

**Nader Tehrani**

*Principal of NADAAA*

**Jackie Nickerson**

*Photographer*

**James Kimura-Green**

*Artist*

**Persons of Interest Magazine**

# Nader Tehrani

Writer: Stephen Hopkins  
Photography: Jeremias Perez

*Nader Tehrani, is an architect, designer, educator, and wearer of many hats. An English native, Nader lived in Iran, Pakistan, and South Africa throughout his youth. After studying at RISD and Harvard, as well as in Europe, Nader founded Office dA in 1986 and later NADAAA with partners Katherine Faulkner and Daniel Gallagher.*

*NADAAA is an interdisciplinary design firm based in Boston with projects ranging in scale from urban design and building design to furniture and product design. NADAAA focuses many of its efforts on construction, digital fabrication, and design investigation. Some of NADAAA's projects include the Hinman Research Building at Georgia Tech; Faculty of Architecture, Building and Planning for the University of Melbourne; the renovation and restoration for the University of Toronto's John H. Daniels Faculty of Architecture, Landscape and Design; and many more.*

*Nader served as the department head of MIT's SA+P from 2010-2014, and currently serves as the Dean of Architecture at Cooper Union Irwin S. Chanin School of Architecture. NADAAA has received numerous awards including the Cooper Hewitt National Design Award in Architecture, The American Academy of Arts and Letters Architecture Award, The Harleston Parker Award, amongst several others.*

*As a professor and former Department Head at MIT, how does your time spent in academia correlate to your firm's projects and other personal projects outside of academia?*

The connection between practice and academia has featured strongly in my career over the years. In the beginnings it was a dialogue between Office dA and RISD. Later that evolved with what we did to transform the pedagogy at Harvard through the work of Office dA, particularly in the area of materials research. Finally, as the Head of MIT, a formulation of a broader curricular change as a result of the culture of making—the introduction of the FabLab and the launching of the *How to Make Almost Anything* course in the context of the Department of Architecture. So, practically speaking, it's two full time jobs. It's about toggling back and forth between the two on a daily basis. But broadly speaking, one of the investments that we have here has to do with a much more direct investment in construction and fabrication techniques insofar as they impact ways of thinking, but also the protocols of the building industry. In an academic context, ways of rethinking and evolving academia for the transformation of means and methods, and how that impacts the way we design, and in practice how we interact with the construction industry. These can't happen apart from each other. In school, one formulates different types of generative speculation, and in the world you have to prompt a company to take on the risks of making...and if they don't, you make them yourself here as the first baby step. That's been one of the major contributions to building that link between academia and practice. But of course, the conduit for that connection is also research. Design research in academia and materials research here as a way of building that connection with industry.

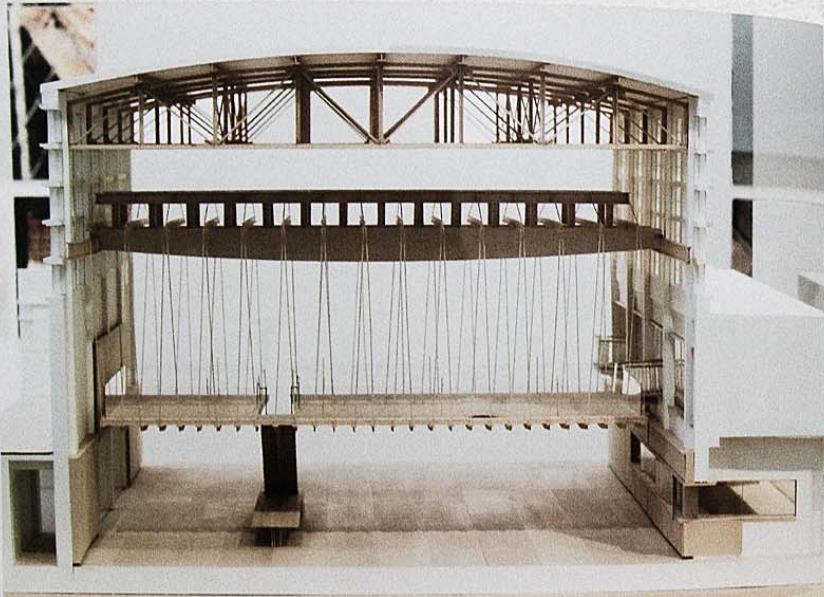
*NADAAA has done numerous projects for universities including Harvard, the University of Melbourne, Georgia Tech, and most recently, MIT. How does your approach to designing educational spaces differ from that of other projects? How does the educational culture of the individual school play a role?*

In the context of educational spaces you have to ask yourself, what are the models of education for which you are designing. Models of education, and their respective spaces of learning are changing so much right now, thus, so too are the types of buildings they involve. All you need to look at are some of the TEAL spaces at MIT, or collaborative spaces, breakout spaces, FabLab spaces...

