SCI-ARC

ISSUE 003

TOM WISCOMBE
FACULTY PROFILE

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Design concept currently in planning

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LEARNING TO FLY

In the permanent state of arrival and departure that defines SCI-Arc, the role of faculty is of course critical, but SCI-Arc does not seek individuals who fit within a certain dogma. Instead it's about identifying some very specific and hopefully important part of the larger architectural conversation that is, right now, at a critical inflection point, as well as the people who are pushing and defining it. If we are to be successful in challenging the individual, the individual will challenge us, and will make everybody who is already part of that conversation stop and change what s/he are thinking.

Tom Wiscombe is one of those individuals. From his days as Senior Designer at Coop Himmelb(l)au, to Principal at his firm EMERGENT, his work is always at the convoluted center of experimentation and feasibility. Tom's work seems to keep accelerating - though not always succeeding conceptually or aesthetically - instead of finding ways to compromise. That is unusual, and unusual works for SCI-Arc.

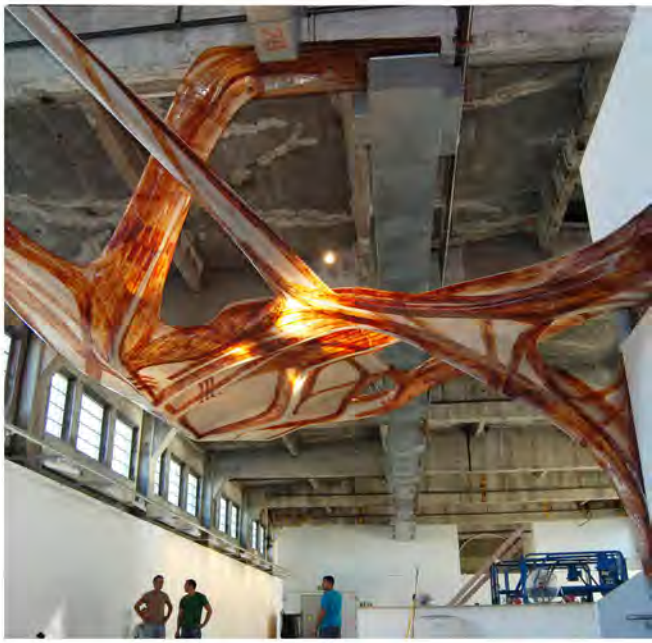
His *Cantilever* marks the first project of the Material Lab, which is founded in the notion of the indeterminate relation of architecture to material processes: pedagogically, conceptually, instrumentally, the boundaries of inquiries and research are never fixed. Design, production, assembly, teachers, students, final or not so final, all of these are in a permanent state of questioning and the result is just a partial answer. The *Cantilever* is just the first of these partial answers - many others will follow.

HERNAN: First the obvious: where did *Cantilever* come from, and when it started, what was the whole idea?

TOM: The idea of *Cantilever* was secondary to the idea of having a Materials Lab at SCI-Arc. The intention of the Materials Lab was to create some friction with a lot of the formal experimentation going on at the school, and force the students to deal with the limits and messiness of actual materials. We decided that it should be a two-semester program, so that something could be designed with a group of students in the Fall and then built in the Spring, for the next five years. The idea isn't to do a cantilever every year, but rather that every year a new instructor will explore a new material in relation to a new agenda. Composite materials drove cantilever; this year John Enright is doing steel.

HERNAN: One impression I had when I saw *Cantilever*—and, of course, because of the research that was done with the students, it's not completely your own work, even though they had certain guidance from your part—was that in relation to your own practice and your own ambition as an architect, it felt to me that the formal aesthetic of the piece belonged to an older phase of your work. In most of your work from the last ten years, from the pure form or notion, there was a desire of combination with what I will call degree three with degree one: formal geometrics. But your work from the last two years has taken a different departure. Is Cantilever, not a conclusion per se, but the end result of a body of work in combination with the students' and Material Lab input?

