

(Un)Build/Design/Build: Exploring the Role of Consequence in Architectural Education

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The role of teaching is not just a conveyance of what our profession is, but rather, what it might be. As instructors, we do not simply prepare students to integrate passively into the existing situation of the architectural profession, rather we guide students towards establishing an empowered position, giving them an acute awareness of the impact their work has on the environment and people for whom they design. As a result, their responsibility to architecture is not to repeat the conditions they find, but to advance the field through an informed, personal, and intelligent critique of it.

The complexity of issues, ideas, and approaches in architecture charge us to teach in a way that is born of our own subjective interpretation and negotiation of them. This challenge reveals the pluralistic nature of resolving design problems, and as well, the opportunity for us to establish our voice in the ongoing discourse of the profession. It is exactly for this reason that the greatest asset we can impart students in their education is an awareness and sense of importance about their view of the world around them.

The design studio is a valuable tool for us to describe and model the range of issues and challenges real design projects provide. This tool however can also serve to misguide as much as it might help a student understand the value of modeling reality versus engaging it through their architectural investigations. As experienced instructors and practitioners, it is easy for us to sometimes take for granted the awareness that is required by students to understand the nature and value of representation and how it translates to the realities imposed by a site

and its situation. Very often this disconnect leads to projects developed by students that are narrowly focused on a few select issues, yet radically disconnected with the complex and important ones that greatly impact the success of a project. Focused and intensive research is deeply important and is the unique opportunity of an academic environment, however without a meaningful connection to the realities of what we build or the experiences within it, the lessons that can be gained can be at best limited, if not misleading.

One of the most important concepts I have found to help students establish a meaningful dialogue with the realities of a project is through the introduction of consequence. Through this, students can discover how the ideas they develop in a project are translated and transformed by the unique realities of that project. In a design project that engages with the realities of a site, situation or materials, the entire exploration of design becomes informed by the actual nature of the situation, rather than an abstraction of it. Design projects that encourage a student to involve factors and conditions that they cannot control in the secure confines of a design studio help to remind them of the role of studio as a lens through which to view the world, and not being the world itself. In fact, the discovery, invention, and establishment of themselves in the work that embraces consequential actions serves to teach much more effectively than any lecture, reading, or instruction might. Experiential learning always trumps inherited knowledge.

Several studio professors have explored models of teaching within real life situations, offering stu-

dents a direct experience with the realities inherent in each design situation. Professor Shin Egashira, who teaches at the Architecture Association in London, has led students to the small village of Koshirakura, in northern Japan, to develop a wide range of design and build projects aimed at responding to the lives of the people in the town. In his studios he focuses on teaching students about the importance of becoming sensitive to the lessons offered by the people and environment for whom they build. The projects they have created are as a result informed as much by the local culture of the community as they are by the craft and tectonic lessons contained in the old buildings in the town. The long-term commitment of Egashira, who has worked with this village for over ten years, has allowed his studio to develop a meaningful relationship with the community, gaining the confidence and interest of locals who might otherwise resist such an outside presence. In his *Additional Space* studio project, his students used the participation of the community to offer personal objects contained in their homes and private spaces to inform the creation of a communal structure that would serve as an archive of the village's artifacts.¹ In these projects students demonstrated a sincere interest to adapt to and learn from local traditions and techniques in building, which result in projects that fit quietly but effectively within the existing tapestry of the community.

Professor Richard Kroeker with Dalhousie University uses many of his studio projects to support the Inuit communities of Canada. Over time, he as well has gained the confidence and support of these traditionally tightly knit communities. In his studio projects, he uses local materials, and regional techniques for construction that reflect a sensitivity toward the culture in which he builds. However as Kroeker states in an essay with colleague Ted Cavanagh, the way we build and what we build with have a profound impact on the communities and land from which we draw our resources.² They point out that by looking outside of local resources for material and skilled labor, we limit the ability for the people in those communities to curate future material supplies and construction resources for themselves. Through interdependence on foreign and universal material supplies and non-regional construction skills, we limit our ability to become self sufficient, and independently resourceful, and thus less empowered to respond to our own needs.

