

PROFESSION WITHOUT DISCIPLINE WOULD BE BLIND

The thesis of this paper is that even though there is a clear and important interdependency between the profession and the discipline of architecture it is the discipline, with its major tasks and basic questions that is indispensable to the understanding of architecture as a part of fundamentally human endeavor. It simply has to become the foundation of the education of an architectural student. If we don't understand architecture as a part of our nature as people and if we don't see it as a tool for exploring our place and our being in the world, architecture loses its charge and becomes only a craft rather than a philosophically human endeavor.

In this context I would like to explore two design studio projects which were experiments in bringing the discipline of architecture as gathering and generating knowledge to a fundamental part of the early design education. Both of these projects used the bodily experience of the world as a tool for collecting information about natural forces. In both projects this experience became a base for a series of representations and translations which consequently lead to a design of an architectural element and eventually architectural structure.¹

Context

The most basic difference between profession and discipline of any kind is that one – discipline – generates knowledge and the other – profession – applies that knowledge to solving specific problems. Thus, the profession and discipline of architecture differ in their primary foci. The profession focuses on the product and the ways of production. It concentrates on the practicalities and processes of building. Discipline, in my view, is mostly concerned with the more philosophical questions of why and how we build. Architecture, in its very essence, relates to the most primal human activity which is building of shelter. In a very direct and physical way it manifests and defines a person's relationship and place within the world at large. So it is the discipline of architecture, rather than the profession that takes on that fundamental and philosophical search for the definition and understanding of our place in the world.²

The discipline of architecture is accumulated and organized knowledge that relates to making buildings. Part of that knowledge includes the natural world and natural forces, people and the relationship between them and the natural world. Our social relationships and hierarchies are also a part of the discipline, but in this paper I will rather focus on the former part of architectural knowledge. That knowledge could be and quite often is generated through person's direct experiences of the natural world, by experiencing and intuiting the forces in our bodily reaction to them. In the projects which I would like to discuss in this paper the students were offered opportunities for direct experiences of the natural forces as a base for gathering and generating worldly and architectural knowledge first hand, by themselves and for themselves. My hope was that they would come to know and understand these forces on the very fundamental, intuitive and intimate level and that at the same time they would be able to look critically at their experience and use it in a consistent, disciplined and analytical way to design an architectural structure.

¹Juhani Pallasmaa, *The Eyes of the Skin*, (Great Britain: Wiley-Academy, 2005). Both projects in their conception phase were inspired by Pallasmaa's exploration of the role of bodily and sensual experience in perceiving the world and architecture.

²Michael Benedikt, *For An Architecture of Reality*, (New York: Lumen Books, 1987).

Projects

The projects that I would like to discuss are based on two major principles. First, they are structured as to follow a design process consisting of multiple re-presentations and mappings of the same idea.³ That series of representations and mappings connects the point of departure which is a specific bodily experience and the architectural structure which is the conclusion of the process. It allows for a close tie between the beginning and the end, but it also allows for each of them to be their own entity. Second, in both projects the design process is initiated by students' bodily experience of the natural world and their critique of that experience. The initial phase of the project is not "architectural", but it relies on students' intuition and observation of the world as it is and understanding very basic worldly phenomena, i.e. the relationship between wind and ground in a given place.

The first project to be discussed focused on the understanding of the physical forces of a natural environment, a place of a person in that environment and the role of a built structure as a mediator between the natural world and a person. The second project was an attempt to offer students an intuitive understanding of structure, enclosure, light and shadow.

The students' task in the first project was to design and build a structure located on a specific site to balance and weigh one specific natural force. The site for this project was located on a prairie hill by Clinton Lake in Lawrence Kansas. We chose that site particularly for its exposure to the wind, sun, gravity (hill) and buoyancy (water).



Figure 1; Site exploration

³ Octavio Paz in *Marcel Duchamp; Appearance Stripped Bare*, New York, 1991 in his interpretation of the Large Glass presents Duchamp's idea that three dimensional world which we can perceive is a projection of the real, four dimensional world. The fourth dimension is always the essence of a given thing. Thus, the appearances (representations) could differ while the essence of a specific thing stays the same



Figure 2; Sketch by Gavin Snyder

As this project was going to build on a direct experience of the natural forces we started with very thorough, first hand understanding of the site. Since our assumption, from the beginning, was that the only instrument for recognizing and learning about the world that we have is our body and our bodily perception it was clear that we needed to spend as much time as possible on the site. Our first visit lasted half a day and was spent in simply being there and allowing for the different aspects of the site to reveal themselves and come to us. During the second visit we started to record these

observations, mostly through sketching and later through photographing. The purpose of the observation was to see the site as made by a set of interdependent forces that shape the place as well as each other and the recording was the first re-presentation of the site from a particular point of view using drawings and photos collaged together. That re-presentation was to reveal the site clearly as a field of interdependent forces.