TOM: I think that's a great way to characterize *Cantilever*. For me it was an opportunity to rethink *Dragonfly* from four years ago. That's when I was much more interested in the specific formal qualities that could be coaxed out of engineering loops. I've always felt that *Dragonfly* didn't deal enough with the material sophistication of wing structures in nature. The 'skeleton' of an insect wing is really just zones of extreme thickness of structural



Dragonfly, SCI-Arc Gallery, 2007

cuticle, it's not like a human mineral skeleton with skin attached to it. So we were using an industrial paradigm to explore a biological paradigm. The three thousand bolts we had to use for that project always stuck in my head as evidence of that mismatch. Intuitively I wanted to glue it all together. So I guess Cantilever is a redux—it's all glue!

To answer your question about the development of the work over the last two years, yes I have definitely moved away from expression of structure and more towards nuanced relations of structure, skin, and volume. But I was actually never interested in structural expressionism. I am interested in formal articulation and ways of achieving articulation from within the discipline of architecture. I would say that the best way to understand the shift in the work is as moving from surface-to-strand geometry which might appear more skeletal, to surface-to-volume geometry, which appears more manifold and massive.

HERNAN: There was a whole lineage of work that dealt with different iterations and different mutations and so on, but I think there was a very coherent, almost obsessive monomania about certain logics. I think Cantilever is a good transition to what the work is now.

Historically for architects, the thirties have been about establishing a sensibility and establishing a logical work, and the forties are when you figure out how to put it out. I don't think that's the model anymore, it's much more accelerated—media and publications makes all the work exposed way earlier, even though the architect may not be mature enough to be that out in the open. This kind of contemporary condition means that you don't get to figure things out building small projects, or small renovations—it seems like museums, installations, exhibitions, pavilions, and competitions have become an alternate venue. My question would be if you can resume the evolution of this for eight years, which I will say is incredibly coherent in terms of the formal, architectural protection of the office, but at the same time incredibly heterogeneous in the ambitions in relation to reality.

TOM: I think that is true that younger offices like mine now have the capacity to be published all over the world before the work is

fully cooked. It is for sure different for us than for the previous generation. We are out there exposed and have to feed the beast. I would like to think that you could still develop a few tricks in your thirties and then refine them in your forties and fifties, but I'm not so sure you can do that when you are chasing butterflies. I also think that for the work to have gravitas that it needs to interface with the world in some significant way, in a way that toughens it up. Although I think that all the press, conferences, lectures, shows, installations are great for a while, it sometimes seems extra-disciplinary to me. If you are not careful you can get lost in it.

I think we all transform over time. I remember when I was an undergrad we thought Zaha was the greatest. But she was a different Zaha compared to now. The work was sharp like knives! My point is that I am not interested in locking in to something yet even though I know I have a very clear sensibility. I want to transform over time. I hope I am that resilient.

HERNAN: How much was a strategy, and how much was the nature of the project, the research and the work that takes you there? In a twisted way, you're going in reverse – your early work seems way more buildable and way more logical in the traditional sense than your current work, and I'm intrigued by that, because I would say most people go the opposite. Most people start more radical and over time become more rationalized and more figured out.

TOM: My career is a bit more like a horseshoe than a steady slope. Most of my career was spent doing big buildings for Wolf Prix, and beginning again from the ground up. I have been doing my own work for 5 years and it's a work in progress. Even though my work might seem to be getting more complex, I am constantly trying to produce an effect of effortlessness, where a project is so clear formally, organizationally, and materially that it seems like it had to be exactly that way.

HERNAN: I would say that, conceptually (as opposed to formally) your work is rooted in Le Corbusier principles. My take in looking at the historic opposition, defined by many architects and critics over the last 60 years, between Le Corbusier vs. Mies Van Der Rohe, is that it can be found in their approach to details. Le Corbusier exposed the fragility of materiality while Van Der Rohe disguised details with materials. But when those Corbuserian principles became style, a new discussion arose. One thing I would criticize of your work is that is does potentially suffer the problem of becoming a style, or the baggage of stylistic features that you know to deploy. In this framework ,do you think style is a bad thing or a good thing?