REGIONALIZING MEANING

For the last three years, I have been developing a design studio in which issues of material resources, environmental independence and cultural identity have served as a basis to support one community's localized response to these global issues. The subject of this work is a community of sixty-eight people located two and a half hours southwest of the University of Manitoba campus in Winnipeg, Canada. The town of Clearwater is a small farming community and one of the original settlements of Midwestern Canada. Having reached a maximum population of 120 fifty years ago, this town has been experiencing a rapid depopulation and deskilling due to the industrial agricultural movement that has taken over most of the North American farming communities. Because many farmers have had to buy up and farm more land than they could normally manage themselves in order to keep up with growing demands and falling wages, there is less land to support these towns. Farmers as a result have gone into deep debt owning and operating expensive machines that are required to harvest greater tracts of land, while earning just enough to simply make the payments on their new debts. For this reason, many who live in rural communities like this one have either moved away in search of other ways to make a living, or have changed professions and have begun to commute to larger towns and cities in order to continue living in the town they grew up in. The younger generations have been entering urban professions because of the lack of farming opportunities available to them. The trade their family has lived by is slowly but surely being severed, leaving families to cope with questions about identity, worth, and an unfamiliar future.

In 2001, the elementary school in this town shut its doors because of the lack of students to justify its operation. Faced with this stark reality, the people of Clearwater realized that this closure was the beginning of several more if they did not reconsider how they would continue and survive as a community. In the face of this impending future, several people in town joined up with some residents of the city of Winnipeg, and boldly formed the Harvest Moon Society (HMS), a non-profit organization aimed at providing sustainable approaches to community development and self-reliance. Much of their mandate was based on the common values the town had been established on, the production of food, but now their focus

was on ways to produce food that was centered on the quality of it, rather its quantity that to many was considered the source of many of their problems. In order to raise awareness of their cause, the HMS established a yearly festival to bring together farmers, and members of rural and urban communities together. The Harvest Moon Festival began in order to combine a celebration of music, with farming tours, and workshops that educate people on healthy practices of food production, tool making, animal raising, and overall sustainable practices that could be used in homes as well as on farms.

At my first festival I was struck by the physical evidence left in the wake of the depopulation this community had experienced over the last fifty years. Dozens of abandoned barns, homes, storage structures, and schools peppered the prairie landscape, revealing decades of neglect and weathering. These buildings, although appearing valueless to the community, hinted at a potential they embodied in the materials they contained. At the same time, the people of the town, all but left behind by a massive industry, did not in anyway come across as a community that had given up on itself. Instead they displayed a profound dedication to their new ideas about how they would try to survive, given the realities of a larger global force that had transformed their town. Witnessing this unique situation inspired me to form a committed and meaningful collaboration with Clearwater and the students of architecture at the University of Manitoba.

WORKING BACKWARDS TO MOVE FORWARD

In the fall of 2007, I led fourteen architecture students (in a vertical studio of both undergraduate and graduate students) to a one-room schoolhouse in Clearwater that had been donated to the studio by a farmer who owned it and had used it for grain storage over the last fifty years. He had been planning to burn and bury it into the ground, as has been common practice for dealing with buildings that had outlived their usefulness. Knowing that I wanted to work with one of these abandoned structures, he generously (and courageously) offered it to our studio.

The Crystal River Schoolhouse (circa 1892) now severely weathered and in disrepair, served as a reminder of the intentions of the past and the stark

realities of the present. It posed questions to us as to what we see when we look at buildings and materials that are considered useless, like this one had become. Questions about what a "sustainable" approach to our project would be caused the students to grapple with the significance of this term that has been so broadly used that its meaning had become overtly generic, and invoked little or no connection to our specific situation. These questions charged the students to define for themselves what being "sustainable" meant to them as well as to this project.

What the students came to realize was that the implication of how this word is used today greatly suggests the *future* production of energy and materials. The common reading of the term "sustainable practices" is positioned squarely in the future production of energy and materials. Very often, this phrase implies the implementation of "new building practices", the production of "new environmentally sensitive materials", the development of "new highly efficient tools", and the creation of "new environmentally focused jobs".

By speaking of sustainability in this way, we inherently attach our sustainable ambitions directly to the *future* production and *future* development of materials and energy in order to provide for it, inherently creating new pollution and new consumption of resources. When we do this, we also overlook the most abundant resource of materials and energy that we possess, that which we already have. Recognizing this, the students began to consider the significance of where our project was located, what it was made of, and whom it would serve.

In considering the community's perception that the building had in essence "died", we sought out to inquire if the life cycle of a building could be reinterpreted. The way we imagined we might do this was by devising a way to take the building apart, and to reconsider it through the components contained within it.