In order to make students' understanding of at least one of the forces deeper and even more intuitive each group of the students was asked to reveal that particular force of their choice in some physical way. Thus, students placed an "installation" within the site which would interact with one of the forces and gave it a physical and experiential presence.



Figure 3; Site installation

In some cases the "installation" was as simple as letting a rock roll down the hill and the same reveal the force of gravity and in others it consisted of tying light yellow ribbons to grasses. The combination of visibility of the yellow color and vulnerability of the ribbons to wind made the wind visible to our eyes. The installation on the site had a dual charge; it was another re-presentation of a force and the first physical intervention on the site. From that point on the students were asked to develop a structure that would become a part of that natural environment of the site and would reveal one of its forces in a way that was perceivable to human senses. We worked through series of studies which we tested in large bathtubs and with the use of big fans

depending on the nature of the force under exploration. Once the students developed their

ideas for the individual structures that measured and balanced their respective forces they were challenged to turn these structures into shelters that would protect and connect people with the environment. For the rest of the duration of this project we worked on using these prototypical structures to develop an architectural element – a wall, a floor or a roof.



Figure 4; Studies

Looking back at this project I believe that its strength was in the directness of the steps. After experiencing a concrete, existing phenomenon, such as wind or gravity the students were asked to immediately turn it into a poetic representation – such as the yellow ribbons flowing in the wind. This immediacy ensured a close and simple relationship between the bodily experience and the poetic manifestation of it. On the other hand that poetic representation of the experience becomes the first conscious and physical manifestation of the natural force. Following, there came a series of models that were in-between the poetic representation of the force and the actuality of a specific architectural element. Gradually, in that process the reality of the structure, i.e. a wall or a floor becomes stronger and clearer. Eventually the “wallness” or the “flooriness” of the architectural element asserted itself strongly enough that the structure became a wall or a floor and it is no longer an abstraction of the natural force that were studied. There is a concrete, experienceable phenomenon on one end of the process and there is the concreteness and specificity of an architectural element on the other one. The two ends are connected by a series of representations, mappings and translations of essentially the same phenomena and ideas. In result the experience of the force and the architectural element are directly tied to each other but they also are two autonomous entities. Both of these entities rely on performance in both major meanings of the word. Another advantage of this approach is that students became sensitive to environmental issues that may only manifest themselves as items on LEED’s checklist.

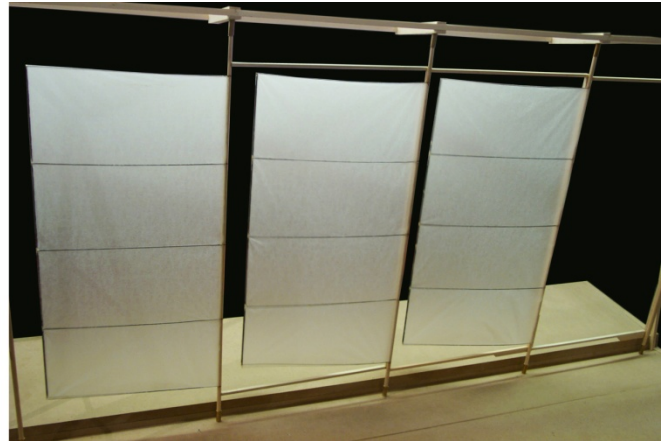
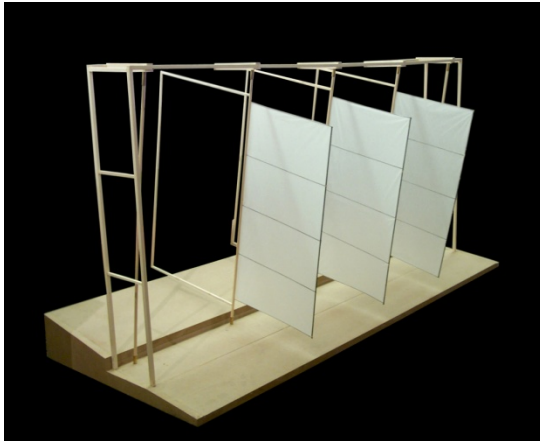
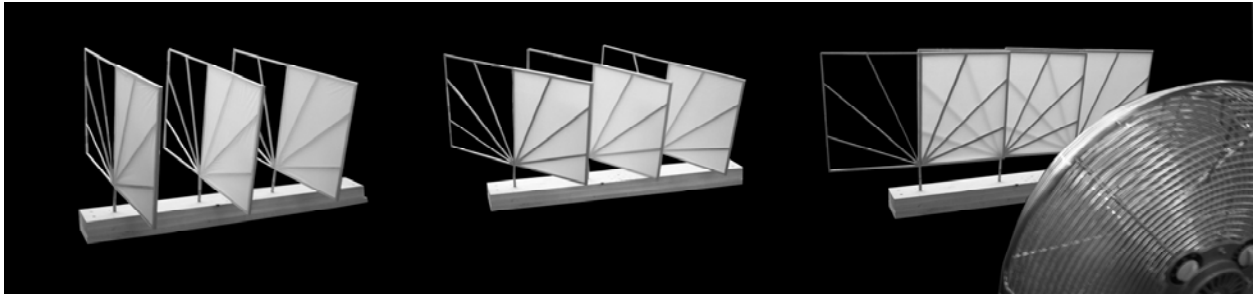


