Nataniel Fúster Roundtable Discussion

The Committee on Design sponsored a round-table discussion with Nataniel Fúster that was held on May 21, 2010 at the Center for Architecture. Here is a transcript of the discussion.

Lai: Can you tell us about how your firm operates as a practice?

Fuster: Our office is very small. Originally, in the office we had 10 people and now we have 5. It is a very compact organization. I take care of design issues, so everything you see here is something that I control. My business partner takes care of the business issues. My wife is also working with us. For now she mainly deals with issues concerning sustainability; she is a LEED certified architect. We have other architects in the

Office: one full time and one part time. We also have student interns working in the office over the past year.

Lai: You were teaching at the University of Puerto Rico before you went to the GSD…

Fuster: I still am.

Lai: So you have a close relationship with the school.

Fuster: Yes.

Participant: I am, obviously, fascinated by your work but one thing that knocks me out is the re-interpretation of the paving tile and the connection to the pattern of the GRC (Glass Reinforced Concrete) material. I am interested to know how you matched the color so perfectly with the existing tile. What is the original material, what is the new material and what did you do to make them?

Fuster: Those are the '*isleño* tiles', they are very common in the Caribbean. It is common to see them in early 20th century houses with those tiles. They are square concrete hydraulic tiles. They make them in a factory with different steel molds where they pour in different colors of concrete by hand. The tiles are not fired but cured like concrete. Their technical name is 'hydraulic tiles' because they are cured under water. So the finish is very smooth. This technique had been used since the early 20th century.

Participant: Tell me how the new tile is made with the tilted shape without the grout line.

Fuster: That depends on the fabrication of the tile. We were planning to do those tiles in the Dominican Republic because they have the factory to do that …we ended up doing them in Argentina. They have a factory that uses a similar system, a very old factory that produces those tiles. Essentially, they fabricated a steel mold to allow them to change the colors because the first floor [of the house] has darker tones and the second floor lighter ones. This type of tile is very particular to the Caribbean… to somehow define floors in a way that resembles carpets but at the same time not using carpets because of the humid climate…yet you have the visual presence of the carpet. What I am interested in is combining the traditional techniques with new forms to create an architecture that is old and new at the same time.

Participant: I also like that fact that you took out the grout line to make it one more step of being more abstract. I think it is beautiful, I really like that detail.

Lai: If we step back to look at the bigger picture, I am interested to know what the construction process is like in your practice.

Fuster: In general, it is similar to what you have here. We selected the particulars for the house: the tile, the fixtures, the finishes and the GRC panels that are very specific. We deal directly with the people who are going to bring those materials from a factory. They follow the specified drawings and sampling. But the rest of the construction is quite typical. We usually work with contractors who do houses and small-scale construction but once in a while we also work with larger companies. On the island, you will find a person who does garages, and the same person will build you a house. Sometimes, you have to have an argument with the contractor because they forgot to bring the plans to the job site. And, on the other hand, there are projects that you would have a decent contractor company like the Natatorium project.

