

DESIGN detail

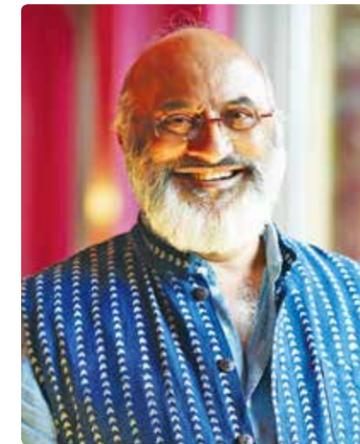
the architecture magazine

editorial

This issue has a Special Focus on Building Materials.

Materials are our "tools" with which we execute our design and "through" which our users see them, appreciate them and respond to them. In my perception, materials on the one hand are fairly limited and have been used and re-used several times and abused by thousands of architects worldwide. Some just see it as a tangible tool to translate their ideas. Yet, there are a few others, who push the boundaries and make the material go further and perform beyond the realms of our limited perception and their perceived inherent qualities. And when we push these boundaries, the materials match the strength of the ideas with equal measure - making architecture memorable.

And, it is the manner in which some of these ordinary and mundane materials have been used, that make them magical in this issue.



Patrick Dougherty's "Waltz in the Woods" using stickwork for the seven oval shaped towers, touching thirty feet high seize the imagination of those who pass through.

The Hunnarshala office campus in Bhuj merges ethnicity, creativity and technology with a series of ethnic materials - using 90 per cent recycled wood for the roof; stabilized reused earth blocks for walls, with mud and lime plaster and thatch roof, revisits our methodologies of traditional building.

And what does one say of Morphogenesis's brick work at IILM which recreates our architecture which "engages with the future".

Mistry Architects Auditorium at Kuppamin Andhra Pradesh can be perceived as an earth pod with a steel pod over it, and the massive structure still manages to relate to its environment.

I love the unusual use of Bamboo by the young team of H&P Architects in Vietnam which makes me realise that bamboo is an extremely relevant and multi-faceted material to be used in India, for example in the north east where we must use it more imaginatively exploring its potential to

cater to the different demands of buildings and its interiors.

There is a lot to learn from the Khar Social restaurant which employs one hundred percent reused materials. This ideology is bound to play a vital role in times to come.

And the SaiMandir in Vennached which sings - is poetry in brick.

The Pritzker Prize was founded in 1979 by Jay Pritzker and his wife Cindy; the award is funded by the Pritzker family and sponsored by Hyatt Foundation. It is often referred to as the Nobel Prize for architecture.

This brings me to our special three architects who have just won Architecture's most prestigious prize - the Pritzker Prize.

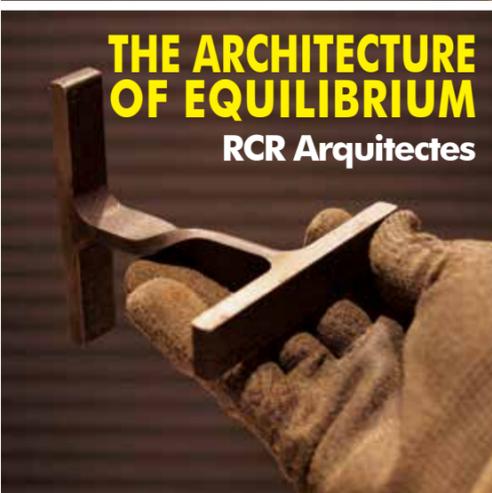
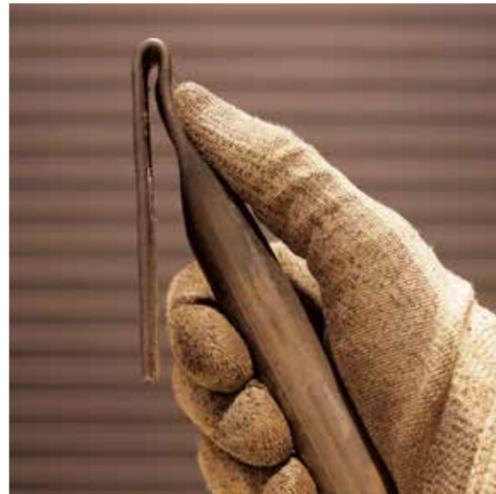
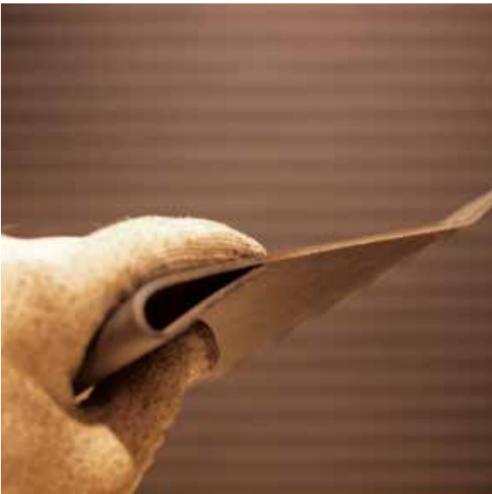
RCR Arquitectes was founded by Rafael Aranda, Carme Pigem and Ramon Vilalta in their native city of Olot in Spain.

They have been invited to more than 200 lectures throughout the world and in 2013 established the RCR Bunka Foundation to support architecture, landscape, arts and culture throughout society.

