

DHARMAN GERSCH

DG: ... I had a pretty good idea of what I wanted to do going into the project. I took the semester off before hand, I had some family stuff to do overseas and I decided to go traveling for a while and work. I spent that time as pre-major because I wanted to make sure that I had something solid that I could go on with. I went to the Venice Biennale in that time - just seeing all the different architecture while in Europe and trying to engage with Rem Koolhaas' exhibition there and my critique of his attitude towards architectural elements - I think that helped me strengthen the starting point of my project. A lot of the way the project played out was determined by the period before the project.

DS: What did you think of the Biennale?

DG: It was a really engaging exhibition. My partner's not an architect and she found it easy to access all of the exhibitions. I think that often architecture exhibitions can be for a very "in" crowd and it catered really well to the "in crowd" but it was also engaging on a lot of other levels.

Having a lot big physical prototypes of different historical bits of modernism and different facades and more recent stuff. But my critique of that is it is an old fashioned way of dissecting architecture into walls and floors and windows and so my project would explore what are some of the gray areas between those components.

I was thinking that maybe a brick can be a prototypical component - like a stem cell - it could end up being a wall or a floor. And if a brick can be customized then what are the opportunities that we have as designers - rather than drawing a gap in a wall that is a window or a door can we break down those hard lines and classical distinctions.

DS: I found your project really accessible in the same way that Rem Koolhaas' Biennale was accessible and even though the project was so specific it manage to capture a large audience.

DG: I think a lot of architects have a soft spot for brick because it's such an old material and there are so many ways that people have engaged with it. I think I intentionally tried that because it has a whole lot of connotations.

I saw it as an opportunity for digital fabrication but also people understand brick. It is a way in - a lot of projects in the digital fabrication area are harder to explain. "It's using an agent based mesh structure to customise something" - you lose people straight away. But customizing bricks? well that's pretty easy to explain.

DS: Were you aware of how you were presenting it? And that at some point to get a good project you had to make sure people engaged with it, critics and colleagues alike?

DG: Probably not enough but in some ways. I wanted it to be something that could extend beyond major project for me. Its this opportunity you get to ask "What's important in architecture for me?": I have all this time to spend on it, I have the support of a supervisor who can dedicate time to provide you with feedback and so I didn't want to make something that was directed by my supervisor. I didn't just want to turn up - I wanted to really think about whether it could go somewhere else.

DS: Was it just as simple as saying I am going to explore the brick or were there other interests? You were using grasshopper to make this thing and you were applying a tessellation across types of topology - there are some other ideas in there.

DG: I think the part to whole relationship - the component to

the architecture - I think that was a really important part of the inquiry. Looking at it at a more cellular level.

DS: What studios had you done before? Did anything stand out for you that you knew you would take further?

DG: I did a studio with Martyn Hook and Rodney Eggleston early in undergrad. We did a competition entry for the ThinkBrick competition so we all designed mixed used housing project with brick which got me thinking. I left it from there but I felt like there was more to explore and I didn't have the skills to manipulate ideas at that granular level. I did a few Richard Black studios that I engaged with but they are more classical ideas about time, ephemerality, space, light; the

real fundamentals and I didn't engage in the digital generative realm very much.

In those Richard Black studios the skills that I learnt were not about complex geometry - the choice of brick for major project - I could see where it ties in with that way of thinking.

DS: It's an attitude to materials that you do not often find in digital fabrication. You went to Steiner school - there's a big component of hands on with clay, and sculpture that, going to a public school I didn't get. I learnt how to knife-fight but not how to make pottery. Your attitude to materiality might stem from your education?

DG: Coming into architecture from Steiner School I already

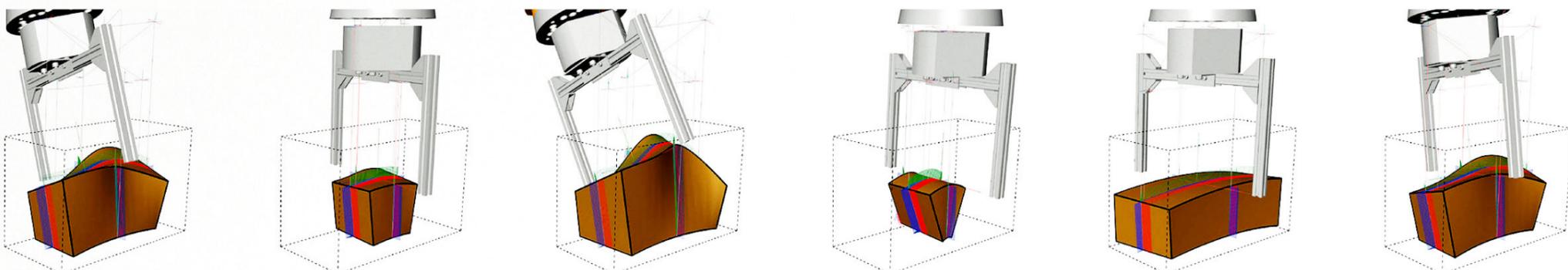
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have a background in or exposure to different types of making that have real relevance to design that I didn't realise at the time. I've been helping Roland with the carbon fiber winding project and I realised it related to some of the skills you learn as a kid like crocheting or knitting and the claywork we did - all those techniques having a hands on experience. I've done a lot of work on building sites and in the same way I think that helps to create better architecture when you understand that architecture's made of

Stuff. Very rarely you get good architecture that doesn't have Stuff involved. You can do it but understanding how Stuff goes together is important.

DS: But also enjoying putting stuff together. In Steiner school you're learning to enjoy and be playful which is what they teach - joy in making. It's interesting that you have a digital fabrication interest but also have that sensitivity to materials.

