Practices

In Research

Explorations

&

Cartographies

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.

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INTRODUCTION

Explorations & Cartographies

Practices in Research (PiR) is a series of online open access double-blind peer-reviewed publications and research seminars and conferences for practice based research in architecture and related disciplines.

PiR explores the ways in which these practices engage or relate to research. It addresses the mechanisms and the frameworks that confer consistence and coherence to a practice. PiR provides a space for practices to interrogate the world, and for the world to interrogate the practices in return.

For PiR, the practice is thus never reduced to being the simplistic illustration of a theory. PiR aims at research in which the practice is essential as a subject (practice-based), as a modality (practice-led) or as a sounding board (bridging practice and research). The contributions are expected to stay in very close contact with the practice. Inversely, they are not limited to the presentation or documentation of a practice. The contributions take a step beyond the practice in the way they present, explore, reveal a question or reflection in the field of architecture.

PiR also searches for creative forms of communication, questioning the dominating hierarchy between text and image. In the framework of PiR, visual and written narrations can relate to each other in multiple ways. Images can be more than illustrations, and text can be more than an explanation. Hence, the provided template is to be considered as a toolbox or set of rules, which can be used creatively.

Explorations and Cartographies

1580s, «to investigate, examine,» a back-formation from ex-ploration, or else from French explorer (16c.), from Latin ex-plorare «investigate, search out, examine, explore,» said to be originally a hunters' term meaning «set up a loud cry,» from ex «out» (see ex-) + plorare «to weep, cry.» Compare deplore. De Vaan notes modern sources that consider «the ancient expla-nation, ... that the verb explorare originally meant 'to scout the hunting area for game by means of shouting'» to be «not un-likely.» Second element also is explained as «to make to flow,» from pluere «to flow.» Meaning «to go to a country or place in quest of discoveries» is first attested 1610s.
(Source : www.etymonline.com)

"Cartography, the art and science of graphically representing a geographical area, usually on a flat surface such as a map or chart. It may involve the superimposition of political, cultural, or other nongeographical divisions onto the representation of a geographical area."
(source : www.brittanica.com)

This journal contains selected and double-blind peer reviewed articles by authors who contributed to the *Practices in Research* conference that was held at CIVA in Brussels on October 27th 2021. For the conference, they were invited to participate to either one of the two following tracks.

Explorations was open to any proposal by the contributors, following the ambitions of PiR#02 – *Tour d'Horizon* (published in May 2021). As the etymology suggests, exploration may be a process of discovery which is fueled by expression (*plorare*), addressing the inquiry of forms of communication. Exploration may also be about the unveiling of inner dispositions and mechanics (*pluere*). This is about close observation, articulations, and in-depth reflection.

Cartographies was an invitation to investigate the practices and the related research as a territory. Reflection on architectural practices is often carried from the outside: the realized works and available material are seen as an autonomous given, subject to interpretation and speculation. When considering things from the inside, however, things appear differently for several reasons.

First, an architectural practice is a loosely defined field consisting of and embedded in a network of actions, reflections, urgencies, interests, and observations, which are difficult to trace from the outside. The practice is motivated by exhibitions, books, travels, muses, theories, and references. Parallel practices play a role too. Exploring the

boundaries of such a field is a welcome step towards a state of affairs, somehow similar to a practice's state of the art.

Second, architectural designs relate to other projects inside the same practice, to thoughts, to theories. A genealogy is to be traced: familiarities, influences, differences, articulations, antagonisms, and juxtapositions. This can happen from the outside, by the observation of the available objects and documentation, or from the inside from the point of view of the designer.

Third, and this is maybe something happening on another level, the modalities of the interactions between theory and practice in the research and the practice can also be traced in these field. This is maybe about overlaps, distinctions, methods, subjects, strategies.

The space of a practice, as a comprehensive and multiple whole, can be considered as a temporal geography. According to Ptolemy, geography is "a representation in pictures of the whole known world together with the phenomena which are contained therein." As practices develop through time, temporality is probably a necessary dimension of such geography.

For *Cartographies*, contributors were invited to provide a visual representation of their practice as a whole. These representations were expected to be given the form of a document or container supporting the diversity of its content. This content is made of projects, references, experiences, readings, and in general anything relevant

to the practice. The cartographic nature of the document reveals the genealogies, the relationships, the ruptures. The format itself was flat and unitary, as the idea is to enable the contemplation of the practice as a simultaneous whole. The dimensions however are free: it could be 118,9 x 84,1 cm or 6 x 6 m or even 0.30 x 15 m.

The conference consisted of a series of short presentations followed by a moderated debate with the participants and panel members.

