

# Prototypes and Experiments IX

## 13 July - 19 August 2017

The ninth edition of Prototypes and Experiments shows models, samples, tests and drawings picked fresh from the studio shelves of architects and designers. This exhibition series has been ongoing at The Aram Gallery since 2008, asking participants from a range of disciplines to show ideas in development and give us an understanding of their creative process.

Unique to this edition of Prototypes and Experiments is a look at architectural drawing as a form of experimentation. We asked an international selection of contemporary architects for a collage, sketch or drawing that shows how they use the medium to communicate and explore new ideas.

### Asa Ashuach

In recent research, I have been looking into the internal 3D geometrical growth of bamboo. I have focused on a breed that, depending on a variety of parameters, can grow extremely fast and sense its environment to correct and reinforce itself while growing. In collaboration with scientists at Kyoto Institute of Technology, we translated the microscopic bamboo's internal structure into producible 3D objects to study. I designed a new collection of objects using actual bamboo 3D micro-structure geometry together with personal impressions and automated scripts. The research is opening the discussion around future industrial design and architecture, where automated processes will be fed by a combination of human and biological intelligence.

[assaashuach.com](http://assaashuach.com)

### Conor Taylor

Foresso is a terrazo material made with waste wood chips. Its development was first guided by trial and error. Each iteration is shown in the sample tiles that I used to explore ideas and processes, they are displayed chronologically starting on the lowest surface.

The first plaster polymer samples pushed me to explore other binders, and show learning of how to make the timber chips. Then came the first resin-based tiles, these showed there was an aesthetic worth exploring. After those came refinements in surface finishing and chip production. Introducing the substrate was a major breakthrough that allowed the material to be scaled up to sheet sizes and also gave a method to rapidly iterate and explore designs.

[foresso.co.uk](http://foresso.co.uk)

### De Allegri Fogale

Re:Connect is a seating island designed for Bloomberg and Arts Co's Waste Not Want It project.

We were struck by the hidden beauty inside data cables, stripping them right back to find shimmering twists of aluminium foil around the wires. We experimented with weaving repurposed cables using traditional caning techniques and embedding them in resin surfaces. We also used cables to join together parts of solid ash wood to create protective screens and chair backs. Wood from broken pallets is planed down and marquetry techniques used to create decorative patterns. The pale colour of the wood counterbalances the metallic, technological feel of the silver foil.

[deallegrifogale.com](http://deallegrifogale.com)

### Fala Atelier

Our new house and atelier is a building with two faces. One, to be minimally repaired, faces the street. The second, to be built from scratch, faces a small private garden. If the first had proportions and alignments that suggested an unbalanced rigour, the second was planned as carefully crafted set of misunderstandings.

Collages are impressionist expressions, drawings are frozen rhetorics. Imprecise and speculative images are thus stronger tools than closed, photorealistic representations. Collages quote, steal and combine references while searching for beauty in a blunt and naive way. Each image of a space tells a short story.

[falaatelier.com](http://falaatelier.com)

### Ineke Hans

Laser Chair came about when laser cutting was not really a design tool yet; certainly not for furniture. I wanted to explore the technique and use that as the only means of production. I liked that you could transfer the wobbliness of scissors to the digital files. It gives the chair a handmade look as if someone chiseled patterns out by hand for hours; this contradiction of the 'high-tech' and the handmade.

Another thought was to use black MDF so the edges burned by the laser would give a ton-sur-ton effect. I worked hard to use the material efficient: you can make 4 chairs out of one standard sheet. Altogether the process was rather long. We made lots of cut outs and jigsawed models before the final chair was cut.

[inekehans.com](http://inekehans.com)

### Jenny Banks

3D-printing textiles not only bypasses the energy-intensive of traditional textile manufacturing, but also has the potential to revolutionise how we consume our clothing. This "3D-printer" uses post-consumer textile fibres and a binder that is bio-based and water-soluble, allowing for 100% recoverability of a garment's fibres and ensuring a closed-loop lifecycle for our future fast fashion.

This large-scale prototype has been designed to print the flat-pattern pieces of a fashion garment and has been built in collaboration with FabLabLondon. The printer is currently being tested with waste nylon, viscose, cotton and wool fibres.

[jenny-banks.co.uk](http://jenny-banks.co.uk)

### Louie Rigano & Gil Muller

Shore Rugs™ are handwoven from custom-made silicone cord. They can be used indoors and outdoors, and are waterproof, non-slip, durable and UV-resistant.