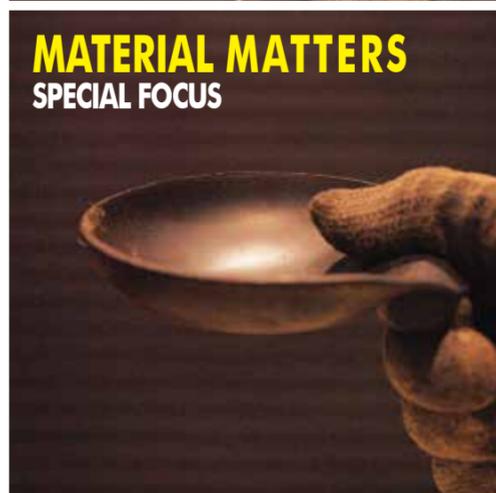
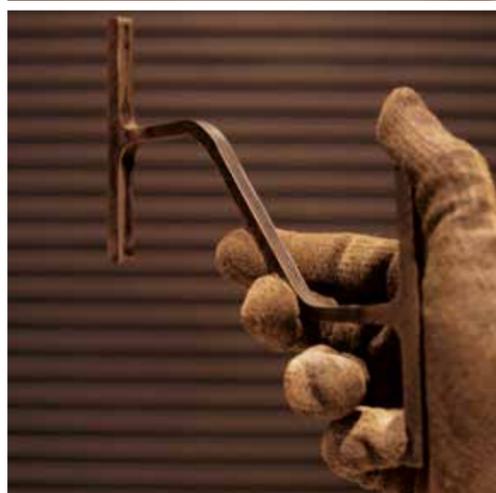
These are the Pritzker Prize winners this year. On the reverse of their bronze medallion are inscribed the slogan "firmness, curiosity and delight".

I salute them and thank them for reminding us that the purpose of architecture must be to provide delight and make us happy - only then can say it is an architecture of success!

Architect **KARAN GROVER**
Chief Editor



**THE ARCHITECTURE
OF EQUILIBRIUM**
RCR Arquitectes



MATERIAL MATTERS
SPECIAL FOCUS

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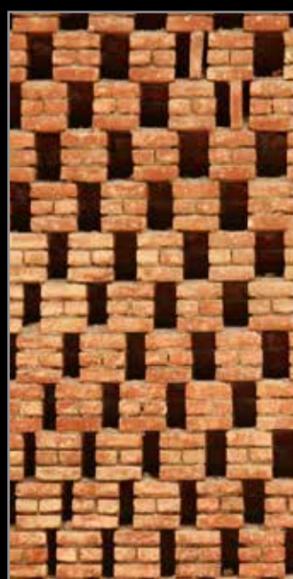


THE ARCHITECTURE OF EQUILIBRIUM
RCR Arquitectes

SPECIAL FOCUS
MATERIAL MATTERS
24-107



Cover image
Courtesy:
STUDIOMAKE



SPECIAL FOCUS

Jali to brick jali. Truss to wooden truss. Floor to Jaisalmer stone floor. It is ironic as to how when our architectural spaces and structures are flagged with material names, they gain an altogether different character and meaning. Enriching our visual and tactile senses, materials are more to our designs than just the lines we draw in our plans and sections. Be it the flowing curves or the orthogonal planes, they conform to any of the many ideas, shapes and forms we perceive.

However, architecture practice today is not just about the newest material in town, but also about what new could be done with the existing; it is about how one could explore the latest and yet remain rooted to the past. In a hunt for the same, Team Design Detail was thrilled to discover places and people who are making it big with the banal out there. For the architect in us who loves to explore and expand, Material Matters.

Ar. Soumya S Warriar

MATERIAL MATTERS

BACK TO THE DIGITS

Text and Photos : *Studiomake Co. LTD*

Our studio maintains that there is no distinct boundary between the act of design and the act of construction; they are inseparable parts of the same spectrum. We often prefer to think with our hands and find empirical knowledge to be a critical aspect of our design process.

In our roles as teachers in the classroom and mentors in our studio we see the growing disconnect from architecture as a craft, a separation of thinking from doing. The architecture schools have no workshops. The strong socioeconomic division (and cultural aversion) between the mental and the manual is a particular disservice to the architect whose work is ultimately manifest in unfamiliar techniques and materials known only by name.

The term 'digital fabrication' implies futuristic technologies where the maker has been edited out and suggests a utopic design experience where ideas effortlessly come to fruition as the perfect objects we desperately want them to be. It exalts the complete absence of the hand, intimating that computer controlled machines are virtuous and faultless, we are simply users and operators our role increasingly minimized and mediated. We believe that fabrication can balance digital processes with the idiosyncratic beauty, sensibilities and temperament. We don't reject technology, we want to humanise it.

In 'The Eyes of the Skin' Juhani Pallasmaa writes that "the skin reads the texture, weight, density and temperature of matter. The surface of an old object, polished to perfection by the tool of the craftsman and the assiduous hands of its users, seduces the stroking of the hand. It is pleasurable to press a door handle shining from the thousands of hands that have entered the door before us; the clean shimmer of ageless wear has turned into an image of hospitality. The door handle is the handshake of the building. The tactile sense connects us with time and tradition: through impressions of touch we shake the hands of countless generations."

The door can be considered a unifier between spaces. The handle serves both as punctuation to the current space and as an introduction to another distinct space. Inside to outside. Hallway to bathroom. Bedroom to closet. Street to garden. Crossing the threshold and passing through is a physically complex and conceptually rich moment within architecture.

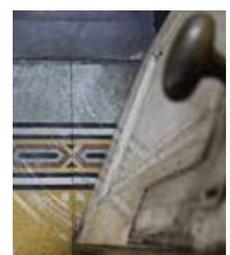
The point at which we grasp material, we physically understand the form of the handle and subsequently evaluate the feel of the material. The moment in which we initiate movement of the handle or latch mechanism we verify our expectations based on our understanding of the discernible design semantics (common sense) and we experience the physical operation of the instrument.



DOORWAYS, THRESHOLDS, AND SURFACES



By observing old, well preserved/neglected architecture we can readily see the patterns of wear form both intended and incidental use. The hands, the sun, the rain, and movement all leave their mark.



