

From the hand to the mind to the hand

Construction as an act of design

Between Reason and Intuition

Drawing as an act of analysis

Between Intuition and Reason

João Quintela and Tim Simon

JQTS

ETSAM (Spain), TU Berlin (Germany)

CEACT/UAL (Portugal), HCU Hamburg (Germany)

A mere thing is, to take an example, this block of granite. It is hard, heavy, extended, massive, unformed, rough, colored, partly dull, partly shiny. We can notice all these features in the stone. [...] Obviously the thing is not merely a collection of characteristics, and neither is it the aggregate of those properties through which the collection arises. The thing, as everyone thinks he knows, is that around which the properties have gathered. One speaks, then, of the core of the thing.

Martin Heidegger

Construction as an act of design

Between Reason and Intuition

The authenticity of architectural experience is grounded in the tectonic language of building and the comprehensibility of the act of construction to the senses.

Juhani Pallasmaa

The process of construction in architecture has necessarily a rational condition. It is framed by the eternal laws of nature such as gravity and it depends on the characteristics of the materials and how they dialogue between them as to define an architectural space. From this perspective, if we consider architecture as the art of construction it will be always grounded to the same common language, that is to say: structure, material, construction, form and space.

At this point architecture can be determined by a mental process of design or, instead, it can be complemented with an empirical knowledge where building is learning, building is deciding, building is designing. Like this the architectural design would be a process of going back and forth, in a reciprocal attitude. Asking the brick what he wants to

be indeed and waiting for his answer at the very same moment. This is also what we can learn from the past when buildings were done by a trial and error method and each builder used to go a step further than his predecessor until failure reveals the limits of a certain structural system.

So, construction should be an act of design and not just an act of building. It can definitely be a learning process where one becomes an active part and has the possibility to carry a load on his shoulders and to feel the gravity in his own hands. It will be than inscribed in our body and mind. Our body is the most important tool to experience architecture. By moving through space, we make ourselves aware of its characteristics. We can touch the surfaces. We can feel the materiality and its temperature. We can feel how the forces of gravity are being conducted to the ground. These are common experiences that are grounded in the tangible physicality of the architectural object.

We have had the possibility of developing several self-built projects which gave us the possibility to experience the construction of a building not just in an abstract way. By this, the gap between designing and building is filled by the experience with the materials themselves. That means that our task as architects is also redefined within the framework of the overall process. Those projects - some academic and others not - allowed us to become part of the act of construction and to take the most important decisions directly

in place by testing and building just like being in a laboratory and doing experiences with our real scale research object. We could hold the elements, feel their weight, notice their temperature, get aware of the strength and touch the surfaces. Through this process the materials inherent properties are becoming physical experiences that bring us in close relation with the materials themselves. Rationally we understand their possibilities of construction and intuitively we test solutions that could go beyond the technical and structural needs in order to transform the act of joining into an aesthetical process that can define the character of the architecture. This approach follows a generic way of dealing with the materials that is driven by the intention of achieving a specific architectural expression.

Like this we are addressing common principles of construction which allow us to build spaces with our hands, with the use of basic tools and analogic processes. And those principles that are based on a common knowledge have also the capacity to be shared with the others both in the process of building and in the experience of the architecture. Accordingly, anyone can participate in that process to turn the act of construction into a new ritual. A simple building becomes than a new common structure and the tectonic language makes it comprehensible to everyone. We all share the same physical experiences of feeling the heaviness of the element and therefore we become grateful for the supporting wall that does the job of carrying the load. The static phenomena of the loadbearing system - the

bones of the architecture, we could say - is than a comprehensible result and its meaning is replaced by the idea of a new symbol. Christopher Alexander states that there is a timeless way of building inside each one of us. It is an organic and natural process that grows spontaneously due to the inherent human desire to create something and inscribe himself in that process.

Being part of the act of construction creates the possibility of reacting to external conditions and transform generic principles into specific ones. While there are aspects that are defined from the beginning in order to create a clear framework, other decisions are taken spontaneously, while the performative act of building is taking place. By this the rational nature of construction is complemented by instinctive intentions. The act of construction is turned into an act of design as it goes from the hand to the mind.