TOM: I have no problem with style, but like I was saying earlier, I think style needs to transform over time. If it's fixed then it's mannerism, which is different. In my experience, you can get pretty far by combining and recombining a bag of tricks, but eventually, the work will no longer be innovative. For it to be innovative I think it sometimes has to jump outside issues of language into other ways of thinking about problems. Still, I think that it is very important to be obsessive enough about particular formal lineages that you can make discoveries. Right now I am really interested in the middle ground between surface and volume, where something razor-sharp and thin transforms into something thick and massive. It allows you to create really open forms with implied enclosure. They feel civic to me. I don't know—is that a style?

HERNAN: I know in the last two years, you've put a huge amount of physical, financial, emotional effort trying to get a series of big commissions in China going. I think this relates to what I was asking earlier about the changing nature of the game, and the nature of research or experimental work. In your work, the testing of materiality etc. occurred mostly through installations and pavilions and stuff like that, and then suddenly you're jumping into 3,000-room hotels, 25,000-people arenas, and so on. We know there is this level of insanity in China when doing these kinds of things. The opportunities are there. Is that something that you feel the nature of your work relies on—a certain scale to really fulfill it's promise? How much of the nature of the current cultural frame define the decisions of the architect?

TOM: The foray into China last year was a strategic move. It has to do with my realization that I just love to do very big buildings. China is the place to do that. I have tried to re-organize my office to support that, including dealing with the issue of marketing, brokers, travelling a lot to build a network, and getting out of my comfort zone in terms of meeting people outside my architectural circles. I love to do large buildings because they force you to interface with the world and a diversity of interests. They also allow you to develop a community in your office, which I enjoy.

But frankly it has been a very tough year. We won two competitions in Shenyang, which I naively thought would go down like in my previous experiences in Europe. They didn't. I was asked to make endless changes, switch sites, change the program, dial it down, and the worst was: change the "style." At some point it just didn't make sense any more to continue on those. The good news is a developer in Beijing who saw our projects asked us to design a hotel in Beijing right after that. That project is currently in zoning approval. We'll see if it goes through. No matter what, at least I feel comfortable in China now and have developed a network. And maybe the best thing was that I was forced to develop a prêt-à-porter line of projects for China, which are a dialed-down version of my work. It is a very hard thing to do, but a good exercise.

HERNAN: Why Los Angeles, and why SCI-Arc as the place to develop your practice?

TOM: Well, LA is my home and when I came back from Europe, it was the only place to go for me. SCI-Arc has made a huge difference in my life. Frankly, my office couldn't have existed these last years without it, on many levels. So I see SCI-Arc for its dual role of being and school primarily, but also a support structure for young practices. I'm very thankful to be part of it.

Cantilever, Materials Lab I
SCI-Arc, 2011
Type: Year-long Composites Research Lab and Installation
Instructor: Tom Wiscombe, Applied Studies Coordinator
Design Team: Dave Bantz, Michael Gross, Paul Mecomber, Vince Pocsik
Construction Coordination: Tom Benard, Henry Dominguez
Engineering: Buro Happold Consulting Engineers, LA
Composites Fabrication: Machineous, LA

This project is an investigation into the advantages and limits of composite materials. Via an asymmetrical structural type–the cantilever–the goal was to create massive differences in stress patterns within an object and respond to those patterns in a way that would both index the structural diagram but also exceed it.
Composites are more than a class of materials; they imply a paradigm shift in architecture in terms of allowing real progress on the contemporary desire to blend formal, structural, and ornamental systems. They also engender a new way of thinking about assembly and engineering, where and structure cannot be broken down into discreet vectors. Continuous difference and variability in structural capacity, transparency, pattern, and color becomes the design space, as in nature.
The piece was evolved through a feedback loop between morphological developments and structural analysis in ANSYS, where features such as connective armatures and surface pleating were introduced over time. It was also informed by manufacturing logic, in terms of limitations of mold size, requirements for structural joining of components, and grading fiber density and orientation. Based on a consciously under-dimensioned overall thickness of 1/8" fiber-composite layup, a pattern of 2" fiberglass tape was created in order to locally respond to high stress conditions.
The tape operates as a figure embedded in the form: it is a translucent structural tattoo, which follows its own aesthetic logic as well as performance demands. Critical for the piece is the depth effect that is produced by being able to see the back side of the tattoo as a ghostly silhouette through layers of translucent material.
Cantilever is ultimately neither a simple expression of a structural type nor a readable response to forces. As in biology, it is a mutation which performs but does so in a non-optimal way. Its features are irreducible; they cannot be associated 1:1 with behaviors. Excess and obfuscation define the project as much as structural and material intelligence.