The experiments on display show our aesthetic exploration with both colour and pattern, and our functional research looking into weave structures. Working solely with silicone sponge cord, a material that is both spongy and stretchy, poses many obstacles that we have resolved through extensive hands-on exploration. The final product on display is a rug made up of segments cut from virtually every test in our colour library, including solid colours and colours that smoothly transition into other colours, thus comprising an infinite spectrum.

[shorerugs.com](http://shorerugs.com)

### Map Project Office

We worked with BleepBleeps to create Suzy Snooze, a product that combines the functionality of a baby monitor, sleep trainer, and nightlight.

This series of models and prototypes shows five key stages of the design process. Early foam models were used for developing the overall form and character of the product. The functional movement of Suzy's hat, lighting and sound were developed through physical mock-ups and electronics hacking. Accurate visual models were then made for the Kickstarter launch. During tooling and pre-production, samples of every element were refined for quality, colour and finish. Finally all components were test assembled to check the production line and product functionality.

[mapprojectoffice.com](http://mapprojectoffice.com)

### Merel Karhof & Marc Trotereau

This exhibit shows the colour/form research of ShadeVolume: a lighting range that is a modern interpretation of the classic lampshade. The system can link lampshades together in endless combinations from a few generic shapes. Each design is modelled in CAD, then the 3D-shape is unfolded into a flat surface from which we create a scale paper model. Gradually we get the desired shapes and colours to develop the collection. A 1:1 scale paper template is printed to check if it fits the structural metal rings of the lampshade. The shade is then ready for production: the template is plotted from standard lampshade material and assembled around the metal rings. Finally, the separate lampshades are clipped together.

[shadevolume.com](http://shadevolume.com)

## Monadnock

The Oculus is a proposal for a new ambitious institute for Chicago, to go beyond the conventional school and architecture centre. The building itself is the main didactic tool for learning about architecture. It contains a wide variety of learning spaces, stuffed with pivotal architectural fragments, based on the idea of direct experience through close reading, walking through and the touching of examples. The building will accommodate a broad range of institutes, visible as towers above the plinth. The Central Grand Space has models from all over the world, a life-size catalogue of examples. The eye, or oculus, looks to the rich cityscape of Chicago, gently equalizing inside and outside.

[monadnock.nl](http://monadnock.nl)

## Opendesk

Delactable is a simple table that experiments with some big themes: from the near future of the workplace to the nature of global manufacturing and supply chains. Built around IKEA's pre-release Delaktig product model, Delactable combines prototype elements including an industrially-produced aluminium frame, and locally-made recycled textile parts.

Originally produced for a collaboration between Opendesk and Space10, Delactable explores combining local manufacturing with locally-sourced materials. The tabletop and legs are made by combining Kvadrat textile waste and recycled denim, a rigid material made pliant by experimental scoring with a CNC machine.

[opendesk.cc](http://opendesk.cc)

## Sam Jacob Studio

The act of representation is central to how we work. First in how we draw, make models and use other forms of media as part of the design process. More than illustrations they are where ideas about architecture and design are staged. Second, representation plays a key role in how we think objects and buildings work in the world. 'Things' – the products of our studio including drawings, objects, spaces, and buildings – exist in dialogue with the world.

Representation for us is the way we bring things into the world but also how things exist in the world. Scales, media, budgets and site vary, but we can imagine buildings as 1:1 scaled models just as much as drawings can act as architectural ideas.

[samjacob.com](http://samjacob.com)

## Studio Furthermore

Lacuna is a voluminous hollow of mouth-blown glass illuminated from above by a chip-on-board type LED. A single moulded form becomes stand, shade, insulator and reflector to a pared down electric circuit. Each piece is individually blown into a wood mould by a master glass blower. The craft process ensures that each lamp is uniquely marked with trapped bubbles or variations in colour. Traditional glass Fresnel lenses found in early lighthouses provide a visual cue for Lacuna, which is geometrically parabolic in shape. An anode and cathode follow their way up the contour of the lamp to power an LED. A sculpted metal mass is set into the top of the lamp. Milled from solid copper and aluminium, the mass passively transfers heat from the LED and away.

[studiofurthermore.com](http://studiofurthermore.com)

## MOS Architects

We draw, talk, email, doodle, diagram, render, print, print, draw, model, receive, distribute, call, approve, confirm, reject, plead, deny, laugh, export, import, present, listen, order, zoom, script, post, pan, copy, paste, scale, collate, staple, eat, list, drink, walk, draw, chat, meet, photograph, crop, calculate, draw, adjust, tweak, sip, solve, stack, note, organize, scan, edit, review, print, question, comment, make, sketch . . . and occasionally, we collect things from this process and store them in a flat file.

