University of Miami School of Architecture
Faculty Oral Histories

Interview with Jacob Lehman Brillhart
Asistant Professor, Architect
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Interviewed by Gilda Santana
Recorded by Gilda Santana
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Summary: Jacob Brillhart's research engages the creative search through drawing, painting and design. This ongoing curiosity focuses on the ever changing relationship between design and methods of representation and visualization. His scholarly investigation of the creative search is based on Le Corbusier's travel drawings and into his architectural theories and built work. He teaches drawing courses in the Rome program, seminars on Le Corbusier and Theory of Architecture and the Environment, plus core and upper level research studios. This scholarly study influences his own built work through his office Jacob Brillhart Architect, P.A., which seeks to establish a dynamic building vocabulary drawn from place, culture and climate. As a licensed architect and LEED AP, Brillhart is also engaged in sustainable building practices and was honored with the 2009 AIA Miami Design Merit Award for his "Mechanical House" and 2010 AIA Design Excellence Award for the "Grass House". In 2010, he was also nominated as a finalist for the Rome Prize in Architecture.

http://arc.miami.edu/images/uploads/Jacob-Brillhart.pdf
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Gilda Santana: What are the challenges you are facing as a researcher and/or as a teacher?

Jacob Brillhart: As a researcher, for my research, is done really in the architecture office, where we're trying to develop new models for architecture born out of old typologies like vernacular housing. How do we develop a new architecture that has present day materials and has all the things that we want in our present day life without throwing away the past, right? And making it a local typology. The other line of research that I am doing is constant drawing, and painting, and searching, but that I would say is less research and more observation. It's just drawing the world and learning from it, which is direct visual research. The challenge with that is that I just don't have enough time to do it. The challenge with the other kind of built research is that we're struggling to find local craftsmen that can execute our ideas. In terms of the craftsmen of the old days, they were great, and they could build all these great Florida modern houses, but you can't find those craftsmen nowadays.

GS: Where are all the carpenters?

JB: Yeah, where are the carpenters, right? So that's a challenge for our built research, and you can find them, but the challenge is that they're so expensive that they're unaffordable, there are so few of them in South Florida. So what we've ended up doing is dumbing down our details in making them more buildable by your average handyman carpenter. So I guess the challenge of that research is the reduction of the elements of architecture down to this kind of "home depot-esque" kit to get something really built, because we're actually trying

to build stuff, we're not just designing it and letting it stay in a drawing. Now is that a real challenge, yeah, that's a constant fight. The new tools like the CNC, and the laser cutter that we have here in the school—have made this bridge of craftsmanship,

GS: by CNC you mean a computational device?

JB: Yes, the computational devices and the CNC mill that cuts things perfectly eliminates in some ways the carpenter, right?, because you can do it with the machine, and it's perfect, but the challenge then is it's only for the proto-type and you can't use it in the field, because the city and the community haven't gotten that. Not every builder has a CNC. These tools are 'now'. They're not out there in the real world as they are here at the school. So, in that sense it's nice to see that the University is much farther along than local tradesman. In some instances, that's not the case. They're doing it better in private practice than we're doing it here. But, here in that sense, the school's got it nailed. We just need more of those tools. The challenges of teaching now, maybe it's just to get the focus with the phone and all the distractions, but the other challenge of teaching now is that not only do we have to teach the digital world, but we have to teach the analog world. Like, when we were in school we learned to draw by hand, and that was it. Now you have to learn how to draw by hand, do all of the things we were taught, and then you have to do it all by computer, which means you have to learn how to print, and you have learn all these softwares. So you're basically learning double the amount of technical skills within the same amount of time. That I think is the biggest challenge of teaching now. Before we used to just make a plan by hand, draw it, draft it, section, draft it, make a physical model, then you had a project.

Now you have to do all double the amount of output, and double the amount of processes to get one project.

GS: Do you think you can eliminate any part of that process?

JB: You can, but the trick is to teach students when to draw by hand, and when that's faster, and more revealing and more evident, and when not to, and when to use the computer, and when to use the CNC, because now they want to use the computer all the time, or, they just want to do it by hand all the time. So the challenge of teaching right now is to know what tool to use when. Part of the problem is a faculty problem—because the faculty that didn't grow up with a computer—and I don't blame them, don't think like that. So they use their skills and their methodologies in a way that the students are not going to relate to. In my education I was lucky. I wrote about this in my tenure binder, one of the things that I said distinguishes me from other people, is that as an undergraduate student in architecture for five years, I learned the old way, we did everything by hand, and then when I went to grad school we did everything by computer. So I was part of this twenty-year period of people who were actually taught both. Here in this school I think we're teaching students both, but they're being taught both by faculty that don't know both. That's not the faculty's fault, it's just part of this transition. But that's the challenge of teaching. Each faculty member has to deal with their short-comings, what they don't know analog, and what they don't know, digital, and obviously we know some things better than others.

GS: How do you think that the field is changing?

JB: Five to ten years ago, if you wanted to be cool and avant-garde, at forefront of the field, you needed to know the computer, you needed to know all this digital world stuff and Rhino, and all these programs, everything had to have a script, or else it wasn't modern architecture. It wasn't groundbreaking. Now it's changing back. It's not changing back that the programs aren't being used anymore, but the processes are not what makes you "relevant" anymore. They're merely the tools. So it's taken ten years for the profession to kind of go "OK, we don't get so excited about just doing it", we're are asking "What is the result of doing it? Does that really matter? What is the value of it? What do we get out of it?" So I think we're actually going forward by people coming to this understanding, but in a sense one would argue stylistically that the profession is moving backwards again. I would argue that in a couple of years hand-drawing is going to be really cool at all the Ivy League schools. The students are going to try to find a way to distinguish their work from other people's work because if it's all scripted in

Rhino on the computer, it's all going to look the same. So the field is changing in that sense. I think you will not be able to do just digital architecture in the future, although the computer is undeniably the main tool right now. But I think that the best practices and the best people practicing architecture will be doing both.