Special thanks to Buro Happold Consulting Engineers, Machineous, and ZCorp for their generous contributions to the project.

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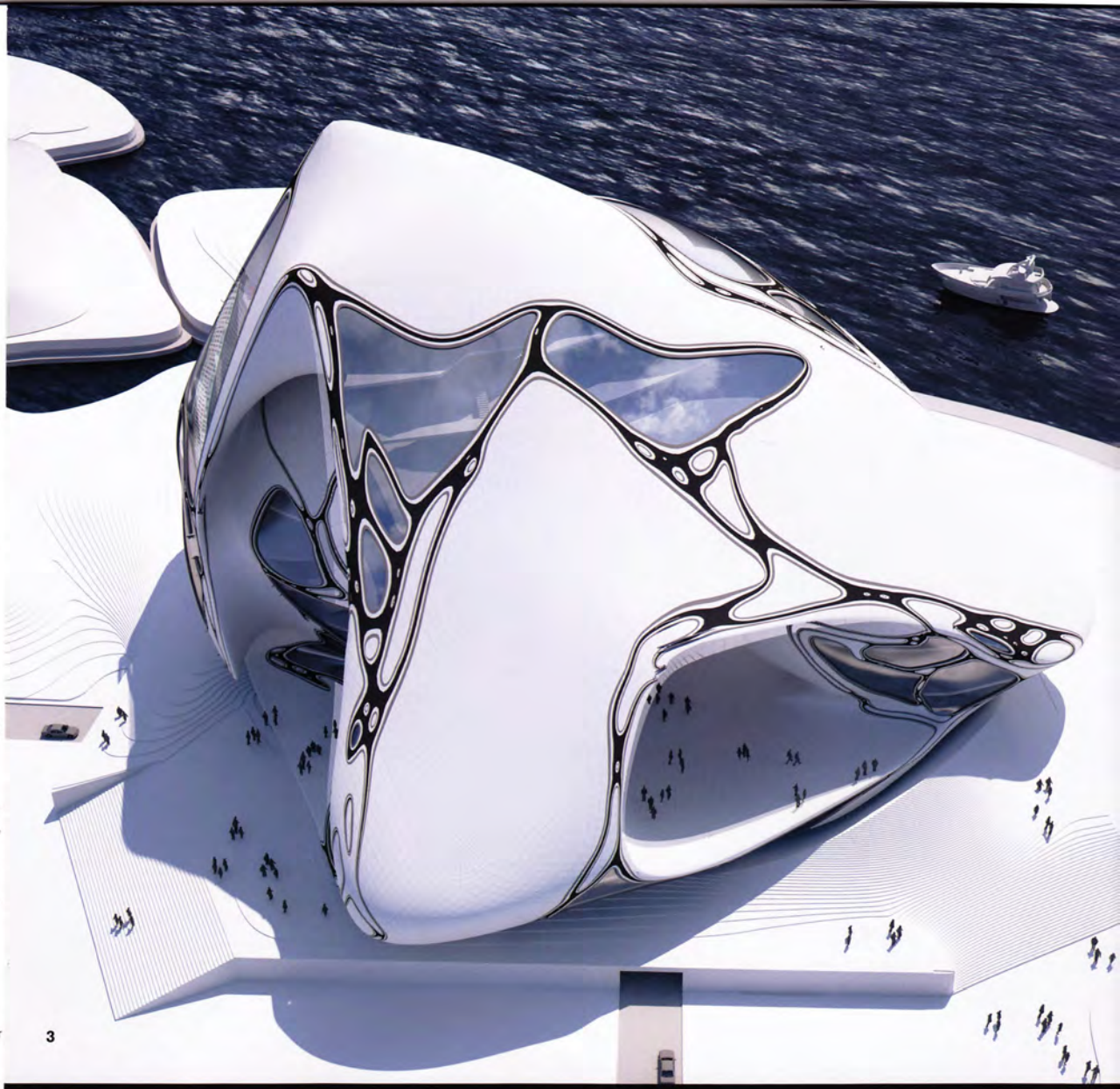