CRAFT AND TRADITION

Workshops and craftsman provide a launching point for our design explorations and material understanding. Our relationship with the makers is just as important and complex as our relationship with the materials and techniques.



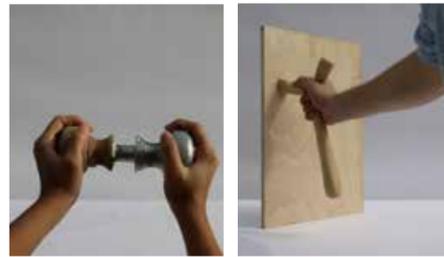
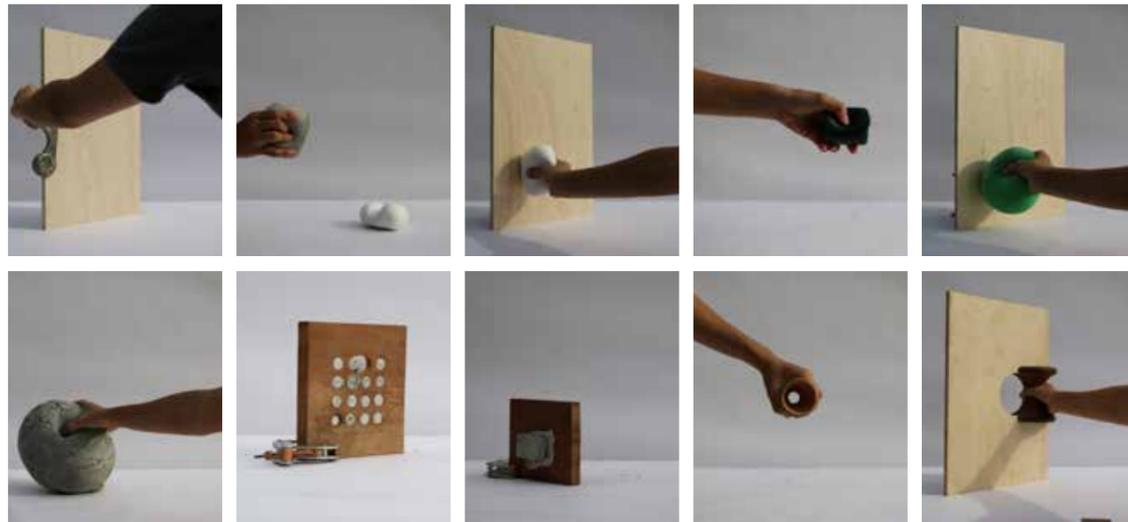
HOLDING THINGS TO SEE HOW THEY FEEL

An early exercise in which we instinctively grasped objects to understand the moments and textures we respond to best. Not only to engage in the visual clues of industrial design semantics but also to allow our hands to settle and discover what we could not see.



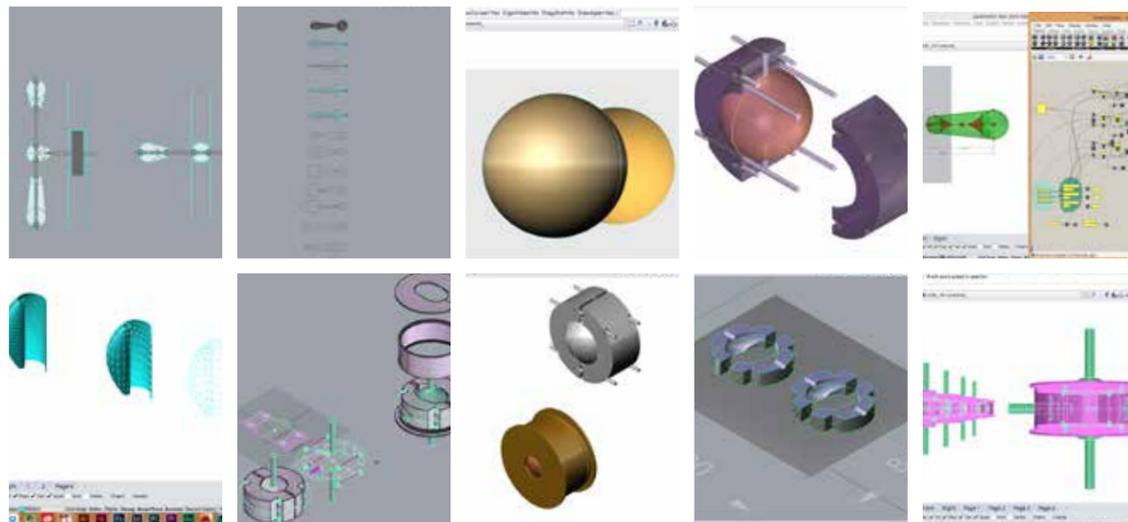
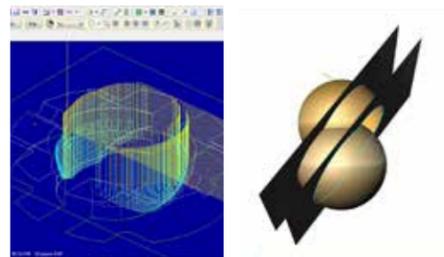
MAKING SKETCHES THAT WE CAN TOUCH

Several investigations into: The use of metals as a conductor, which could pre-emptively inform a user of interior conditions. The use of intuitive forms, and found objects which break from known conventions. The engagement of door edges and the penetration of the door surface.