After the conference, the editorial committee invited the contributors to develop their abstract to be published in the third issue of Practices in Research following a double-blind peer reviewing process. Each contribution was reviewed by two members of the scientific committee of invited experts. Anonymity[1] was strictly maintained and all information in the paper that identifies the author was removed. The anonymity of the reviewers was also ensured. The reviewers investigate the scientific rigor, the artistic quality, and the clarity of communication of the contribution. The reviews also included an open comment on the contribution.

Following this review process, five contributions out of ten were approved for publication. They are the work of practicing architects who are teaching or researching at five different institutions.

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1   The editorial board acknowledges that the work of the involved practices may benefit from public recognition in the professional or cultural field through prizes, exhibitions, lectures, etc. The anonymity of the contribution does not address the practice itself but the authors of the contribution

Illustration from the call for contributions
"L'Ermitage", BE, AHA - © Aurélie Hachez Architectes, 2018

Thibaut Barrault and Cyril Pressacco are teaching at EAV&T Paris Est and ENSA Normandie, while being the partners of the architecture office Barrault-Pressacco in Paris. Their work reflects their in-depth interest for extremely refined yet low-tech construction methods, addressing materials such as natural stone and hempcrete.

Floris De Bruyn, Philippe De Berlangeer and Frederick Verschueren are the partners of GAFPA architecture office. Floris is teaching at KU Leuven Faculty of Architecture and researching at KU Leuven Department of Architecture. Their contribution addresses "primary structures", their architecture design studio, which relates closely and expands the topics at the heart of their practice at GAFPA.

Salvator-John Liotta is a partner of the architecture office Laps Architecture in Paris. He teaches and researches at ULB Faculty of Architecture La Cambre-Horta. His contribution reflects on the experimental and reflexive nature of a series of smaller scale pavilion projects inside the office, in the midst of the constraints inherent to larger scale projects.

Virginie Pigeon is a landscape architect, partner of Pigeon Ochej landscape architecture office. She is teaching and researching at ULiège Faculty of Architecture and currently in the final stage of her PhD. Her research embraces creative and operational cartographic techniques, which relate to history and theory of cartography and are simultaneously grounded in her practice as a landscape architect.

Stijn Cools is a partner of aNNo architecture office. He is teaching at KU Leuven Faculty of Engineering Sciences and researching at KU Leuven Department of Architecture. aNNo challenges the conservation approach of heritage and historic sites. The contribution focuses on one specific project and unfolds the practice as a whole in a rigorous cartographic (or archaeologic) way.

Additionally, two participants of the conference in the *Cartographies* track were invited directly by the editors to publish a mostly visual account of their contribution to the conference (no peer review), because of the originality of its format.

Els Van Meerbeeck, who is teaching at KU Leuven Faculty of Engineering Sciences and researching at KU Leuven Department of Architecture, is a partner of the architecture office Carton123. She created an animated hand drawing exploring and identifying the space of the architecture office Carton123 with the mental space of their designing practice.

Tom Finch is a partner of the architecture office Morales Finch. He presented an exhibition of posters, books, artworks, references and extracts from his practice at Morales Finch. The exhibition and his presentation invited to consider a designing practice grounded in the consciousness of its intrinsically unfinished nature and its entanglement with a rich referential universe oscillating between architecture, art and industrial design.

We want to thanks the authors of the journal, the contributors to the conference and the members of the Scientific Committee for their committed participation. Both conference and journal are forming a dynamic platform of exchange for a network of practicing architects who are either academic or professional researchers, and who share a genuine interest for the critical investigation of the discipline and the positive curiosity for its diversity.

The editors
Benoît Vandenbulcke, Harold Fallon and Benoît Burquel

INDUCTIVE RESEARCH

From practice to research To practice again

Building site as a catalyst for reflexions.

Thibaut Barrault
EAV&T Paris Est (France)

Cyril Pressacco
ENSA Normandie (France)

Barrault Pressacco, architecture, urbanism

Introduction

In issue 187 of the magazine Plan Libre, Sébastien Martinez-Barat describes his architectural design process with the phrase *'the project is an enquiry'*. He describes the project in terms of its searching and prospective dimension rather than as a goal to be achieved. Mainly because the starting point is not the formulation of a hypothesis that remains to be verified, but rather an observation that questions and worries, an uncertainty that persists after having done, an intuition that would guide the action of searching beyond, outside the project itself. The investigation as inductive research, which proceeds by successive deductions, by a non-linear path. *'Each project opens up its own field of research. Thus, what is achieved at the completion of this process is unexpected and strange. Unexpected because it is discovered. Strange because it is foreign, outside of oneself.'* [1]