FROM THE HAND TO THE MIND TO THE HAND



INSITU, 2015
KAIROS, 2012

FROM THE HAND TO THE MIND TO THE HAND



POVERA, 2015
HEARTH, 2020

FROM THE HAND TO THE MIND TO THE HAND



UNTITLED, 2020
ALBERTO, 2019

FROM THE HAND TO THE MIND TO THE HAND



VERTIGO, 2014
ULISSEIA, 2019

FROM THE HAND TO THE MIND TO THE HAND



VIATICUS, 2018
KAIROS, 2012

FROM THE HAND TO THE MIND TO THE HAND



ULISSEIA, 2019
GALLERY, 2017

Drawing as an act of analysis

Between Intuition and Reason

“The eyes are the organic prototype of philosophy. Their enigma is that they not only can see but are also able to see themselves seeing. This gives them a prominence among the body’s cognitive organs. A good part of philosophical thinking is actually only eye reflex, eye dialectic, seeing-oneself-see.”

Peter Sloterdijk

Drawings are a common language and a tool to communicate and share ideas. We can see their potential from the childrens’ intent to express themselves to the architects trying to explain how the building was planned. But we could argue that a drawing is an act in itself, particularly if it is made by hand with the use of analogue methods. It can be at the very same time a tool of representation as well as a tool of analysis. One comes back to the idea of how the body connects to the mind and how the mind is expressed through the body.

In architecture several kinds of drawings are produced during the process of design with the goal of exploring and testing different ideas. Sketches, perspectives or collages they work as tool for design. We used to explore drawing techniques not just as a design tool but rather as a process of analysis and expression. We try to extend this process of drawing to a step further when the project is defined so we can look back and analyze its intrinsic architectural qualities which are usually related to the material, the construction, the structure and the space that comes out of the design process. But in the same way as the project is a physical construction where one feels the heaviness and the texture of the materials themselves, we do believe that these drawings must be done by hand through a physical act that inscribe the process of making in our minds. The project informs the drawing and the drawing reveals the project. It does not create a narrative but instead it adds a new layer of understanding.

Different methods such as painting, engraving, scratching, serigraphy or others are applied into different surfaces such as paper, cardboard, wood, steel or concrete depending on the specific characteristics of each project. We could say they are a direct consequence of the origins of each project once they relate to a certain constructive detail, loadbearing structure or spatial structure.

Those works are produced in retrospect which means they were realized after the project was already defined or even built. They are the eye reflex. They are a tool of investiga-

tion and try to clarify the principles of the architecture that come out of the designing process. By this, the act of drawing is turned into an act of analysis as it goes from the mind to the hand. It's a way of looking back and understanding our own work and trying to recognize what makes the architecture specific and what gives it a particular quality or experience.

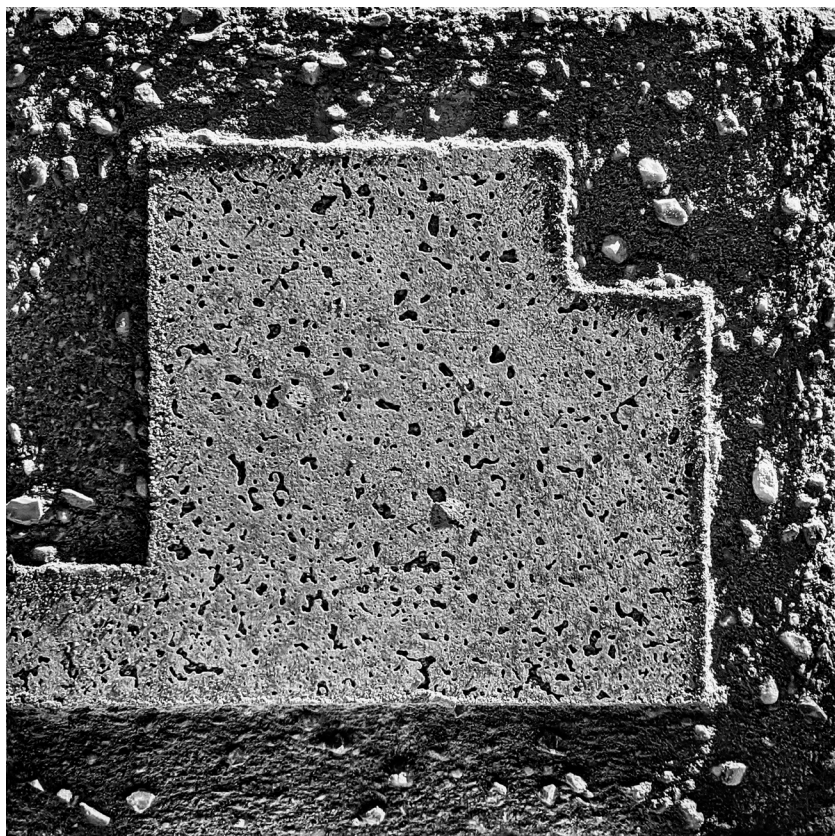
Despite of being done by hand it is important that these drawings are done in a very precise way. They want to bring the experience and the poetic of the space to the precision and rationality of the architectural construction once again. Because of that we can see how the most prominent aspects are underlined and some others are ignored. This doesn't mean that they must be in a certain scale or have the right measures but they do have to express with clarity the architecture and the relation between the parts. In that sense the use of the same material of the project within the drawing allows us to create a mental link with a certain atmosphere that one feels while visiting that space. In that way the drawings have to be as abstract as possible in order to focus as much as possible on the main qualities.