At the same time because the audience, the students and faculty, are all involved in architecture or education, de facto all of these spaces become pedagogical spaces. And by pedagogical spaces I don't just mean spaces of learning, but didactic spaces...instruments of learning. For that reason they've become exemplary in the way that they behave.

So in that way—material usage, tectonic elaborations, structural optimizations, environmental behavior—all of these are put to a heightened test in order to demonstrate their relevance. They are opportunities for speculation, but they're also a way to challenge convention and propose a new paradigm—because they are precisely the foundation of the expertise for which future projects may emerge. And then of course, this is all very dynamic because spaces of teaching are flexible. Teaching will change in 10-20 years from now. So we've had to think about how to design an infrastructure that has the ability to transform later down the road.





*Previously you've mentioned the concept of the "debundling" of systems whether it be a print book versus kindle or physically going to class versus virtual classes. I think we can both agree there is a vast benefit to this evolution of entertainment, workplace, classroom, etc. However, upon digging deeper there is a sizable experience lost within.*

The debundling has to do with something that is already happening in popular culture. The idea of your ability to download music, a book, or something from Netflix is effectively demonstrating the fact that you can gain access to information and knowledge on your time, on your schedule, at your convenience. Currently the education system is based on a four-year module, bundled all together, in a strict linear sequence. In many schools this preempts the possibility for added research time or added practical professional training. You may want to finish your four years of college in three years, (*the points*) he may want to finish that same four years in six years to gain two extra years of research and professional training. The debundling enables for that level of interaction in platforms of learning.

The second part of the question has to deal with this idea of how do you negotiate the physicality of educational experiences versus the virtual. The argument, at any rate, is precisely because you can break down lectures into smaller modules, then it's something that you have access to at midnight; and if you don't understand it, you can go back to it the next morning at 7 A.M., and if you still don't get it, you can do it again at 11 A.M. But what this does, is that it enables you to use class time at 3 P.M. to come together with a larger group of people and discuss it, do experiments around it, and learn through collaboration. So one is not a substitute for the other, the latter is a reinforcement of the former. The debundling enables the possibility of breaking down education into smaller constituent elements such that the time you spend in class is focused on the experience of educational interaction itself.

*NADAAA is of course a cross-disciplinary firm that has taken on projects from the furniture scale, to the urban design scale. How does your design philosophy change with these varying design mediums?*

When you're designing a chair, the question of ergonomics becomes central to the way in which you formulate a set of constraints.

If you're designing buildings within a dense urban context, those constraints all of a sudden transform to zoning envelopes, floor area ratios, maximum building heights, setbacks for light and air among a range of other things that activate the figure of the building. These are fundamentally different from each other. At the same time, there are certain ethics that could bind these two scales together. That has to do with an ethic towards materiality, how things are fabricated, ways in which materials or resources are used responsibly in an optimal fashion. But also techniques of integration that make for smart connections across disciplines. We talked about disciplines and these are moments in which areas of environmental, structural, and formal development of the project come into dialogue. There's nothing less structurally relevant in a chair than a project at the scale of building, even though they operate very different scales. So there are definitely certain aesthetic sensibilities that form the red thread that binds the smaller scale to the large, but there are also certain irreducible qualities at each scale, and each medium, that cannot be translated from one realm to the other; we recognize both.

*For projects such as Mantra you scrapped the contractor and built the interior in-house for a margin of the cost. What is your take on the architect's role in development and building for the future? What is the role in your firm?*

One of the fundamental things that we developed at Office dA, and continue to do at a much larger scale now at NADAAA is to involve ourselves in questions of the means and methods of fabrication as a direct challenge to the triangular relationship to the client, architect, and the building industry. Such is the case when you divorce the relation between design intent and building protocols. It produces a situation where the architect has no control over design intent. What we are trying to create, whether through the digital process or not, is a situation where a certain ethic of control comes into being by gaining an insight about smart ways of using materials, effective ways of assembling them, and a more optimal way of impacting the use of labor on site. This control that you regain over the built artifact is not control for power's sake, and nor is it a way of gaining efficiency, optimization, or intelligence per se, but it is a way of thinking of the designed environment as part of a dialogue between cultural, economic and social priorities all at once. So what we did in *Mantra* with a sheet of plywood and an assembly process saved somewhere around \$200,000 for the client.