DG: I don't like pigeonholing myself as digital fabrication -



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it's a good key word but I see it as being a realm of tools. I've started to learn how to write code. It's magic - if you have a good idea you can do it a thousand times and it's really hard to get it into that code but it's the same as doing it by hand if the code's good enough. It's just a tool that allows you to accelerate good ideas (and bad ideas as well).

For me coming to that quite late was probably a good thing because I spent time thinking about materiality and other aspects of architecture that I could then apply more sophisticated geometric approaches to.

DS: And then that segway's into to your role in the workshop...

DG: I think it's a natural progression - it worked really well for me to work on a few complex architectural projects as a labourer and also getting on a computer to help a builder. Then I did major project, and then starting in the workshop brought all those things together - the hands on making, engaging with architecture, trying to apply my design skills to fabrication in the workshop.

DS: It also gives you an opportunity to be part of projects maybe Roland, or John Cherry you get to hear about them, see them and have a relationship with those experienced fabricators.

DG: Being exposed to their process and what complicated projects go through is really important for a designer because architecture is trying to do things that are unique and specific and being involved in how researchers approach those projects at the cutting edge of fabrication technology is going to be important for working in the industry. I've learned so much more detailed knowledge by

being exposed to people who work with furniture and industrial design students and lecturers - working across discipline. Architects like to think of ourselves across all those scales but actually industrial designers design at a different scale with a lot more thought that we don't deal with and it's often relating to the actual production process.

DS: So how did you get involved with the wax project?

DG: That was through a friend - I met him at a barbecue years ago and since then he's started his own business as an electrical engineer and he's been trying to do his own creative projects and establish a manufacturing base in Melbourne. He's tried to resource himself with some equipment that not many people have - custom circuit boards so you can have a really good turnaround on prototyping. It's a completely different area of design but he's working with a few different creative projects on the technical side like creating a CNC machine so I got involved. I've been working on the plug in for the 5 axis CNC in the workshop so I'm familiar with generating the G code to drive a machine like that. He's designing a machine that works on similar principles. It's pretty complex and it's going to run unmanned for 365 days.

DS: It seems like the way you approached your major project with the brick is almost immediately an outsiders project. To me it seemed like something I hadn't seen very much of. Not very many people do a fabrication based major project.

DG: It doesn't happen at RMIT but around the world it happens a bit more. I started out thinking I really wanted

to make a small thing like a pavilion and show at 1:1 the opportunities of what I was designing but I ended up chickening out from that approach.

After that second review I realised it could have been really successful to go with the initial approach but I felt like no one was really working in that way - no one is basing their project in making prototypes. I guess the discussion is everyone presents their project on paper and you don't have to go out and build it. We know stuff can be built and you don't have to prove it because the drawings are enough to communicate the ideas but I think when it comes to newer technologies...I did a few prototypes as proof of concept - you can make this with the robot and it follows that you can make a lot more but I do regret not taking it more in that direction. I felt that as I hadn't seen projects that had done that before I felt like it might not go down well or it was maybe taking too much risk. I had planned to make a lot of prototypes I was going to take them out to a brick production line and they would fire them, in their kiln. There is still potential for collaboration with them because they have robots in their factory but they're just moving lumps of clay from place to place not doing anything unique. Their function is removing human error and labour which is good for profit but can't you leverage that to get better design outcomes?

DS: It's not really using a robot to it's potential. Maybe the thing that makes you not want to prototype during major is you would get a lot out of it but how do you present it on 3 A0 panels. It's hard to communicate knowledge and the experience of fabrication.

DG: Unless it's really successful and the thing stands up and works in the end. But there is always the risk that it won't work and if it doesn't it doesn't mean that it isn't a valid process but how do you communicate that? Particularly if there isn't a precedent for it. I went to a whole lot of major reviews before I did major to see what it's about and what people are doing and I didn't see any projects that are doing that so I guess it affects what you think is possible. I hope that more people start doing projects with a fabrication bent and start taking it further to make some bigger prototypes for major project. Maybe my project will make people think that it's possible.

DS: It's great that for you Major Project was a body of research that you can whip out of your pocket and use as a way to communicate potentials for fabrication projects.

How many people can do that with their major to communicate with someone following a similar line of research? If major project can do that for you then you've got something out of it - it's the ideal outcome.

DG: Yes rather than being relieved that you're done. I think it's problematic that it's only a semester. Industrial design do an honours program where the fourth year is their honours. They spend the first semester writing, researching and developing a project and spend the second semester executing it. I think it's a shame that we don't have more of an opportunity to develop our agenda in a formal way. There used to be a pre-major studios but I made the decision to take a semester off to do that in my own time and I really benefited from that. It takes a while to formulate ideas in a way that you can design from.

DS: For you, you would have probably had a small build by the end of a year. You might have been able to approach a brick manufacturer to build it with you but there's not enough time really from the beginning of semester to the end to explore avenues that may be slightly risky or that might fail. A lot of people would be afraid to engage with something like that.

DG: Although you always wish you had more time to work on things. If you get twice as long is it really going to be twice as good, or is it 25% better? (laughs)

DS: Major project allows written work also. Did you engage in a written element?

DG: I wasn't aware of that at all. The idea that if you wanted to write something you could write something, if you wanted to make something you could make something or if you just wanted to present the panels that flexibility is a good thing. It's not that clear that there is that kind of flexibility and I'm not sure how flexible it actually is. I guess that's up to the creativity of the student to work out how to push it.

I got all the elements books from Rem Koolhaas' Biennial and I had the idea to make one that fits alongside that on the Brick. The missing one.