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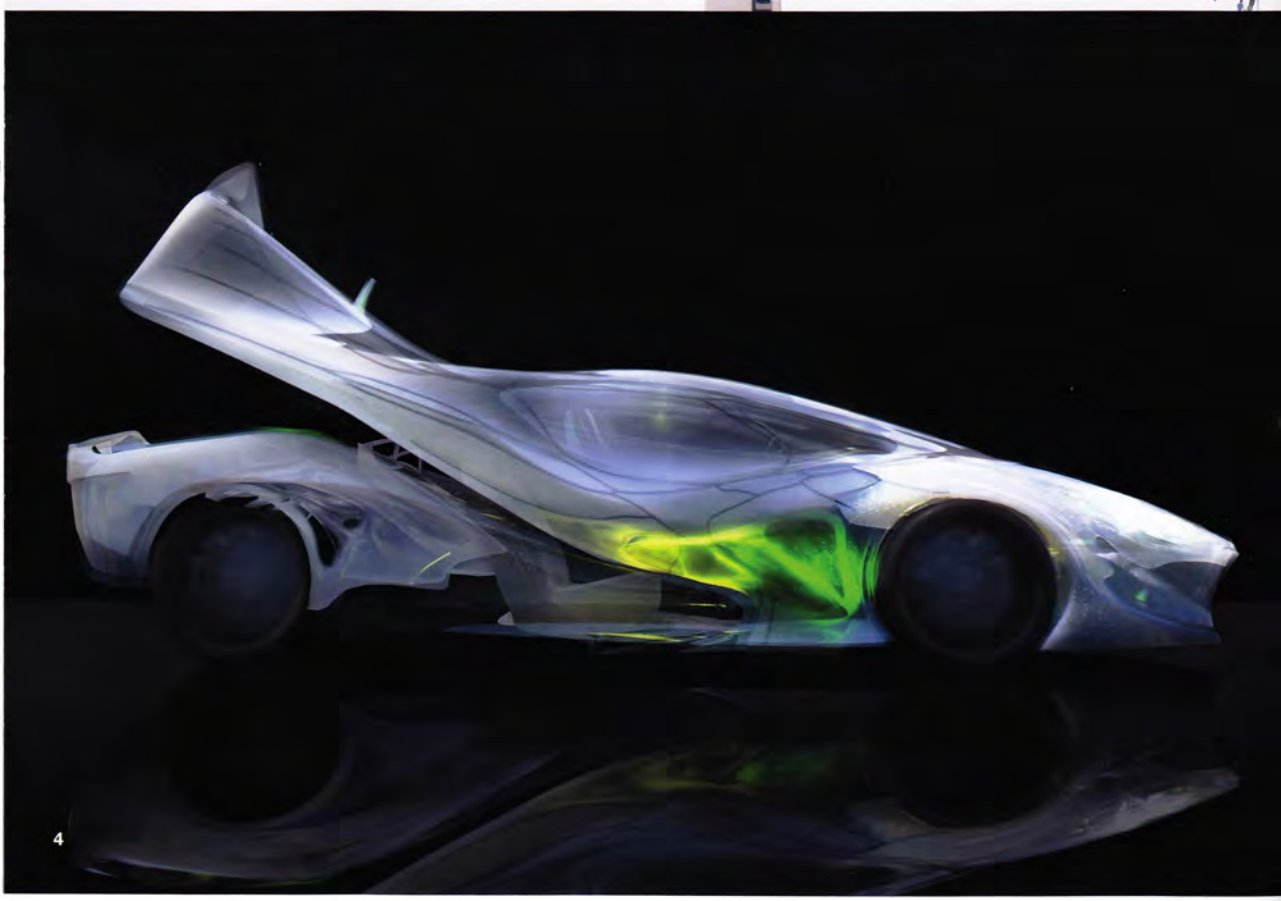

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