The contractor had up-charged for the Hookah Den and we found ways of enabling the client to implement a key feature of their design: the totem for which the entire place would become known.

*For the University of Toronto you did something similar in that you manufactured a scaled mock-up which ended up making the project \$800,000 cheaper. Can you elaborate a bit on how you approach design hurdles with this sort of business strategy? How do you decide where to pare away?*

What we are doing now are things like this, but at the scale of an entire building. The skylights at Toronto are an example, where questions of daylighting, structure, and the hydrology of the building are coming into a conversation with each other. All of a sudden it has a much more relevant presence. In that case, we are not literally building it, but we did build the mock-up downstairs, demonstrating its feasibility. All of a sudden you recognize that this becomes instrumental to how we function as a discipline.

*How does it play a role in your design theory?*

It shows you that architecture is not just a mute object or space, as a background for education. Architecture *is* the vessel of experience. More and more, the academic context is becoming a destination. Think of when you go on a vacation or a historic tour—the experience is very important. The natural ecology of the Caribbean, the historic pungency of Rome...these are things you go for. But academia can be argued to be very much the same way. It connects the intellectual mission of schools with a visceral counterpart. So what all of this does in our buildings, is that it enables us to focus on the architecture --the materials, spatial connections, formal conditions-- and produce a framework for that experience, in effect, making a bridge between actuality and cognition, to internalize how the architectural environment works to reinforce our mental advancement.

*I recently came across an interesting article about Bjarke Ingles Group and their kickstarter campaign for a Vapor Ring Generator.(The smokestack uses excess steam from the BIG-designed Amager Resource Center (ARC)—set to be the world's cleanest waste-to-energy plant—to eject a 70-foot-wide vapor ring for every ton of carbon dioxide it incinerates.) What're your thoughts on the idea of crowdfunding an architectural project?*



Well I think it's fantastic, especially if they succeed. Is that smoke ring worth it? Absolutely. If the will of the people can fund it, then it becomes part of the public imaginary, and that's fantastic.

*Are there any technical systems that you feel may change the industry at some point soon?*

Well so much has already changed. Your generation and the way you've been educated is so different than mine that I find myself more often than not, being taught by your peers. You draw differently, you communicate differently, you learn differently...So what you're talking about has already happened. Except the only difference is that if the evolution of changes were microscopic and millimetric back when I was in school, you guys are making leaps and bounds and miles by day. Why? Because technology has evolved at such an incredible speed.

*On another note, you have previously stated that in architecture there is a constant "battling" between a configurative and a figured approach to a structure. Can you touch upon this idea and how NADAAA deals with this? How about outside of architecture?*

I'm not sure if I said configurative and figurative specifically with respect to structure, but as a broader conceptual set of categories, certainly. The "figurative" involves a formal bias where your will to form something, or to shape it, comes first, and then how it's broken up comes second. The "configurative" develops smart modes of assembly or aggregative parts that enable cellular or supple ways of accreting volume, space, and program: without a determinate form, but rather more of a system. Without a bias of what the figure of the building will become, design invariably involves the discrete and unitary development of systems, with a more open-ended approach to its positioning in a site, a skyline, or a context. It is the confrontation between these two modes of thinking where it becomes more interesting: when designing from outside in and inside out or from cell to overall massing become impacted in productive ways, if only because they will often not coalesce in automatic ways, and thus key choices and priorities will need to be set. Our process often biases the configurative, and thus when designing a building from ground up, lets say using brick, we will use the brick's layout, bonding, and depth to inform the organization of the building at a larger scale, or even its spatiality.

And yet, we are mindful of the figural results it may yield, so we are also not innocent of the iconic or symbolic associations that may lurk within.

*As an English-born Iranian that grew up in South Africa, Iran and Pakistan, how did these vastly different areas of the world affect you as an architect?*

Well if anything they demonstrate how the potency of each environment can change your perception of place, of knowledge, and sense of identity.