Drawings: House No. 10 (Courtyard House), under construction; House No. 11 (Corridor House), 2015; School No. 1 (Krabbesholm Højskole), 2012

[mos.nyc](http://mos.nyc)

## Point Supreme

We use image-making in the same way during the entire design process, from conceptualization until detailing and then communication of a project to the public through photographs. Drawings and images become critical, engage reality and force observation during both project and its representation.

The self-commissioned Circular Playground uses standard toys in a circular, collective structure. Reacting to uniform, unimaginative playgrounds in Greece where children are encouraged to play alone, the project creates a shared experience and the feeling of an exclusive, unique place, despite the fact that it is made of standard items widely familiar and available in the market.

[pointsupreme.com](http://pointsupreme.com)

## Samuel Wilkinson

Soft Shell series is set of three plywood shell chair prototypes. The aim was to produce a comfortable shell with a smooth continuous outline to pair with a variety of bases (two stacking and one pedestal). The shells show tests of different edge profiles and improved ergonomics by slightly dishing the seat pan and backrest.

Crinkle is a preview of a V-shaped LED lamp for manufacturer Decode. Initially cardboard mock-ups, then 3D prints were created to review scale and detail. Now the final tooled aluminium extrusion has been completed, final details will be tested, such as how the diffuser fixes into the shroud, various material finishes and if the intended base designs can work.

[samuelwilkinson.com](http://samuelwilkinson.com)

## Theo Riviere

I create objects as a means of exploring new processes and combinations of materials. I made a collection of stools as I was looking to work on a larger scale. I used planks of ash, embracing its natural grain and movement. The shapes came about through the action of turning on the lathe.

A set of screenprinted fabrics complement the stools. First I translated elements of the stools' shapes and textures into architectural drawings. As they developed, they became abstracted and distilled into the essential lines of the forms. From here I was concerned with composing my motifs into simple considered patterns, taking a minimalist approach when it came to colour and composition.

[theoriviere.co.uk](http://theoriviere.co.uk)

## Office KGDVS

Dar Al Jinaa and Dar Al Riffa are two similar buildings, part of a project of urban renewal in Bahrain. The ambition is to give a public face to the ancient community of pearl fishers, and their musical traditions. Each project consists of both the renovation of an existing Dar ('house'), and a new Majlis ('collective room'). The Majlis will be used as communal spaces for traditional music performances. Both buildings consist of a simple structure of round concrete columns and platforms. The entire building is covered by a seamless steel mesh, providing cover from the harsh desert sun, and transforming the buildings into enigmatic, 'veiled' objects. When the building is in use, the veil is lifted to allow passers-by a glimpse of the performances inside.

[officekgdvs.com](http://officekgdvs.com)

## Rezzan Hasoglu

Sand to Glass is a research and design project combining sand from various origins, and glass (liquid sand). The exhibits are a set of sand-glass combination experiments, full scale models in various materials, glass experiments to find the best way to control sand, and new trials to extend this process. I worked with three glass studios, learning from their experience and guiding them through the process for this project, resulting in a creative dialogue.

The final outcome is two collections. The first is a set of craft objects, celebrating advanced glass techniques with sand. The second is a set of glassware that uses sand as a gripping function and as a way of reconnecting with nature through touch.

[rezzanhasoglu.com](http://rezzanhasoglu.com)

## Shin Azumi

The exhibits show the development of the teapot which is a part of the teaware series, Topo by Kinto.

At the early stage of the design development, I usually make as many paper models as I can until I am satisfied with the balance between the design and the size of the object. With this project, I used my small 3D printer for the first time to check the details after the paper models. As it can create hollow shapes, I could check the water flow of the spout. I could also determine the best balance between the usability and the aesthetic on how much the lid edge should poke out from the body of the teapot.

[shinazumi.com](http://shinazumi.com)

## Zuza Mengham

Camber is part of a long term series of material explorations using resin and various inclusions, most often in powdered form. The single stem vase serves as an exercise for developing a shape that creates a structured pattern while highlighting the detail by manipulation of opacity. By using synthetic onyx in varying levels of density, the milky semi-translucent effect affords a feeling of suspense while still holding a firm structural framework. The display shows both the play in form and line as well as testing levels of translucency. Alongside this are the density tests, paired up with different surface finishes, which can accentuate each sculpture's perimeter whilst also giving a sense of floating buoyancy to the coloured inset pieces.

[zuzamengham.com](http://zuzamengham.com)