This approach is closely related to that developed by the philosopher John Dewey, who considers enquiry as a practice whose purpose is to clarify a problem in order to make it intelligible. Enquiry confronts a complex situation, involving a certain lack of understanding or a high level of uncertainty - in our case the project in all its complexity - thereby to engender a problematic. The question is clarified in an iterative way until the stabilisation of the situation. The intuitions at the start of the enquiry are suggestions that become ideas. *'Ideas are operational in that they instigate and direct further operations in observation; they are pro-*

[1] Martinez-Barat, Sébastien, October 2021, 'L'enquête', Plan libre 187.

posals and plans for acting upon existing conditions to bring new facts to light and organize all the selected facts into a coherent whole' [2]. This to the point of becoming a theoretical statement, a plan of action, a possibility. Enquiry shifts the focus from the result to be achieved to the process to be developed, while the project continues ineluctably towards its final completion. The investigation opens up possibilities for action, while the project seals the action of doing. These two distinct and complementary approaches place our practice in the field of the shareable, the common and the disciplinary.

Fig. 1 - The construction site shows fragments of the ground becoming elements of architecture.

[2] Dewey, John, 1938, Logic, The Theory of Inquiry, New York: Henry Holt.

Therefore, the consideration of the construction site, as the starting point of our research and investigations, leads us to adopt an inductive approach as opposed to a deductive approach based on the hypothesis to be verified.

Our research method remains protean and opportunistic. Two sites (O27OBK and 047MRX) are real starting points for research projects. The construction of a massive stone building (fig. 1) led us to investigate the stone sector and the transformation of ground into architecture (066FAI). The insulated hemp-concrete (hereafter hempcrete) project (fig. 2) motivated research on the formal potential of this natural insulator (101CDC). More autonomously, the construction of an artefact for the Biennial of Architecture and Landscape allowed us to produce a statement on assemblage (086AUG). The limits of the regulatory framework of the hemp-concrete technique led us to conduct a series of normative experiments beforehand (088JOL).

Fig. 2 - The hempcrete is the whole envelop of the building. The insolation is the whole wall.

Stone building (027OBK)

Between 2013 and 2017, the agency carried out studies and then the execution of a housing block in Paris made of solid load-bearing stones, wood, concrete and hempcrete. Beyond the heritage dimension and the possible formal relations with some of the Parisian traditions of the 19th century, we were interested in the potential contemporaneity and topicality of a constructive system of this type, and in the numerous environmental virtues of all the materials employed.

The preparation of the building site took place relatively early on in the studies, given our initial lack of knowledge of the different materials handled. All the suggestions inherent to the constructive systems had to be resolved or at least identified, both in order to ensure their technical and regulatory mastery, but also to fully explore their formal and architectural potential. Also, to increase our competence on the strict subject of stone, we visited numerous quarries and stone-cutting yards, met several industrialists, contractors and carvers, and progressively embraced a large part of the sector and assimilated the different trades that constitute it. These multiple conversations with all the actors, and, above all, the numerous contacts with the material, have initiated deeper reflections on the act of building today.

The two images (fig. 3 and 4) expresses the transformation of the ground. The fragments extracted are choosen for their appearance, squared and then laid on the construction site. Building is manipulating ressources that are inevitably coming from the Earth.

Visiting a quarry engages a direct relationship with the Earth's surface and its constitutive elements. Whether open-air or underground, the landscapes observed awaken different levels of consciousness and raise the issues of construction to considerations beyond the building itself. This provokes scientific and poetic questions and stimulates both objective and subjective concerns. The vertical walls of the quarries, whose shape is the result of the extraction methods used, force a sectional observation of part of the terrestrial crust. The process by which the material is formed is revealed and gives an account of the slow phenomenon of sedimentation - an accumulation over tens of millions of years of animal and vegetable organisms compacted by phenomena that mix pressure and de-pressure, rising and falling water - and reminds us of the primarily telluric property of our planet.

Fig 3 - The blocks extracted from the quarry are waiting to be squared, and to become architectural elements ready to be laid.

Fig. 4 - The stones are being assembled on the site. They bear the traces of their belonging to the ground.

Exhibition STONE (066FAI)

The logic of stone construction is comprised of three major stages: extraction, transformation and installation. The energy involved in the displacement of the material accounts for a large part of the carbon weight of the stone. However, stone allows these three phases to be carried out in the same place. This was the objective of our solid stone project (027OBK), which could not be maintained after the tender procedure. The selected stone contractor, located 300 km from Paris, offered us a stone from its own resource basin, which met our aesthetic and mechanical requirements. In the 19th century, the architects and builders involved in the transformation of Paris had taken advantage of the immediate availability of the resource, which a century later we were no longer able to reproduce. This is where our desire to investigate the availability of the limestone resource, and the existence and vitality of the Ile-de-France stone sector, was aroused.