Due to their abstraction, the drawings have their own expressive qualities. There is a point where the representation is no longer attached to the represented object but it can be the object in itself. It arises the question of representation in architecture as these handmade drawings aspire to a certain autonomous body of work. They have been creating an independent collection of works over the years.

FROM THE HAND TO THE MIND TO THE HAND



ALBERTO, Acryl on Plywood, 2020



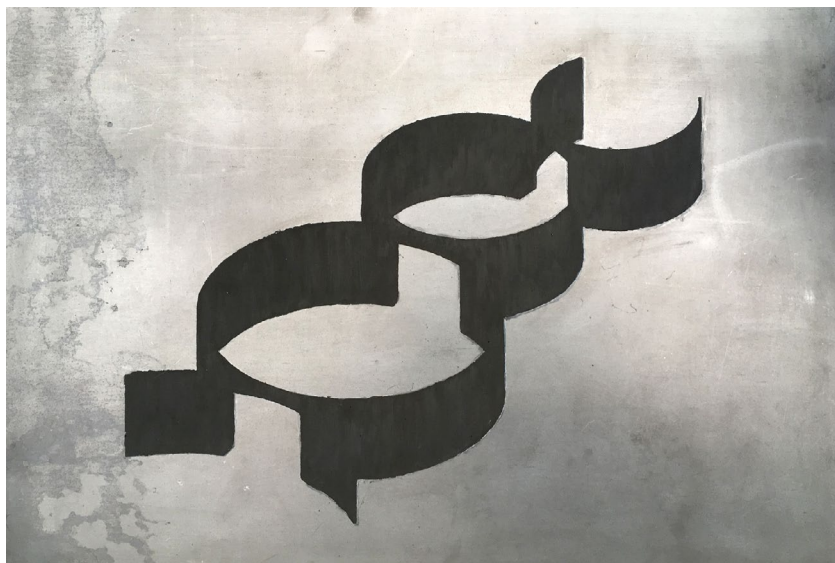
KAIROS, Concrete Relief, 2019

FROM THE HAND TO THE MIND TO THE HAND



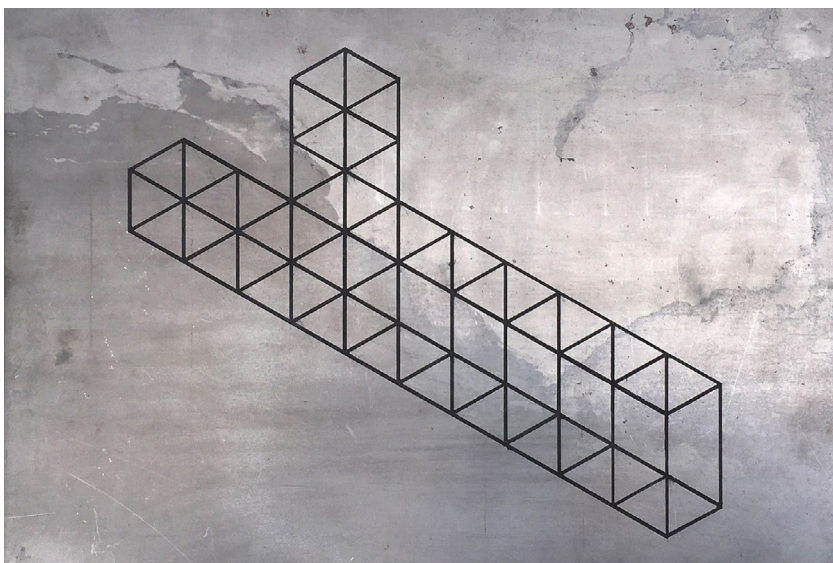
POVERA, Colored Powder mixed with glue on wood, 2019