Having never deconstructed anything but models, the students set out to examine this question, without the confidence and security offered by any of their own experience. In a significant way, the students invited the role of consequence to judge the value and meaning of their work. The realities of the site, people, and materials would have as much



Figure 1: The deconstruction of the Crystal River Schoolhouse.

as a way to talk about what the project might become as much as their own imagination and reading of what they produced. For most this was a radically new approach to working, which scared many of them but inspired everyone, including myself.

THE (UN)BUILD

From the top down, we worked alongside the farmers and began to pull apart the materials from the building, while trying to preserve as much of them as we could. For many students, this was their first experience working on a full-scale project with using construction grade tools. The work initially was rough, resulting in many splintered boards, scraped materials, and growing scrap piles. However, very quickly, the students honed their skills when they realized that the way they used their tools had a direct influence on the amount and quality of material they were able to save. The size and quality

of the materials we were discovering portrayed an era of wood harvesting that was unlike anything we know of today. The connections and details described the technique used to build the structure, and revealed the role each component played in supporting the overall building.

Even the markings on the wood offered insight into what gave it shape, from the tools that carved and cut the wood, to the edges gnawed off by the insects and animals that had found shelter in the building over the years. These lessons offered the students an appreciation for the history and richness contained in the materials they were working with more than any lecture could have hoped to deliver.

During the first weekend of the deconstruction, one of the farmers arranged for most of the surviving teachers and students of this schoolhouse to join us for an impromptu weenie-roast amidst the piles

of lumber, scraps, and tractors. Sitting around a campfire at dusk, we were joined by around twelve members of the Clearwater community who had experience with the building we were working with. Beginning with one of the farmers, each person described their reason for being there that day. The students of the studio explained why they chose this studio, and why they wanted to work with this community and project as opposed to the other conceptual projects offered by other studios. The community members recalled their memories contained within the walls of this building revealing the cold winter days requiring continual feeding of the wood stove in the middle of the classroom, the dances that were held after school aided by the piano in the corner of the room, and the number of generations this school served. By the end of that night, we gained a much deeper appreciation of the significance this structure had to the community. The building now appeared much more than a school, but in fact an integral component of the culture and history that shaped the town of Clearwater.

By the end of the third weekend, we had successfully deconstructed the entire building, down to the stone foundation that supported the wood structure above it. As a result we were able to reclaim almost 80% of the original old-growth Douglas Fir wood, three five gallon buckets of hand made nails, and a large container of regional made bricks that are no longer produced. All that was left was a rectangular patch of raw soil, surrounded by a perimeter of sapling trees that had been planted around the building by the prairie winds that carried the seeds from the neighboring fields.

IMAGINING A NEW USE

Over the course of the next several months, the students worked together with the HMS and members of the community in order to find a meaningful site for the structures the students would design with the material they reclaimed. On the north edge of the town, a new interpretive nature trail was being developed by the HMS in order to showcase the rich eco-system of the valley region upon which this town is situated. They hoped that the trail would help draw environmentally focused travelers and nature lovers to this area. This trail offered two sites for the students to consider. A third site that was selected was the school that was

purchased by the HMS that had been operating out of Clearwater since its closure a few years earlier.

As a studio, we had to decide how best to use our human resources as well as the materials we had gathered. Allowing the students to choose their site of interest, I broke the group of fourteen into three groups, giving each group an equal share of wood from the schoolhouse. Although it would be necessary to work in groups, I focused my efforts in helping students to develop their own areas of research and design within the context of a group project. The motivation for the students became multi-layered, involving both a personal interest in the work as well as a communal sense of purpose they rarely experienced in previous studio projects.

Working closely with the community and non-profit organization, the students produced several iterations of concepts for each site. After agreeing on a final design, the groups then carefully planned the use of each piece of wood to its greatest potential. Some of the wood was traded between groups, revealing the type of wood needed by each group to support the unique characteristics of each design. After generating construction drawings and models, the students worked with an engineer who helped them ensure each project was able to meet code and the realities of each situation.

During the term, the students explored and researched the nature trail to discover the qualities it possessed, and how architecture might help to reveal this to its visitors. The first site selected was



Figure 2: The bridge

a gorge that had formed due to the high volume of drainage from the farmland situated above it. As a response to this, one of the groups developed a design for a bridge that was inspired by a 2000 year-old Chinese method for constructing long spans with small dimensional lumber. The bridge levels at the midpoint, offering visitors a moment to witness the impact the gorge has had from high above.