In 2017, simultaneously with the construction work of 027OBK, the Pavillon de l'Arsenal launched the FAIRE programme, a call for research and experimentation projects. We seized this opportunity to propose an investigation of the Ile-de-France stone sector, in partnership with the photographer, architect and Doctor in Architecture Giaime Meloni and with the scientific support of the environmental consultancy Elioth. The results of the study took the form of an exhibition for which we provided the scientific curating.

The research is envisaged here as a desire for demonstration and concreteness, with a double objective: to draw up an inventory of an already existing sector in Ile-de-France, and then to justify the environmental relevance of load-bearing stone construction. The method of investigation is cumulative and proceeds by data collection and analysis, measurements and extrapolations. The ambition of the exhibition is to communicate objective and manipulable elements, so that everyone can grasp and consider the possibility of building with stone in the Paris basin and thus maintain the link between the resource basin and construction. This results in a deepening of the territory in its metabolic capacity to produce for the city.
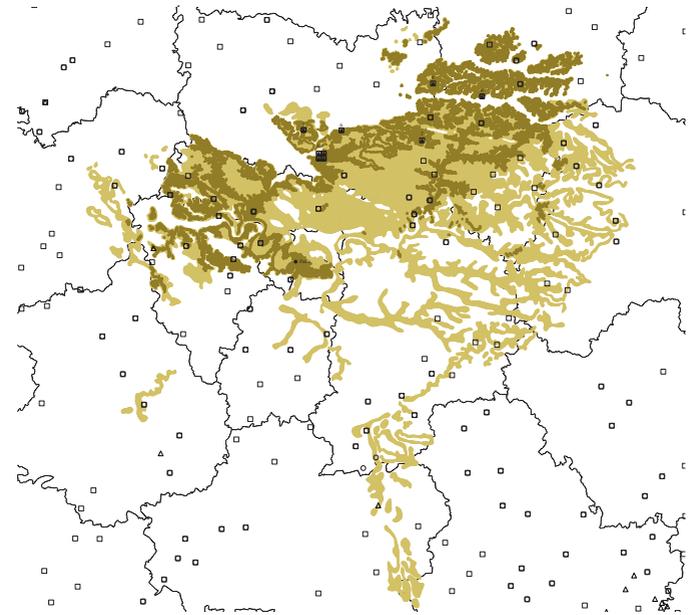

Fig. 5 - This lithostratigraphic map represents a part of the Parisian limestone basin. The light patch corresponds to the Eocene era, and the lighter patch to the Lutetian stage. The latter is the available outcrop layer just below the natural ground, on which all the quarries are located.

The studies and the exhibition were structured around three topics: the resource, energy and assemblages. The first was the subject of surveys and readings, the second of measurements and calculations led by Elioth, our technical partner, and the third offered a panorama of contemporary housing projects in solid stone. With the support of an expert geologist from BRGM, we integrated into the scenography some fundamental knowledge of geology to recall the formation of this sedimentary basin in which the Lutetian stage, belonging to the Eocene era, is the outcropping layer of limestone that we are collecting (fig. 5).

Of the many quarries in operation, nine are identified by our study as being capable of providing rock suitable for construction. We draw a statement of their available reserves and their annual extraction potential as well as the duration of exploitation. As the same limestone soil can comprise different sedimentation beds, we represent, in cross-section and axonometry, the reality of the different layers that make up each quarry, in order to enumerate exhaustively and completely all the types of available rock. The total volume of stone extraction is then aggregated for the nine quarries concerned. In relation to the quantity required per dwelling (10m3), we extrapolate the possible annual production of solid stone dwellings to about 6000, i.e., about 10% of the needs of the Ile-de-France region up to 2030. [3]

[3] SDRIF 2013: (Schéma Directeur de la Région Île-de-France) : Annual needs for the construction of 70,000 new dwellings.

Fig. 6 - Through one economical gesture, the cut, the fragment becomes element of architecture.

Measuring the energy embodied in stone and placing it in relation to two other materials, wood and concrete, was the second part of our investigation. The major quality of this material lies both in its intrinsic nature, which requires no modification, and in the simplicity of its transformation. Cutting, by sawing, the only transformational operation in its trajectory from matter to material, is incomparably energy efficient (fig. 6). The comparative analysis of the life cycles and carbon footprint of the material, conducted by our partner Elioth on an identical construction unit, reveals the low footprint of stone. It therefore represents a realistic alternative to concrete, even without reaching the environmental performance of wood. Stone construction could therefore take on a significant share of the construction industry by meeting high environmental requirements.

This study, as well as the resulting exhibition, has enabled us to draw three major conclusions that lie between the fields of architecture, construction and economics. Our first conlusion was that, by accumulating the various data acquired, we have drawn up both a panorama of the reservoir of the limestone resource near the capital, and a portrait of a very active structure of trades linked to stone construction. Without ever suggesting that questions of discipline or form are secondary, awareness of the act of building is augmented by considerations of territory, energy and movement. A ready-to-use building material is the result of a whole system of organisation; a sector, which allows the identification of a natural resource, its transformations, its displacements, and its forming into an architectural element.