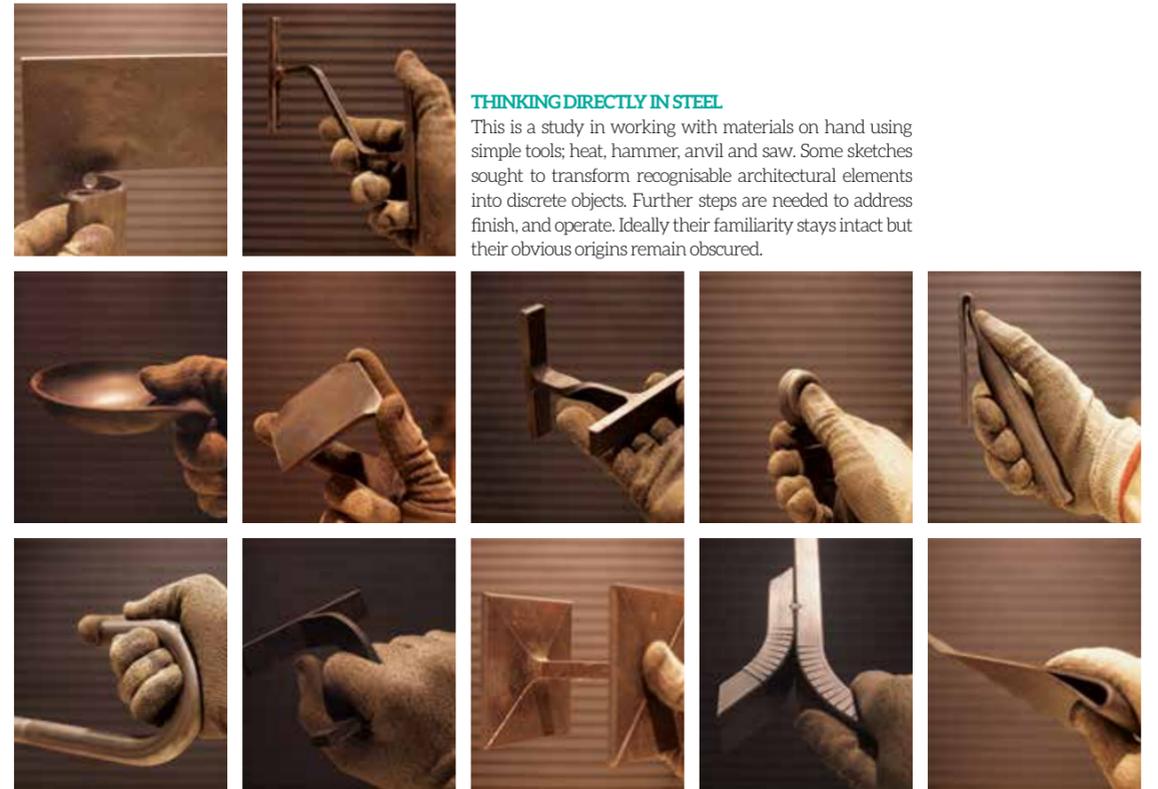
A MOMENT WITHOUT GRAVITY FOR SAKE OF CLARITY

Many investigations have started in physical material and moved into digital development; most often for increased precision in understanding and translation for machine language. A few ideas have derived their form digitally and the material translations have proven to be much more poetic.



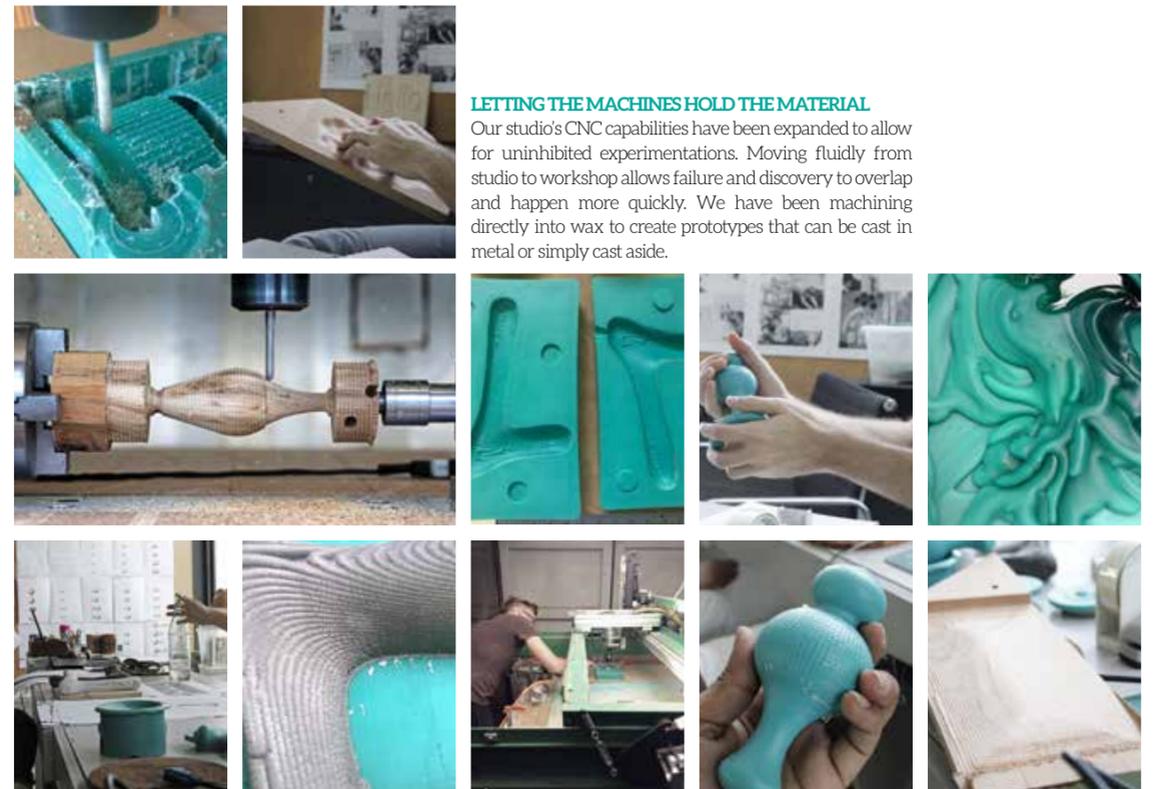
THINKING DIRECTLY IN STEEL

This is a study in working with materials on hand using simple tools; heat, hammer, anvil and saw. Some sketches sought to transform recognisable architectural elements into discrete objects. Further steps are needed to address finish, and operate. Ideally their familiarity stays intact but their obvious origins remain obscured.



