the Divide," July 2002
http://www.metropolismag.com/html/content_0702/ob/ob08_0702.html
[7] Talarico.
[8] Archilab. "DECOI," 1999.
http://www.archilab.org/public/1999/artistes/deco01en.htm#
[9] Talarico.

Illustration References
Fig. 1 - SHoP Architects: Rector Bridge, http://www.projectrebirth.org/rebuild/urbanPlan/rectorBridge.html
Fig. 2 - dECOi: Ether/1, http://www.archilab.org/public/1999/artistes/deco01en.htm#