Participant: When you are dealing with the construction, are you there all the time?
Fuster: Yes, very often I'll be there to keep an eye on what they are doing. It is a very particular process of building. It tends to be more informal. In one sense that it is not so good (laugh), but sometimes you create a particular dynamic that could become interesting.
Participant: We heard last night (lecture) that the quality of some of the concrete work is not so good, but some of the plaster and GFRC finish is so nice and smooth. I am just wondering from the very beginning, do you conceive of these spaces with different materials joining together with different tolerances and finishes, or do you just deal with it as it comes up in the field?
Fuster: It is very important to be in the field because many of the decisions take place, like aesthetic decisions, take place in the field. For example if I enter a space like this and I really like these walls (a mix of rough concrete and smooth plaster) (laugh), I may take advantage of the situation. Construction is a way to finish the design of the project while constantly making adjustments, especially on the houses. For example there was a project where the concrete form work opened, creating some waving on the surface of the wall. The contractor told me, that he was sorry about the situation; that the form opened up, and he asked me if I wanted to destroy the wall to correct it and I said no, I really liked those waves, the imperfection of it. Architecture as a reflection of humanity has to be imperfect.
Participant: The decision to use the GRC panel on such a small project, you may have done a study model and put the light behind it to get the outcome, but rarely does it allow you to do a mock up panel and tweak it and play with it before you have to put it in place. It is pretty bold decision to try to do something like that in a small project, and I would like you to talk about how much you can accurately predict the construction process and the outcome? Some of the openings of the panel actually break out because it is so close to each other.
Fuster: They are very close but not broken. Part of the decision is to deal with the factory and people who are actually going to build it… we where talking a lot with them. We had a mock up of a very small piece of the panel just to select the final finish of the panel. But we don't have the advantage to put up the whole thing.
Participant: Did you have a study model to study the direct/indirect light?
Fuster: No. I did drawings and perspectives. We had a general idea how it was going to work in terms of the entrance of light and ventilation. But it was a risky move to do it. It is part of design because you can make all the models you want but at the end the building will have its particular looks when is finished …it will be very impacted with its particular construction. But in a way I was sure it was going to work because the light in the tropics is so powerful that you can place but a few punctures on the wall to lit up a space. So I convinced the client about this and at the end when it worked, I was very relieved. For me, to make those kinds of risky moves is one of the things that make architecture interesting.
It becomes a surprise for you and your clients.
Lai: I am curious to know about your relationship with the client. When you are out on the job site, you have some of these surprises. Some clients don't like surprises. So how does the process work? Are they also on the site to make certain decision with you together or they trust you a 100 percent and we will just let you do it.
Fuster: When a client approaches me, almost for certain they already know my work. I try to push the form and the design as much as I can with the client. Sometimes I have to convince the client about things that they don't agree and sometimes there is a discussion and sometimes we may fight about things. It is part of design process. Sometimes we will take some ideas into consideration. But often, when the design is taking shape, you may have no other options but to convince the client of what you believe is the right track.
Participant: There is nothing separating the living room and the pool, right?
Fuster: Yes. There is a skylight panel you cannot see. It covers a third of the width of the area above the pool. When it rains, which is the favorite moment for our clients, the water drops into the pool… sometimes you have sun and rain at the same time, so you have reflections of the sunrays through the raindrops. (Started drawing a sketch of the section.) Most of the house is