LETTING THE MACHINES HOLD THE MATERIAL

Our studio's CNC capabilities have been expanded to allow for uninhibited experimentations. Moving fluidly from studio to workshop allows failure and discovery to overlap and happen more quickly. We have been machining directly into wax to create prototypes that can be cast in metal or simply cast aside.



IMMEDIATE PROCESSES

As much work as possible is completed at our facilities. We are not opposed to collaborating when our skills or tools are exceeded. But having an intimate relationship with the successes and failures of our ideas tunes our ears to the desires and fears of the materials we work with.



RESEARCH CONCLUSIONS

Over the course of several months we have watched patterns develop within our ideas and physical sketches. Themes of engagement started to organize and refine, sometimes absorbing multiple investigations into a single design. We have developed a series of door handles, pulls, and latches that magnify and draw focus to particular physical or experiential moments of within the simple act of engaging a door.

Traces of Wear

Close contact with the living, breathing, secreting, human body leaves marks and residue that accumulate over time. The constant touch of the human hand usually degrades the designers or manufactures final vision.



A large brass disk floats away from the door surface. In grasping the edge your fingers find purchase on the deep curved lip behind. The surface where your thumb rests is scored with an eccentric pattern. With time the brass blackens where the hand does not polish.

A large teak wood disk floats away from the door surface. The front plane is hand polished to a glass like finish. The side and back has been hand carved with the smallest common sized chisel producing an aggressive texture. The teak will continue to polish and darken where touched by the hand.

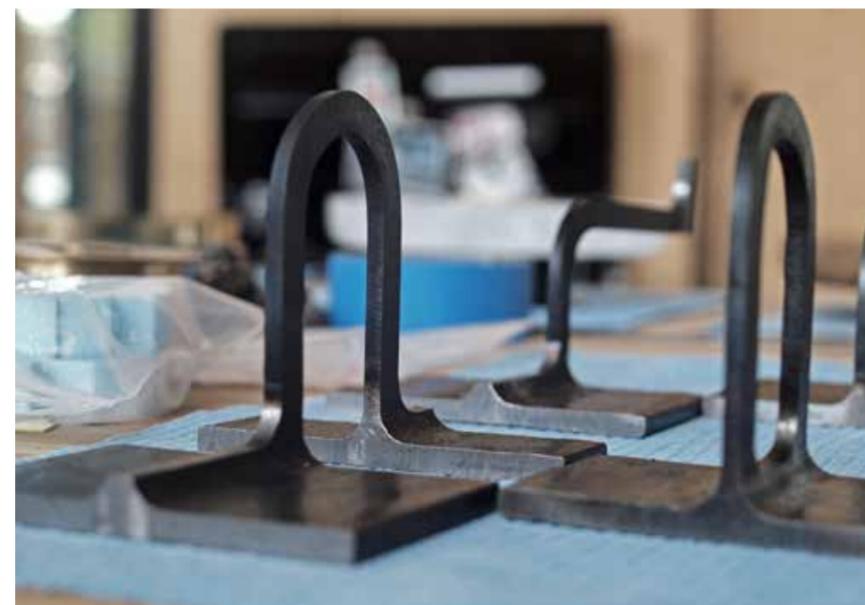


A large crystal potassium alum disk floats away from the door surface. Cut and polished the mineral appears both translucent and clear in places, you can see your fingers wrapped around the back side. With properties that allow it to function as an astringent and antiseptic it naturally cleans and deodorises your hand with each touch. Roughed on bandsaw, formed and finished on a wood lathe. Delrin spacer cut on CNC lathe.

Fragments of Architecture

Architecture is an additive process using standard and modular material. Working subtractively with wide flange steel beams, a vocabulary was derived that maintained a faint familiarity yet developing its own design language. We conceived of a series of

door pulls that share the same origins as the building. Working subtractively with wide flange steel beams we derived a vocabulary that maintained a faint familiarity but developed its own design language. CNC milled wide flange steel, heat bent and hand forged with laser cut teak inserts.