The second conclusion is a fundamental concern that deals with the act of building. Any architectural material handled is initially a fragment or product of the terrestrial soil. The limestone used in the construction is the result of a long process of transformation of the material and reminds us that the Earth, which has been shaping its soils and subsoils for tens of millions of years, is telluric in nature. During the laying of the stones on our site, and throughout this study, we became aware of the architectural becoming of a terrestrial fragment. Construction, to be deeply connected to environmental issues, must integrate this awareness of the soil into its imaginary (fig. 7).
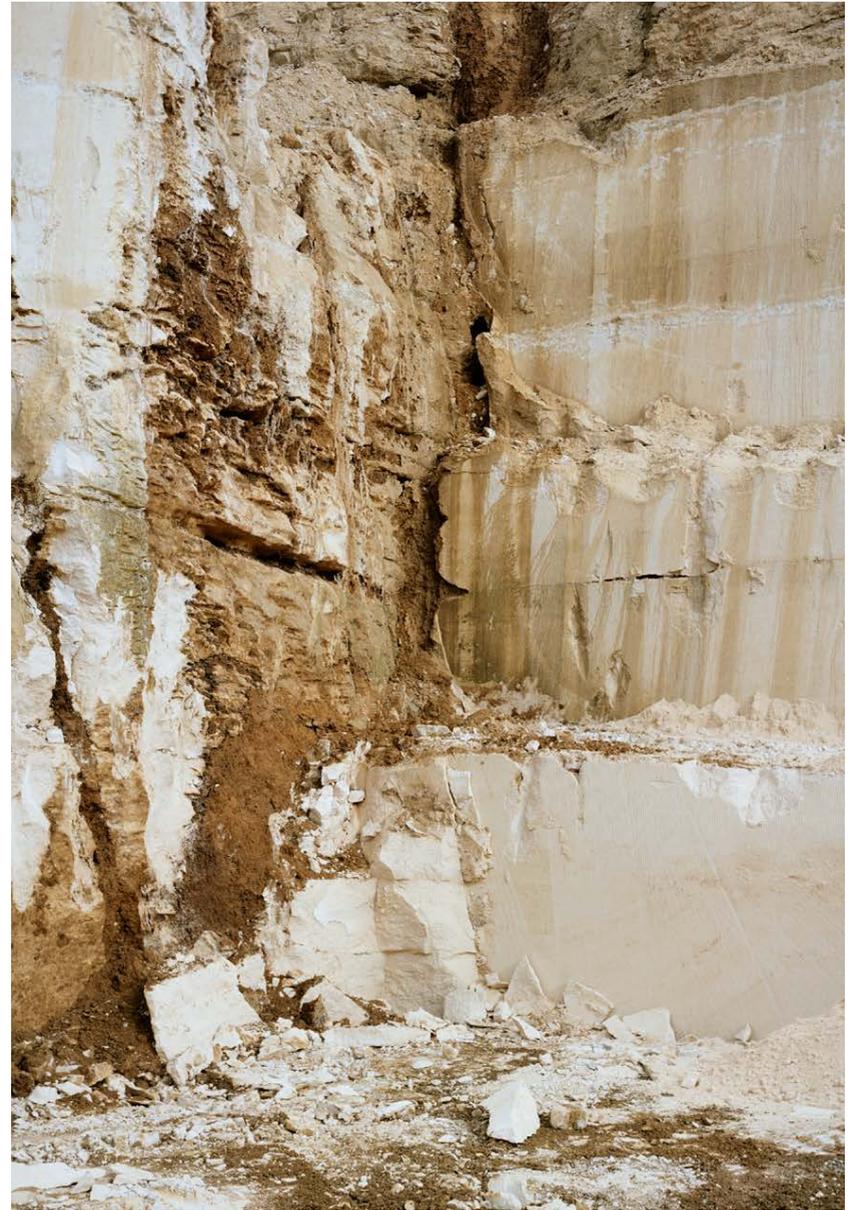
Fig. 7 - For each of the quarries visited, a photograph, produced by Giaime Meloni, is selected. Through this tool, we proceed to build a very strong relationship with the soil, which is both natural and transformed. The traces of sedimentation and the constitution of the limestone are as visible as the marks of the saws (cutters) used to extract the blocks. Nature, beyond being contemplated, is engaged in a transformation instigated by man.