Figure 5; Wind Wall by Brent Forget and Gavin Snyder

The second project explored the relationship between a person and a built structure on maybe even more basic level. The formulation of the project started with the idea that we (people) relate and feel connected with structures when we intuitively understand how they work. And we intuitively understand how they work if we are able to project our bodies into them and use our haptic sense and our intuitive understanding of balance and movement to understand the behavior and balance of the particular structure.

In order for the project to be rooted in this intuitive, bodily and haptic understanding of the physical forces that govern the environment on Earth I decided to allow for the students to literally become the structure itself and use that experience in developing a structural member. That member would later on be used for designing a dismountable shading structure sited in close proximity to the architecture building at the University of Kansas.

The students were asked to form pairs and perform an act in which their bodies were interdependent on each other and they formed a system that was in the state of equilibrium.

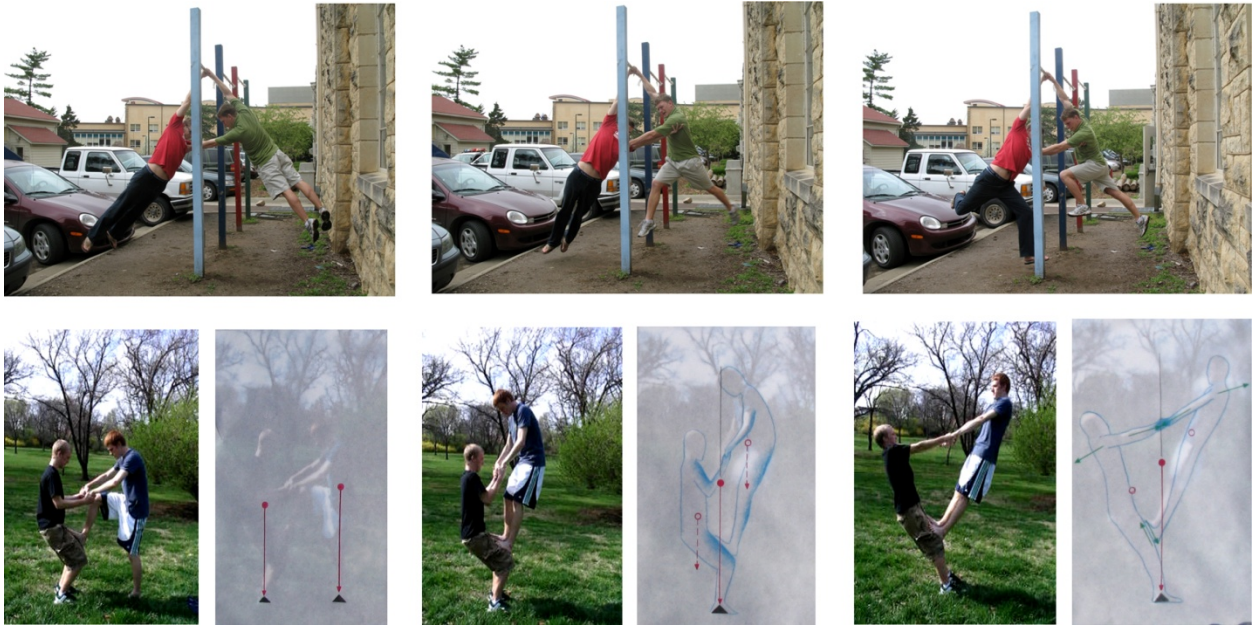


Figure 6; Exploration of forces and stresses

They analyzed the position of their bodies' centers of gravity, the changes in balance and stability caused by the change in their respective body position and the stresses in their muscles. Based on that analysis each pair of students developed a structural member. These members were to be dismountable and in their size and weight they were to correspond with a human body – so an average person could easily take each member apart and put it back together.

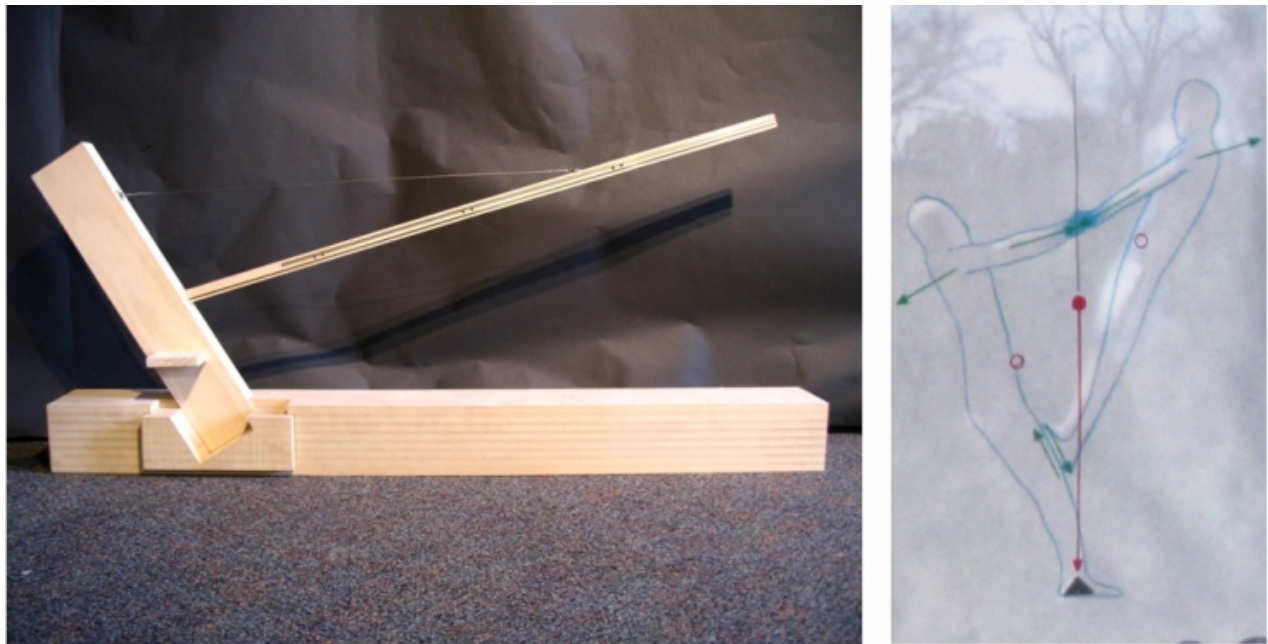


Figure 7; Structural member

At the same time as they were developing the structure the students started experimenting with different materials and their response to light. They looked for a way to use a specific material in specific state and form to mould and shape light and shadow. These experiments concluded in creating a full scale panel of what would later become a skin of their pavilion. They took that panel to the site and spent half a day looking at different ways that their skin

panel interacted with the sun at different times of the day and in different parts of the site and documenting that interaction.