The second site became a lookout shelter at a point along the trail that offered dramatic views of the valley region. This structure was designed to sit on the ground using small concrete footings that would experience heaving from the freeze-thaw cycles of the clay and shale soil in the area. The structure was broken up into triangular sections, hinged together to create a surface to walk, sit, and rest on, while being protected from the rain and sun.



Figure 3: The Lookout Platform

The third project focused on the Harvest Moon Centre (what was once the elementary school that was purchased by the HMS) that housed a meeting room that various community groups would often use to discuss farming and food production issues. At times the kitchen in the next room was used to support the meetings. The students decided to design a wall that could be transformed from being fully enclosed to fully open through the use of a counterweight system that folded the wall into the ceiling, revealing a meeting table between the rooms. The students chose to use a large stone from the schoolhouse foundation as the counterweight that raised the wall. In this way, the people of the town could now touch a hidden, but deeply symbolic part of the building and the community.



Figure 4: The moving wall

LEARNING FROM CONSEQUENCE

While the students were resolving the technical aspects of each of their designs, the things they drew and built became noticeably different than what they produced only a few months earlier. The drawings became richer with information, precision, and intention. The models they built were done in order to inform the drawing, and visa versa. At this stage in the work, I found that my role became less of an instructor and more of a facilitator and guide for the students who were driven by things much greater than the requirements of a studio project. The conceptual ideas the students were then developing now related to the realities of the site. Concepts, no longer served as representational tools, but now were discovered to be tools of consequence.

In the final weeks of the studio, the students travelled back to the community with the wood they cleaned, cut, and prepped to construct the projects on the sites. The tools that the students used to build with were the same tools they used to deconstruct the school with, however now the skill and confidence with which they used them were worlds apart. The students worked alongside with members of the community and HMS in order to realize the vision they had all worked to make. It became very clear during this phase, that the relationships the students had developed with the community greatly impacted their interest and motivation in the project.

The ribbon cutting ceremony was attended by both a vast majority of the people of Clearwater, as well as many members of surrounding communities who had heard about the project via the social networks



Figure 5: The two-season patio extension

that connect these rural towns. Many of the local newspapers came to report on this project that had brought several groups together in order to achieve something that many thought was not possible.

One family who approached me during the ceremony was one of those who doubted the ability of the schoolhouse to produce material of any worth. This family stated that after seeing the quality and quantity of wood that was produced from the schoolhouse, they were forced to reconsider their intention to tear down and burn a century-old barn that had been in their family for generations. Although they desperately wanted to avoid this, they thought because of its appearance and age, that it had had no further use. Realizing this, they asked if I would consider using it for the next year's project, which I did.

The following fall, I along with nine new students from our department embarked on another un-

build/design/build project to carefully reconsider the potential remaining in the barn, that until a few months earlier was on its way to becoming a lost resource of material and history for this community. Working once again with town and the HMS, the project resulted in the creation of a two-season patio extension for the existing community-owned restaurant in Clearwater. Although intended to provide an outdoor venue for the restaurant, the project soon revealed a lesson in how what we make is not always what we expect.

RIPPLE EFFECT

In the planning for this year's festival, the HMS recognized that the new patio could provide an ideal way to establish a performance venue within the town, instead outside of it as it had been for the previous eight years. The town agreed, and at this year's festival the structure established a new form of collaboration between the town of Clearwater and

the 1,200 visitors who came this year. People in the community setup impromptu farmers markets and garage sales throughout the town, encouraging the visitors to explore and discover the area for themselves. The town now instead of simply hosting the festival, became an integral part of it.

This was a very significant change for another reason, as for the first time the actions of all three groups, the University of Manitoba, the Harvest Moon Society, and the town of Clearwater began acting as a single entity, each benefitting from the contributions of the other. The new life that the patio took-on helped the students understand that what they had been designed was not a fixed thing, idea, or concept, it was in fact a new character that would have its life to live in an evolving community. This lesson helped us all realize that the consequence of our actions as architects can only be understood once the building has had a chance to live and speak for itself, without the defense of our best intentions.

ENDNOTES

1. Shin Egashira, *Before Object, After Image Koshirakura Landscape 1996-2006* (London: AA Publications, 2006).
2. Simon Guy & Steven Moore, Ed. *Sustainable Architectures*. (New York: Spoon Press, 2005).