The last conclusion focuses on the issue of economy. The transformation of matter requires many stages and movements, each of which involves a certain amount of energy. To initiate a profound change in our relationship with the Earth, building today requires us to limit these steps and movements and thus reduce our footprint as much as possible. These considerations allow us to go beyond the financial cost of the elements we handle, and to extend the question of economy to energy and carbon. The same process of material reduction by sawing is carried out at each stage of stone processing, from extraction by cutter, to squaring with a circular saw, to the final adjustment of the block with the saw. The transformation is thus only successive volumetric reductions without any change in the state of the material. The nature of a stone present in a building is strictly identical to that which it was in the soil. The fragment of ground becomes an architectural element immediately. And conversely, the element that has been laid down bears witness to the fact that it belongs to the soil.

Fig. 8 - The exhibition aimes to relate the fragments of the ground, the territory and the act of building today.

Fig. 9 - 29 stones are available for extraction in the resource basin. They all have distinct mechanical and thermal specificities.

Assemblages (086AUG)

In addition to the reflections carried out for the PIERRE exhibition, the project of housing in massive stone pointed to another register of questioning, linked this time to the assemblages and the necessary complementarity of the materials.

During the preparation of the PIERRE exhibition, in July 2018, the Biennale d'Architecture et de Paysage d'Ile de France (BAP!) launched a call for applications to participate in its first edition in Versailles. We propose to participate, again as a team with Giaime Meloni, in the exhibition commissioned by Djamel Klouche, AUGURES.

If the research method was cumulative during the PIERRE exhibition, it is reflexive within the framework of the BAP! The approach is similar to the design process of an architectural project, but it is even freer, as it is independent of all practical contingencies inherent to use or function. It is through form, and through the language that derives from it, that the discourse is tested, illustrated, constructed and then affirmed. It is through architecture, and through the question of assemblage, that we take a stand. Our installation is divided into two parts: an artefact MANDALA and two photographic images PRÉLÈVEMENTS. All these elements illustrate an approach that seeks to put in tension form, assemblage, displacement and transformation of resources.

The form of the artefact is directly borrowed from Sol Lewitt's Variations on Incomplete Open Cubes, produced in 1974. The object consists of three vertically and horizontally arranged rectangular parallelepipeds with square sections and identical proportions (fig. 11). Each of the parallelepipeds is made up of a stone element and a wooden element. The language of the assemblages is derived from the constructive tradition of Japanese frameworks, explored here for their interlocking qualities, which do not require any third-party elements to ensure their stability. Their size and dimensions are linked to the measures imposed by nature but are also subordinated to a formal idea that goes beyond them and unites them.

The wood was felled in a forest in the Eure-et-Loir, cut in a sawmill in Frétigny, and then transported to a workshop in Ivry-sur-Seine to be cut into smaller elements. The limestone comes from the north of Paris, near the town of Saint Maximin, and is transported to a factory in Gennevilliers to be cut, trimmed and adjusted into blocks ready to be laid. These two materials are purchased, dressed and assembled by two partner companies: Lefèvre for the stone, and Benjamin Gorridge for the wooden elements.

The two PRÉLÈVEMENTS, photographic images produced by Giaime Meloni (Fig. 12 and 13), reflect the original state of the two identified resources. From the innocence of their primary states, it is a question of initiating a mental process that allows any fragment or product of the soil looked at to become an element of architecture.

Through the co-presence of the MANDALA and the PRÉLÈVEMENTS, the spectator is endowed with a gift of ubiquity. They are simultaneously in the presence of the displaced material and in front of the place of its collection. They are invited to travel and meditate towards these places of extraction or cutting, like a hunter-gatherer in search of available resources. Architectural thinking transforms natural elements into cultural elements. The immediacy of the process is linked to their gaze on the elements that comprise nature, to their ability to make the connection between the natural environment around them and the cultural information at their disposal. Nature is no longer contemplated but *'undertaken'*, being part of a *'dialectical process'*. [4]