FROM THE HAND TO THE MIND TO THE HAND



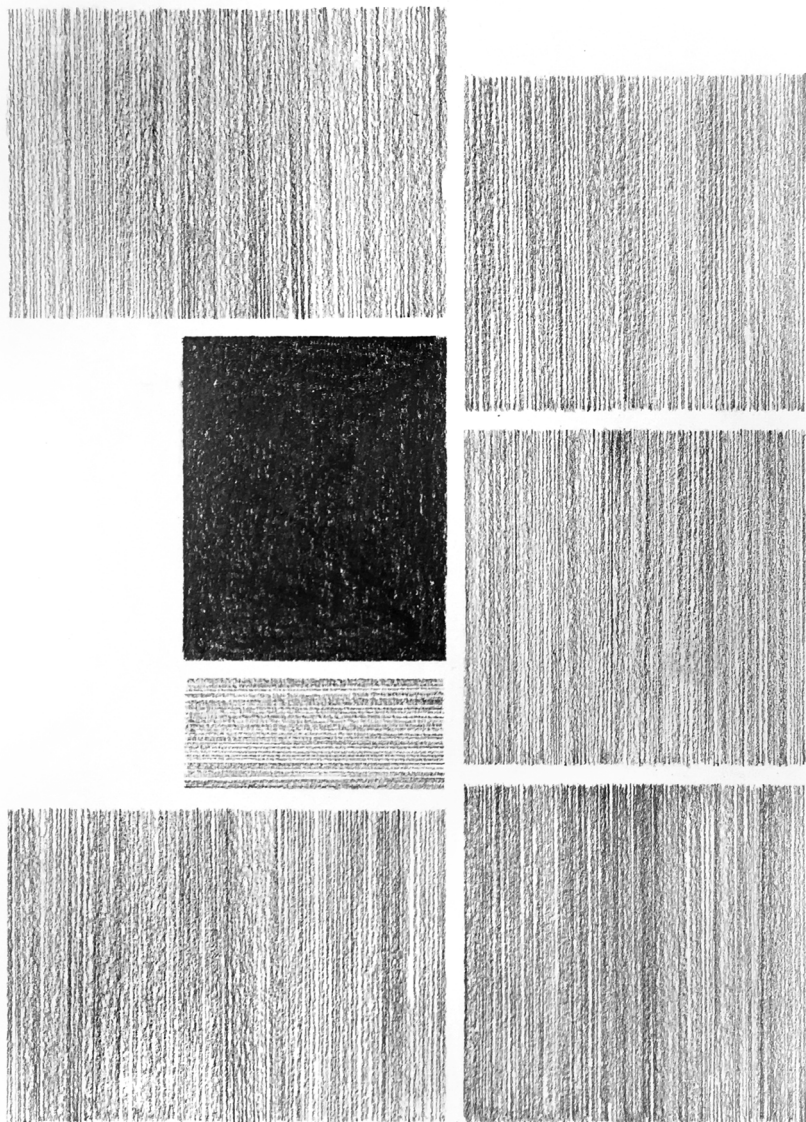
ULISSEIA, Ink on Steelplate, 2018
NOVERCA, Ink on Wood, 2018