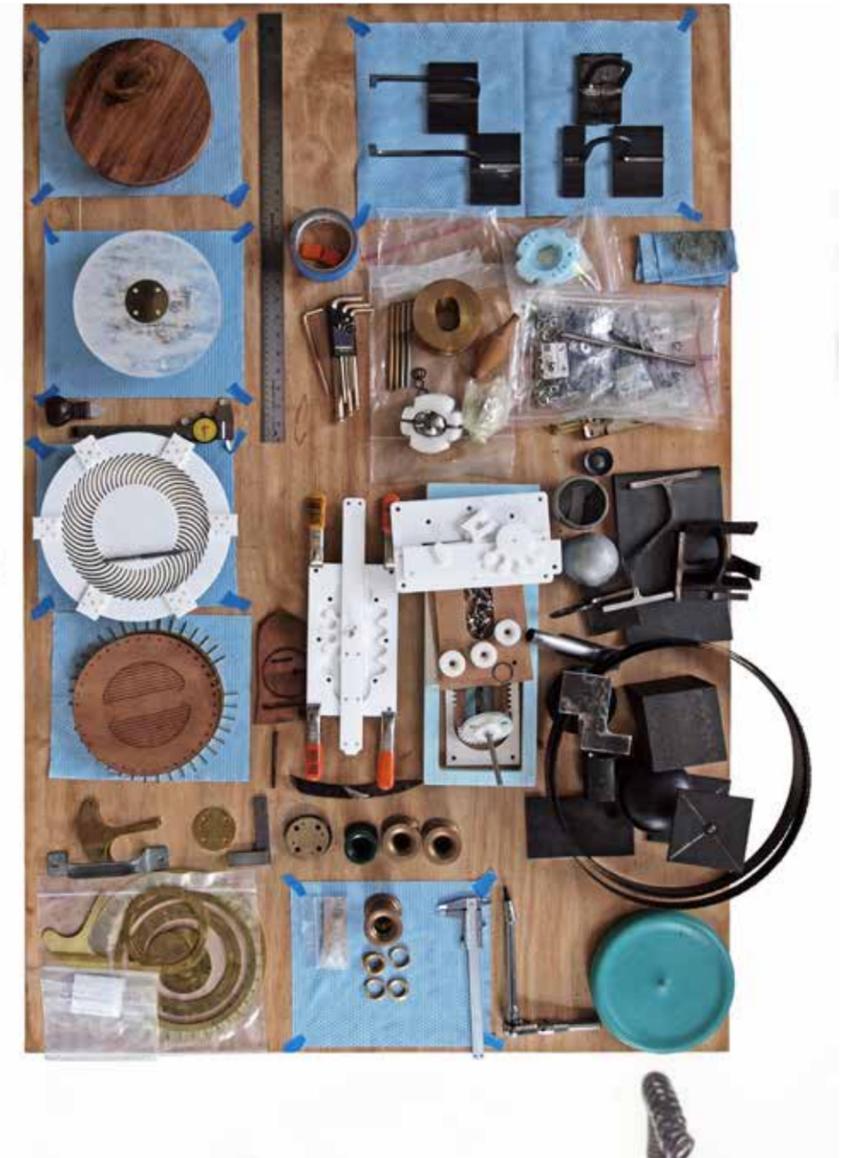
Expectations of Operation

An eccentric gear based mangle rack turns continuous rotational movement to back and forth linear movement. The counterweighted spinning handles intuitively inform of the position of the deadbolt throughout the motion and allude to the tools that were used to manufacture the object itself. Laser cut aluminium plate with hand turned brass and teak counterweighted knobs.



PROTOTYPES

By moving forward with multiple, concurrent designs parallel ideas are allowed to influence each other. A single table for all projects.



STUDIOMAKE

Studiomake is an interdisciplinary design studio led by David Schafer and Im Sarasalin Schafer with a team of architects, designers, and fabricators, currently living and working in Bangkok, Thailand. The team works in the realm of architecture, interior, furniture, and object design, inspired by tradition, technology, and constant questioning.

By working in varying scales, they are able to pull connections between different crafts. Their workshop which is equipped with wood, metal, and ceramic facilities, including large-scale CNC machinery, provides a place for experiment and play in the design of both objects and architecture. [cd](#)



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'MAKE'ING IT HAPPEN

Ar. Soumya S Warriar
in conversation with
Ar. David Schafer



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Blending space making with craft, Ar. David Schafer and his team at STUDIOMAKE believes that there is no distinct boundary between the act of design and the act of making. His studio is in a constant attempt to explore the interplay of architecture, interiors, furniture and object design. Ar. Schafer - the maker of things and spaces in an informal chat with Ar. Soumya S Warriar.

B. Arch - Practice - MFA - was this a calculated decision?

Graduate school was never on my radar during my years in architecture school. It was always about practicing - getting out, working for somebody, getting my license, starting on my own as soon as possible. When I met my partner, my wife, in architecture school, we always had a plan to start our own studio together. When we started to think about what it was more specifically, the idea of moving to Thailand - which is where she was born and raised, came up. A part of that transition involved graduate school; initially because as in most Asian cultures, it is required by the parents. But by having a graduate degree, it meant teaching became an opportunity. When you're young and trying to start your practice, it is a good way to earn money (while you lose money). It is also a way of keeping your practice engaged academically.

We were always interested in the smaller scale of architecture; that which involves intimate type of design engagement. At the time I had been out of school for five or six years and she had been out for a couple of years. We already had this specific view of how we wanted to engage the world of architecture and that was very much focussed on 'making', and so to go back and re-engage in the academic process seemed not that interesting. Going to graduate school to study architecture again felt like a step backwards.

I had always thought what's an M. Arch going to give me when I already am a licensed architect. As an

opportunity to diversify, an MFA sounded a lot more interesting. When we decided to move to Thailand, we recognised that there were many opportunities beyond architecture. An alternate degree was going to be something more valuable to us in the future, which qualified us to teach in other disciplines, and which was a way of us potentially engaging in product design. Cranbrook was our ideal choice as it was focussed on making; there's an academic rigour yet not an academic environment per se. There are no classes or grades; it was an ideal situation to focus on developing our way of making and design.

How did you come to architecture and who has been your inspiration?

Architecture came to me at the young age of nine when my parents bought me a Crayola brand drafting set with a little plastic drawing table and t-square on it. I started drawing plans and dream houses that were absolutely ridiculous; but later I realised that 'this is it!'

I had a pivotal experience when I was in high school. I took drafting in junior high; there was a drafting department in high school where we also had an architecture class. We drew elevations. My teacher made me enter a local design competition that was

- 1) Guan Yin Pavilion
- 2) Baan Sai Ma



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being put on by the AIA and he had an architect friend of his to help me. That friend turned out to be a really interesting person. The first time I had a conversation with him, he started using phrases like 'process of arrival'. He meant the front door! It was a paradigm shift. His words were mind expanding in terms of how I thought about design. He introduced me to Morphosis and immediately after that, I started going to book stores trying to hunt them down.

There definitely are practices that I look up to as we grew - Studio Mumbai in terms of the way of engaging design through making. Kevin Mark Low has been very inspirational; his book 'Small Projects' was a safety blanket during our early stages.

Has 'making' been the core of your philosophy even as an architecture student?