The MANDALA reduces architecture to an essential form and allows us to take a stand, once again, on the act of building. Construction is understood as the simultaneous manipulation of natural materials and savoir-faire from a nearby environment, and of universal disciplinary knowledge. Architecture confronts endogenous resources and exogenous knowledge. A balance is established between the abstraction of form and the belonging to resource territories.
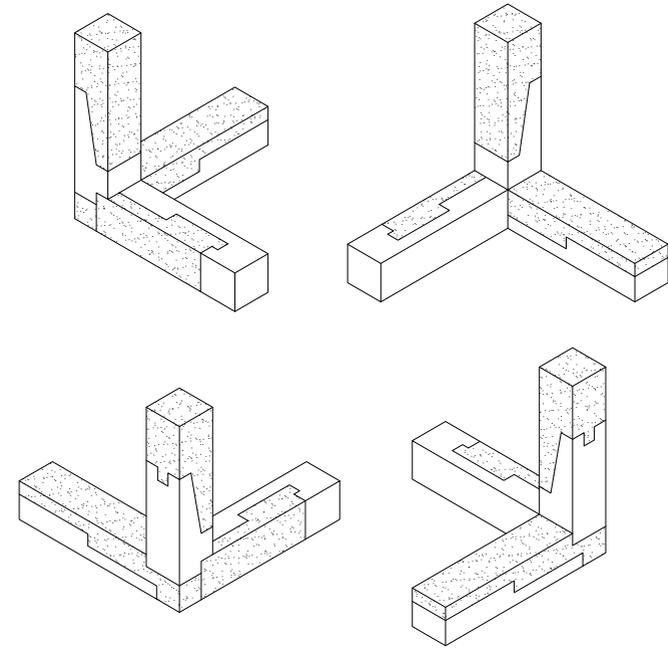
Fig. 11 - The open object of the Mandala replaces the closed space of the primitive hut and proposes an alternative to the initial scenario. The form engages another relationship with the environment and suggests sitting, resting, leaning, contemplating. It is the need to observe that replaces the need to isolate. It is the awareness of the environment that modifies the original idea of architecture.

Fig. 12 and 13 - The architect travels through the territories he transforms. His interested wanderings allow him to locate the products of the ground that are suitable for the construction of his shelters, and to take samples. The two photographs record the initial state of the two resources identified.

[4] Marot, Sébastien, 2010: 'Sub-urbanisme / Sur-urbanisme, de Central Park à la Villette', Marnes 1
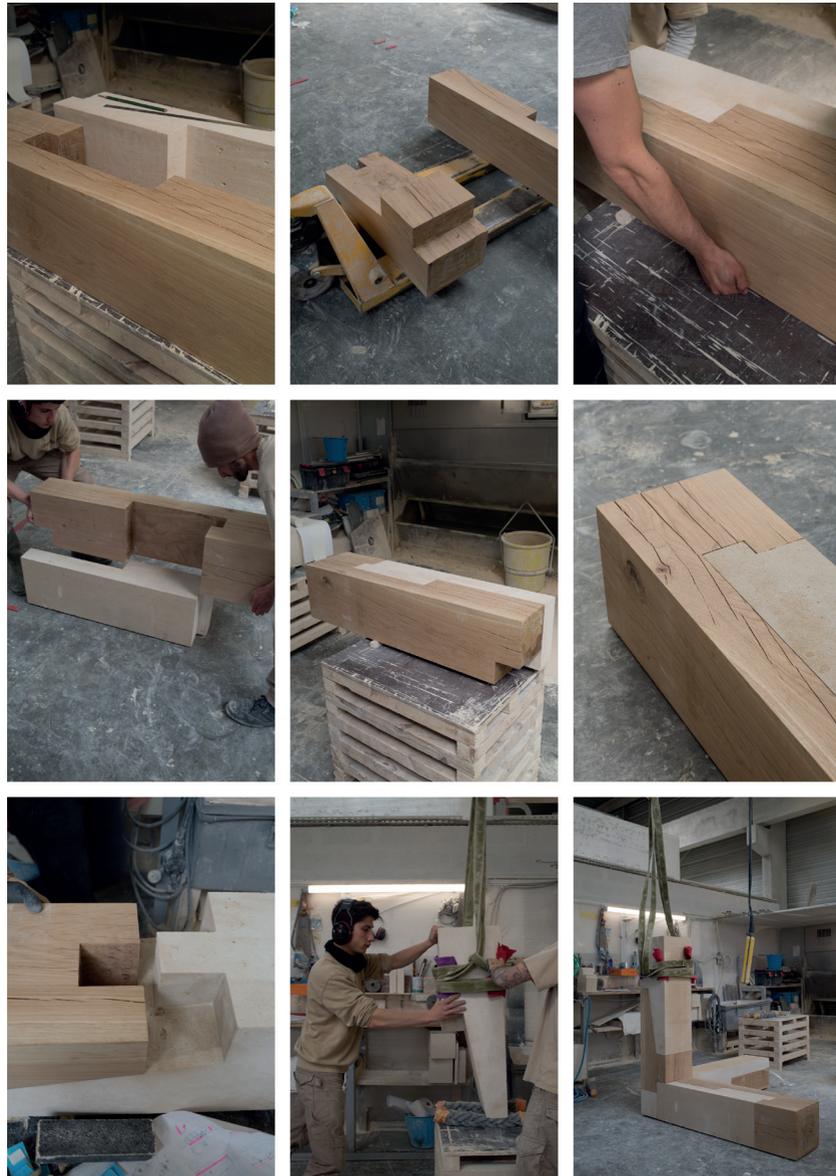
Fig. 14 - The two companies involved in the assembly commit their savoir-faire to the transformation of the two materials: stone and wood. Their experience and gestures allow them to adjust each of the elements of the artefact.