naturally ventilated, except the bedroom and sleeping areas where they have air conditioning.
Participant: How about mosquitoes?
Fuster: Mosquitoes are not a big problem in this particular area of the island. In the area around the mountains and in some costal zones, you may need screens to protect the open spaces.
Participant: In the Natatorium, there is one elevation is very well composed. What technique do you use in your office?
Fuster: We use 'sketchup' for that project and we gave the contractors the 3D model to help them understand the project. In the design phase, it is for us very important to use 3D models. For a smaller project we may also use cardboard models.
There are advantages and disadvantages of not being able to draw on computers, as is my case. I will draw by hand and the office personnel will work the sketches on the computers. The 3D models will bring some new issues that I am not aware of. In a way it is like the process of construction because, naturally, sometimes the person who makes the model in a computer doesn't completely understand what I draw, and then "accidents" occur. Sometimes those accidents need to be fixed, but sometimes I really love to use them, they open up new doors in the design process. Then I follow what the accidents bring to the table.
Audience: I am interested to know the collaboration in your office between the drawing and modeling in the design process.
Fuster: The manner you described is a collaborative process, but in general, for good or for bad, many of the decisions in our office are not originated in a democratic scheme.
Audience: I can see that you are stitching together as an artist or thinker the different sources from the history that is bigger and older than you. At the same time I see the modernity in your work that is well situated with the constraints, how do you arrive that point?
Fuster: I always tell my students that design is about thinking, about asking questions. There are a lot of questions that need to be asked by an architect. I tend to use some situations as excuses to ask questions. Le Corbusier talked about that when he said that when you experience architecture, you might encounter very large windows or very small ones, because in a way, he was referring to the process of breaking conventions. When you break conventions, you are asking questions, you are pushing the envelope.
Audience: There is one project (the 700 sq. ft. prefab house) that is very different than the rest of your projects. What is it about that project that pushes you to a different place?
Fuster: Talking about explorations, we separated some funds to develop a housing prototype that can be sold to clients who where interested in sustainable housing. We created a separate company to sell those houses. We are trying to explore materials not only in aesthetic terms but also in a socially responsible model of living in the tropics. In the design process, we created a model and we develop it for weeks and sometimes if I wasn't satisfied with the outcome, I changed it from the beginning. Moneywise it was not a very productive process, but I tend to do that, a lot. In this case, we created a model first, and another one, and another one… at the end we created 10 prototypes; this is one of them. It solved a lot of the issues, but it was not commercially feasible because of its radical shapes and its object-like qualities. That's why there was another prototype, and it gained more acceptances. But it follows the same principles. We are trying to create an architecture that is spatially open, but had very enclosed exterior. We are also interested in the prefab process to provide more affordable and sustainable housing types.
Audience: But do you have to ship everything in, in that part of the world that things have to be made somewhere else?
Fuster: Yes, but the prefab we are talking about is from local material made on the island. We use GRC panels, but recently we came across another system, which has foam in the middle and concrete about 3 inches on the sides as structure. We see a lot of potential in that system. We think that the exploration of form and the new ways of building should go hand in hand.
Lai: You have mentioned that your wife is a LEED AP. Have you been systematically applying the LEED rating system to your projects?
Fuster: Yes, the hotel project will be a certified project. My problem with LEED is sometimes it

gives credit to a building that is impermeable, and for our architecture sometimes you might need to achieve opposite, to become completely permeable.
Audience: What is your take on natural lighting design?
Fuster: When I make a drawing I imagine light, like in the case of the Fine Arts school. With the idea of using light in some of the gallery, I was trying to neutralize the exterior light coming from the patio, because the light in the tropic is so strong that it can create a backlight effect in the interior spaces. You have to provide complimentary lighting. When I design, I try to imagine every space in sequences involving natural light. In his design sequences, Wright not only employs compression of spaces but also plays with the amount of light that is available.
Audience: Speaking of light, you showed a really dramatic shot of the light from the interior through the screen to the exterior in the evening. Do you design artificial lighting to that effect?
Fuster: Yes, I think that at night, ideally the building will expose all the things that are not present in daylight.
The screenings and perforations are important. You can find houses on the island with elaborate wood screens. There is a Cuban writer in the 50s criticizing modern architecture that instead of breaking the sun with 'brise soleils' (sun-breakers), they should play with the sun like in many of the woodwork on the vernacular houses. It is very common in our region to 'break the sun' and avoid the entrance of the direct light. I think it is good to control the light and play with it.
Lai: You have said that Modernism in its most radical expression is tropical. How do you apply Modernism that is not in the tropic e.g. in Ohio?
Fuster: I would really love to design a house in a different climate. Because, in a way it will be an inversed design process, by asking new questions of how to do windows and walls. It will be very interesting and challenging to see which ideas make sense. And how do you explore the plastic quality of the new forms. For example, contextually speaking, I see Gehry's architecture as derived from the southern California culture of freeways and constant movement, and when he designs outside the local, I can't seem to connect with it. Although in Bilbao, his architecture somehow fits very well in the context, the building somehow was next to a highway. He made the connection.
Lai: My last question is that how do you see the future of the profession in the light of international practice and sustainable design movement?
Fuster: For me, sustainable design is going to be the new International style, but with regional considerations that need to take place in terms of place, location and culture. There will always be differences, but hopefully we can become connected better ways. Recognizing that we can make the world richer and more diverse will make architecture to become also richer. When I talked about working here, it is important to fully understand the historic background. That's something that you need to grasp. We as architects should have that responsibility while being humble to it.
Lai: Thank you.