This idea came from our undergrad experience. Our school was not necessarily a well known school; it had a solid foundation that was perhaps under rated. One of the good things about it was the balance between architecture as a practice and architecture as a theoretical pursuit. Within the school we had the opportunity to chase what we found interesting. I have never been that great at drawing, and therefore spent almost all of my time making models. In my own personal background, in the way I grew up, I have been more interested in engaging architecture through making; whether that's just making a really elaborate

3) *Ornament and Crime*

4) *Habitat for Humanity Shelter*

model instead of an elaborate set of drawings. It became a way in which I best represented my ideas.

How interesting is it to be a hybrid product of architecture and arts?

One thing I realised in my grad school was that 'architecture is not art'. People throw the word 'art' around very casually. The word art is like 'love'. You love your husband, you love your wife, you love your grandma, you love your dog, you love your pizza - these are all very different types of love. We can say architecture is artistic, is artful, but it is not, fundamentally to me, 'art'.

They can overlap, but what I realised at Cranbrook being around artists, while presenting my ideas to them and hearing them present their ideas to me is that, artists and architects come from very different places. Artists are, to their benefit/right, selfish; they are producing work that is about them, that is highly personal. Whereas architects are taught to produce work for the greater good - the user, the client; and we balance that with our own agenda, personality and ego. It's a balance between creativity versus responsibility. If you look at creative professions, architects are at one end of the spectrum, where we want to be creative but have a greater responsibility - like making buildings that don't kill people! Artists have a lower degree of responsibility and therefore potentially more opportunity for creativity; they are allowed to be crazier. The step further is musicians - they have zero responsibility and pure creativity; even with the worst music, nobody gets hurt.

At the other end of it, I don't think architects are the least or most suppressed, you can think of doctors as the most extreme - as the opposite of musicians. Medicine is a practice just like architecture; it requires creativity and learning from mistakes. But the responsibility of a doctor even surpasses that of an architect. Responsibility and creativity, I feel, are polar conditions.

Your work shows how you love to play with materials. Does the material come to you or do you go in search of them in your designs?

It works both ways.

Every couple of months a few local convention centres in Bangkok host exhibitions and industrial trade shows. Huge machine manufacturers produce the machinery and digital fabrication equipment for the auto industry, numerous manufacturing facilities display their wares and tools, and all the industries related to them come out. I keep visiting these just to see what is available out there and build up a material library in my head. I collect samples and keep them on my shelves looking for an opportunity to use them, maybe inventing solutions to problems that don't exist yet.



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One material that has been a pain to work with?

Wood.

I love wood, it's beautiful. But, the issue with wood is the struggle with humidity; it moves so much in the humid climate of Thailand, especially with the air conditioning. In our studio we've made these beautiful wooden doors where on the inside it has an extremely cool and dry environment, and on the outside it has a warm and humid environment. This poor piece of wood has two completely different ecosystems/microclimates within itself and so it cups like crazy as the inside face contracts and the outside face expands!

It is incredible as to how you grow up understanding it as this one simple material, but then you realise how difficult it is in dealing with how much it likes to move.

What has been a surprising material?

The transition that I've had in moving from a western way of thinking to an Asian way of practising is the shift between the cost of material and cost of labour. In America, the cost of labour drives all decisions. Material is more or less inconsequential; every material that you could want is available to you.

In Thailand, there's not a lot of interesting materials that are readily available, but labour is abundant. So we try to do interesting/exotic things with banal materials, say plywood or brick. You can import anything you want, and Thai architects do that a lot. I think maybe when you practice from the place where you grew up, you tend to look out, trying to connect to the international scene. I'm coming the opposite way. I come internationally and the only things I can bring are what will fit in my suitcases! So I guess I bring in a

Right now we're engaged in a project that utilises ideas borrowed from one of those shopping exercises. We're doing the interiors for a leather goods company in Bangkok that has an extremely tight budget and timeline. They have a 600 square metres warehouse space in which they have to fit about 900 square metres of stuff. As we had no time to do a traditional structure; design, engineer, get steel, cut it and weld it, the idea was to use a standard racking system, similar to the home depots in America and customise it as we went.

It was something I was familiar with by seeing the company displays at the trade shows. We are using that system and working within the parameters and basically putting up the structural skeleton. We are co-ordinating the work as an architecture studio, even before the involvement of the contractors. It was a way for us to move quickly.

sensibility in the way of working, and try to apply that to what I can find locally to reinvent things.

How welcoming do you think is the idea of collaborative design, you being a person who leads an interdisciplinary practice?

We work very collaboratively in terms of working with craftsmen and bringing their participation and knowledge into the design process from the beginning. We have done some collaboration with other offices, but generally, I feel collaborations precipitate from big scale projects or competitions, which are generally not what we do. We did do a small project for the Hong Kong Biennale where we brought in some other designers to make an exquisite corpse type of project; and we connect a lot with our peers. But collaborations are not a big part of our studio.

What are the materials to look out for in the future in the context of tropical climate?

I am not engaged or excited by high tech materials per se; but I am interested in high-tech processes. I have an affinity for plywood. It has natural qualities while also having a set degree of stability and predictability.