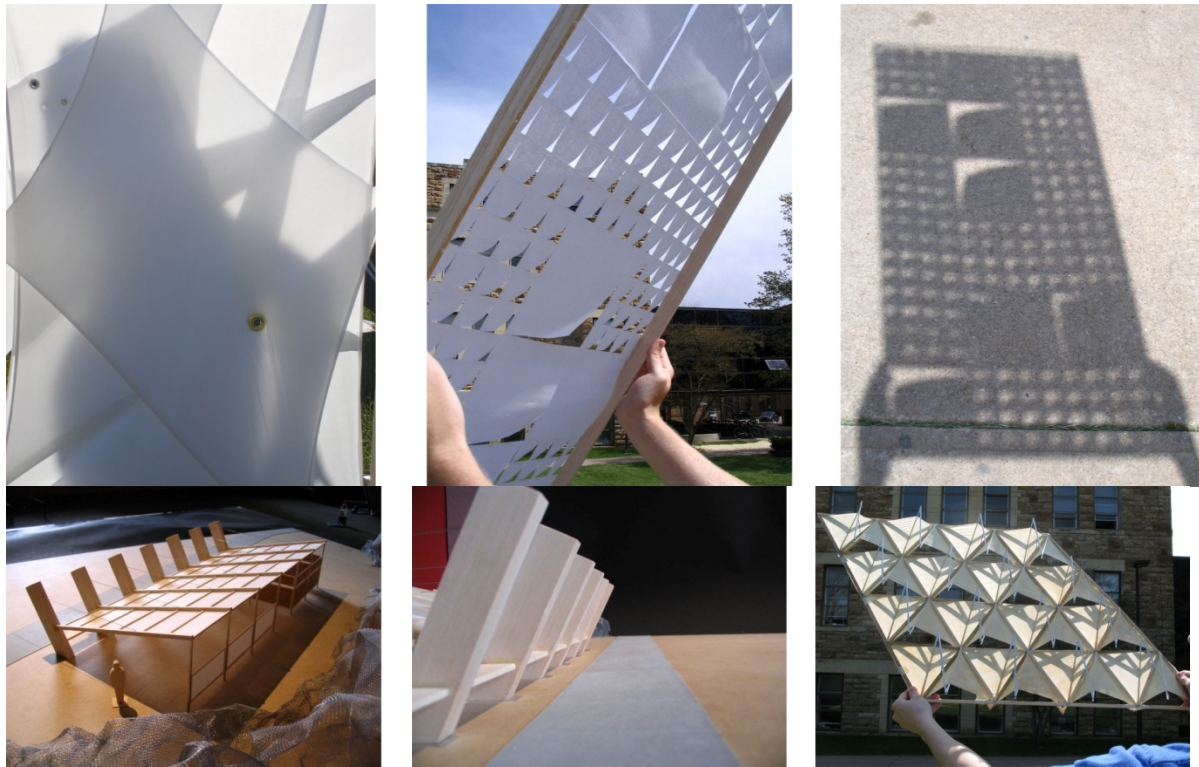


Figure 8; Shadow studies and final structures

Once again the direct experience of the forces and stresses in one's body as well as the experience of the light and shadow – warm and cool, was mapped in a series of representations and translated into a temporary shading structure with a specific physical, architectural qualities and specific program.

Conclusion

I believe that the strength of these projects was in allowing and maybe even forcing the students to think for themselves. They were asked to find their own way, even if guided, to the solution. Because that way started at the point of a very personal experience it was readily accessible and significantly different for each student. The success of these projects was in giving students the independence of critical thinking developing their own project. The weakness of these projects was in not being able to arrive, in the time given, at a really sound architectural (in the traditional sense) solution. This aspect of the projects was responsible for excluding to some degree some of the more technically oriented students. They encountered the difficulty in making an immediate connection between the beginning phases of the project and what they saw as "proper architecture". In result, there were a number of students who were distrustful and behind in their work from the very beginning. The question that appeared was – is this an appropriate project for an architecture school which is a professional school and its primary goal is to educate architects who will practice, support and develop their profession and take on all the ethical and practical responsibilities that the society places on the professionals. I do believe that education that places more stress on the discipline than the profession is very appropriate. Any architect, while designing and building will have a hand in placing buildings in the world and the same he or she will influence the

physical from of the world, he or she will influence creating of the world in which others live their lives. So, in that way every architectural student who turns into a practicing architect will at some point, consciously or unconsciously, successfully or unsuccessfully, address some of the aspects of architecture as fundamentally human endeavor, which defines our being in the world. This is a great responsibility and I believe that realization of that responsibility needs to be at the very basis of architectural education and should be present throughout the sequence of design studios and support courses.

It is true that discipline of architecture without the profession would not exist but the profession without the discipline would be blind. My conviction is that what makes a great professional is not only the ability to put a building together, but most of all the awareness of the importance of architecture as discipline.