FROM THE HAND TO THE MIND TO THE HAND



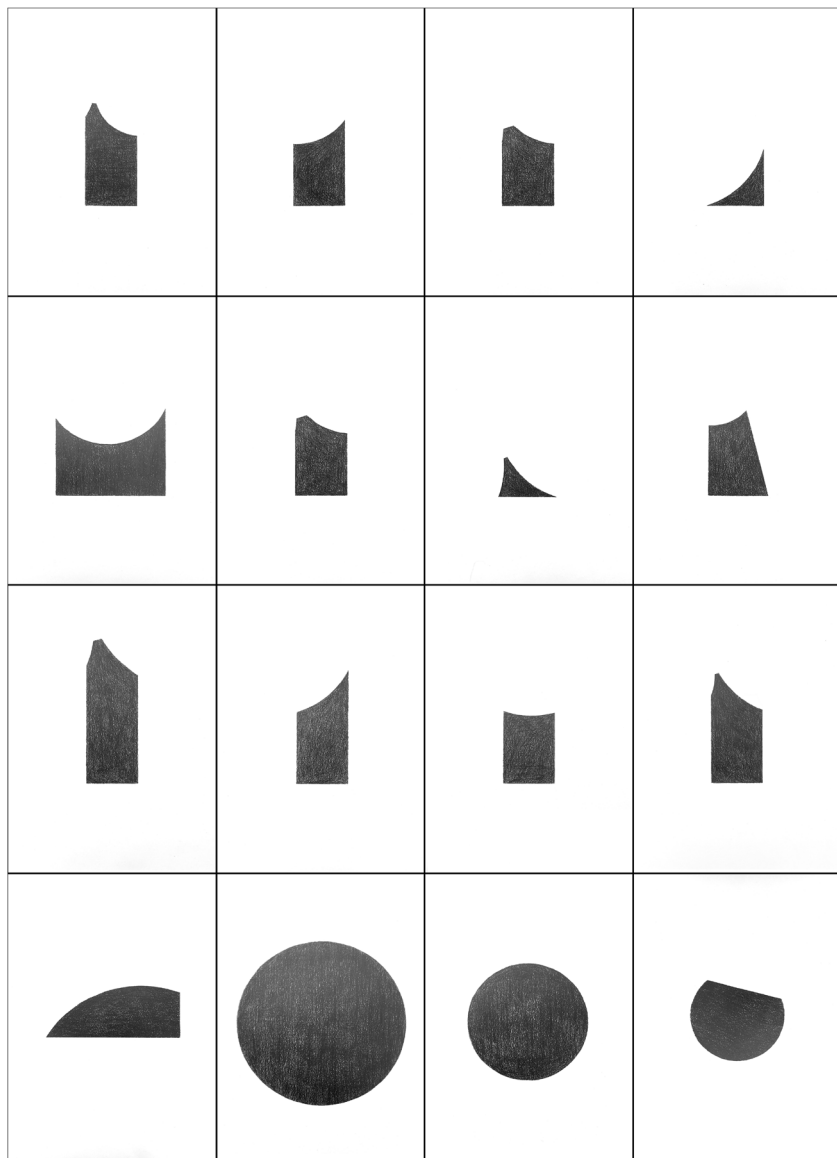
ULISSEIA, Ink on Steelplate, 2018
VIATICUS, Ink on Steelplate, 2018