GS: What are emerging areas for this school?

JB: I think we should be doing more of what we're doing. I think that the strength of the school now is that we have a large contingent of expertise in New Urbanism that was

brought in and developed by Lizz (Elizabeth Plater-Zyberk), and we need to keep that. With Rudolphe (Rudolphe El-Khoury), he's brought in a more digital/technological point of reference, and we need to build that. We need to keep all the good things that we've always had and we need to not get rid of any of that, we need to add more things that we don't have. We need to embrace the things that we don't know and don't like, instead of going back to the things that we like and don't know. I think what should emerge out of this is we need more people doing digital things, more animation things, and more video things. I think the school is weak in that capacity. I think we need less people drawing by hand—faculty, I'm talking about. I think we need less traditional architecture faculty. I think we have great faculty that do that now and they need to continue doing it. I would push the school to continue to expand its digital and technological world because I think that our traditional base is really good, and it shouldn't go. We don't need to worry about that so much. You know you go to Yale and you have Tschumi sitting next to Stern sitting next to Zaha—or used to—sitting next to someone traditional, like Lizz. That's the conversation that we need to set up. Now, you go to Columbia University, and it's not that. Now I went there, and it was great, but there was a very specific trail that you needed to be on which was the digital train. If you weren't on that you were going to struggle and have a tough time. I was fine with that because I had spent my whole undergrad in the analog world and I said "if I'm going to be competitive in the future, I'm going to need this". So it was a great place for me. If I had gone to Yale, I probably would have fallen into this mindset that I'm going to find the professors that draw by hand and tell them my ideas are great and I wouldn't have gotten anything out of grad school, right? So, I think for our school to be competitive in the next twenty-five years, the emphasis should be on that, in

my humble opinion. I think we should get rid of the computer lab. And we should demand more workshops, get more printers. All these other schools now, don't make labs. Let's ask the students to keep their money in their pockets and buy better machines for themselves. Maybe we can assist with software licenses. But I think that space upstairs (2nd floor above library) needs to me more of a communal space. It could be a materials lab. It could be something else than just a computer lab. The idea of the computer lab is an old-fashioned thing. And when I say that to people they say "but, I thought that you wanted to build up the digital weaponry of the school"? I do, but not I the traditional, old-fashioned way of doing it. It's incredibly expensive, it takes up a lot of space, only a handful of students use it. The should be in the studio. The studio should be the lab.

GS: What are your hopes for library support?

JB: I think we need to build a new library (laughs). The support from the library is awesome. My biggest fear about the library, is that they move it from here. That to me is the most devastating thing that can happen to the school. I always ask the students after about 2 months where the architecture books are at Richter Library, and nine out ten can't tell me what floor they're on. The ones that say they do, fake it. Then I ask them if they need to get on another elevator to get to them, and if they say no, then I say, "Well, then I know that you haven't been there". It's so important that the books are near their desks. In terms of library support, I think about proximity, literally distance. There has to be adjacency to the studio.

GS: They all have these mini libraries on their desks as well as communal library shelves within the studio.

JB: Yes, that's what needs to continue to happen. In terms of library support, I don't really have any issues with library support. I think it could be bigger. We could have more stuff. Like materials. That could be so much greater if you had the room. I think the periodicals are awesome. That could even expand.

GS: What do you think about more connectivity between what's happening in the fab-lab(s) and the computational lab and research in the library?

JB: Well I was talking with someone the other day that said, the library of the future would be—there used to be the model shop where you had the skill saw and the table saw, where you made things, but now we have a different way of making things, which is with the laser cutter, the 3D printer, and the CNC. Those are all run by computers. So you used to have the model shop where you had all these big, tough, industrial tools, and you had the library, which was books. Those are all real things, nothing was virtual. They were all real. Now the future library is going to be more virtual, and the tools that are making our actual, real things, are even more virtual because they're being run by computers and screens and we can't even tell how they're doing it. So the future building that links all this stuff together is a hybrid of the real, which is all the materials, the computers, which are now books, and the machines that are making the things that we use. Now is that a library? I don't know what that is. We need someone that runs the model shop, right? That person

that runs the model shop usually know how to do the skill saw, but doesn't know how to operate the laser cutter, because the laser cutter requires the use of a computer and the technical skills. I have a feeling that's going to happen with the library. You're going to have someone that knows the card catalog, the systems, but then there's going to be all this technical stuff, like video conferencing, and there's God know what the new library is. The point is that now you need to know so much "techy" stuff to work in the library, you need to know so much "techy" stuff to work in the model shop. How does all that work? I don't know, but that seems to be the future of the system. I we have them in different buildings, or not it's fine, but, I always worry that the main library people, or the university at large will say, "we're consolidating and we're saving money by doing this". For architecture, that will kill us if they take the library away.

GS: I don't think that will happen.

JB: If they did, we'd have to start our own libraries in our own offices. As a visual culture, as architecture is, we need to have the books.

END OF INTERVIEW
Gilda Santana
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