- 5) Patana Gallery
- 6) Mother Goose

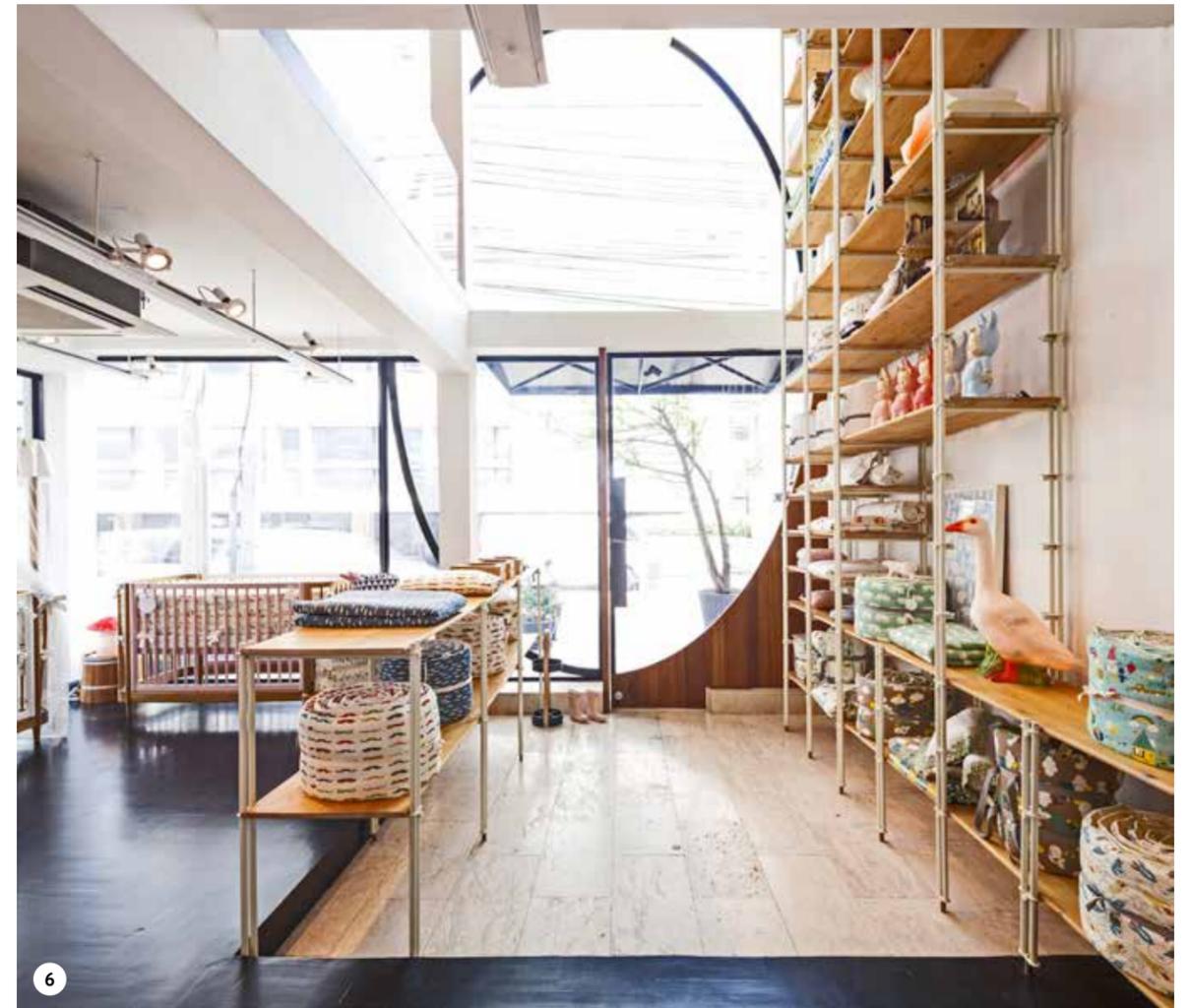
I would like to see more potential with sheet goods - materials that are inexpensive, easily processed and that which potentially have better qualities. Plywood and sheet goods, I feel, are more open ended.

What are the advantages and challenges of being an outsider in Thailand?

One advantage that I feel I have in Thailand is just being a foreigner, being a white guy. Though not because of some sort of white 'privileged' stand point, but simply because clients, contractors and craftsmen are immediately prepared for me to be crazy! But I also try to be very sensitive to the fact that I am a guest here and not to take advantage of my situation. I make it a point to not meet the other expectations of being the demanding, angry and disengaged white guy. I try to never start a sentence with 'well in America..' as if I know better. Though there are certain situations, where after trying to understand the local approach and logic, I do think I have a better way of doing something, then its just a matter of presenting the ideas in a considered way.

The biggest challenge for me to work here is the language. Thai people are not as savvy with English as a lot of other Asian cultures, and the responsibility to communicate is on me; I am working hard at it to prove my commitment to this place. But, Thailand also happens to be more accepting of outsiders. I

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understand that maybe it is easier being a foreigner working here than it is to being one working in Japan. My western education and international outlook brings a certain amount of cache with it that might not work well in other countries or cultures. I try to take advantage of that in a positive way.

Your word of advice for young graduates?

I feel that design education in most Asian cultures is very focused on design as the 'product'; but we try to emphasise that design is just the beginning. There is really no distinction between designing and making; they're part of the same process. A rendering is not the end. That's the problem with most architecture education now. You're judged on the basis of the success/failure of the rendering which overly reinforces its importance. I don't intend to say that architecture schools should be more practice focused; theory and abstraction is equally required. But I do feel that emphasis should always be on the end goal which is to make something. When you're spending a whole day in the abstract world like AutoCAD,

without gravity or sunshine, it is always helpful to remind yourself that what you're drawing is not just lines, but materials. Looking through the drawings to the materials and tooling at the end, I feel is important. Most architecture practices are so divorced from the 'making' aspect that it is a disservice to the design.

What matters to me personally is how buildings feel rather than how they look. Architecture should be more interesting the closer you get to it. Ninety nine per cent of the buildings are less interesting that way. Most contemporary architecture is a retinal exercise - about how it looks, its form. Given unlimited budgets, you could have both; but for me, I think there's nothing wrong with a square building. Experiencing art and other creative work is supposed to get better with time and multiple readings, but that is not the case with most architecture. Emphasising detail and richness is something that is a benefit to the users whereas emphasising form is something that is generally a benefit to the architects or potentially to the owner. Not that there's never a good reason to do a crazy shaped building, but I feel good architecture should be more interesting the closer you are to it. 