FROM THE HAND TO THE MIND TO THE HAND

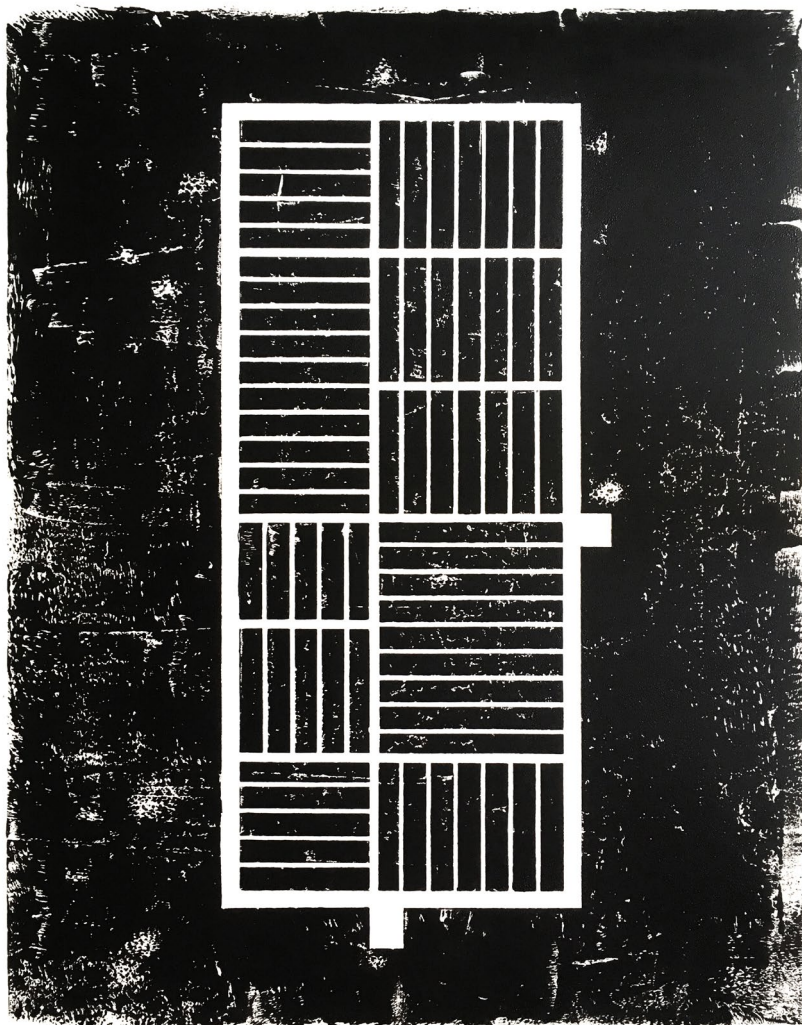


RIBUK, Graphite on Paper, 2019

FROM THE HAND TO THE MIND TO THE HAND



ULISSEIA, Graphite on Paper, 2018



UNTITLED, Linoleum Printing on Cardboard, 2019

Bibliography

Pallasmaa, Juhani. 1996. *The Eyes of the Skin*. England: John Wiley & Sons.

Frampton, Kenneth. 1995. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*. US: MIT Press

Alexander, Christopher. 1979. *The Timeless Way of Building*. Spain: Pepitas

Rudofsky, Bernard. 1964. *Architecture Without Architects. A Short Introduction to Non-Pedigreed Architecture*. US: University of New Mexico

Panofsky, Erwin. 1927. *Perspective as a symbolic form*. Spain: Fabula Tusquets

VVAA. 2020. *OASE#105 Practices o drawing*. Netherlands: OASE Journal of Architecture

Berger, John. 1927. *Ways of Seeing*. UK: Penguin Books

Salvadori, Mario. 1980. *Why Buildings Stand Up*. Brazil: Martins Fontes

Wolfgang Köhler. 1947. *Psicología de la Forma*. Spain: Biblioteca Nueva Madrid

Heidegger, Martin. 1977. *Caminho da Floresta*. Portugal: Fundação Calouste Gulbenkian

<https://drawingmatter.org/>

Practices in Research #02 - Tour d'Horizon - May 2021

online open access double-blind peer-reviewed journal for practice-based research in architecture.

edited by

Benoît Burquel (ULB); Benoît Vandembulcke (ULiège); Harold Fallon (KU Leuven)

scientific committee

Georges Pirson (ULB); Julie Neuwels (ULiège); Pauline Lefebvre (ULB); Rolf Hughes (KU Leuven); Iwan Strauven (ULB); Robin Schaeverbeke (KU Leuven); Harold Fallon (AgwA & KU Leuven); Céline Bodart (ENSA Paris La Villette); Benoît Vandembulcke (AgwA & ULiège); Cécile Chanvillard (A Practice & UCLouvain); Asli Çiçek (Asli Çiçek & U Hasselt); Caroline Voet (Voet Architectuur & KU Leuven); Lisa De Visscher (A+ Architecture in Belgium & ULiège)

double-blind peer review process : www.architectureinpractice.eu/pirjournal

front and back cover images : BAST + ENSA Toulouse

thanks to Orfée Grandhomme & Ismaël Bennani

Practices in Research is published under a Creative Commons Attribution-ShareAlike 4.0 International License and fulfils the DOAJ definition of open access. Practices in Research provides immediate Open Access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge. Copyright for articles published in this journal is retained by the authors without restriction. By appearing in this Open-Access journal, articles are free to use, with proper attribution, in educational and other non-commercial settings.



ISSN: 2736-3996

Practices in Research Journal
Rue des Palais 153 - 1030 Brussels
T. +32 (0)2 244 44 36
info@architectureinpractice.eu
www.architectureinpractice.eu/pirjournal

In Practice explores the multiple ways in which architects can engage their professional practice in academic research and reciprocally. *In Practice* seeks to open a space for architecture practices in research through the development of methodologies, conferences and publications.



In Practice