The approach allows us to confront local materials and Japanese assemblages, and to demonstrate the necessity, today, of not limiting architectural writing to the immediate context. This attitude demonstrates the impasse of any deliberately vernacular architecture, i.e., one that would limit reflections on form to the reproduction of a strictly local and insufficiently questioned tradition. We believe that architecture today is, by contrast, necessarily knowledgeable. All contemporary design enjoys unlimited accessibility to limitless knowledge and information. Ignoring these, whether voluntarily or involuntarily, would reduce the process to a retrograde and nostalgic posture.

Finally, highlighting the potential of hybridisation and complementarity of materials and sectors makes it possible to question the mono-material traditions, and to define the modalities of languages that are aware of their history, but which can also generate nascent forms (Fig. 14). In the case of stone, for example, it is important to consider references and reflections beyond the history of stone construction itself, to confront constructive logics that are specific to it with universes that are foreign to it. The material is originally innocent, and it is the architect, through the assemblage, who takes a stand and builds meaning.

Housing in hempcrete

In 2022, the office completed a building of 15 apartments in Paris. A search for economy of means led us to opt for a primary reinforced concrete frame and a peripheral envelope made up of a secondary wooden frame filled with hempcrete insulation. Our interest focused on the relationship between structure and insulation, their relative positions and their formal potential. These issues placed technical and constructive considerations very well ahead of our design so that they could nourish all our architectural reflections. However, several questions arose during the implementation of the hempcrete. We methodically documented these moments of the construction site, to preserve a history and a material for reflection (fig. 15, 16, 17 and 18). We can consider these revelations as a kind of dynamic that goes beyond the project in progress in order to initiate future reflections. We note them as observations of observed facts, of factual and objective realities.

The relationship between the structure and the insulation seems to be renewed by the very nature of the material used and calls for further questioning of this particular aspect of the project. The thickness of the envelope, made up almost entirely of insulating material, questions the very term 'wall' and the apprehension of the elements of the architecture in an autonomous and separate way. A sort of fusion takes place, creating a system of heterogeneous elements. A reversal of hierarchy occurs where the form is determined more by the insulation than by the structure.

Fig. 15, 16, 17 and 18 - Hempcrete is a compound, an assembly of hemp shives (the aggregate) and lime (the binder) which is only formed at the moment of its implementation by the operator. It does not exist prior to its instantiation on the construction site. The projection of the hempcrete into the wall, by agglomeration, reveals the conditions of the final continuity of this mass.

The final material only appears at the time of its implementation and drying. It is a fragile material and must be covered and protected afterwards. The insulator disappears and its presence is then only a transitory moment, the efficiency of an invisible material which is only revealed by its thickness.

The necessity of the full

The experience of the implementation of hempcrete led us to consider this insulator as an architectural element generating specific forms, writings and spatialities. Wishing to extend these observations, we responded to a call for research projects launched by the Caisse des dépôts et consignations 'research in architecture and landscape'. [5]

Our research project is supported by the École Nationale Supérieure d'Architecture Paris Est. It is made up of a mixed practitioner/researcher team with the collaboration of Giaime Meloni and the scientific support of Sandrine Marceau, doctor of materials science, researcher at the laboratory of Physico-Chemical Behaviour and Durability of Materials at Gustave Eiffel University.

Insulation issues are relatively recent in our discipline. The term insulation itself only gained acoustic and then thermal acceptance in the late 1920s. Until then, insulation only referred to the notion of separation. The history of insulation as a material is therefore very recent. It is mainly a continuation of the development of scientific knowledge in the field of physics and more particularly heat transfer. Modern architecture only considers the issue of insulation through the prism of the separation of two media, with-

out taking into account their resistance to heat transmission: their thermal resistance. The inclusion of an air space between the glazings subsequently made it possible to reduce losses by convection and met with great success in the 1930s. This relationship between air and matter is not new since it existed in vernacular architecture through the use of 'breathing' materials with high inertia and hygrothermal regulation qualities. However, it is the integration of air in industrial materials that marks a decisive turning point. *'Thus, whether it is between the glazing of the window, the glass panel, inside the bricks and glass blocks, or between solid walls, the logic of air insulation seems to be triumphant.'* [6]

It was only later that new studies recommended the use of materials specifically dedicated to reinforcing thermal insulation. Materials that meet two fundamental rules, containing air and consisting *'of the smallest possible independent cells.'* [7]

Subsequently, synthetic insulating materials from a flourishing chemical industry were used to meet energy objectives that had become unavoidable. This led to a hyperspecialisation of the material which, through a continuous quest for performance, leads to the distancing of insulation, and the act of insulating, from architectural and aesthetic issues. Insulation is no longer approached solely

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[5] For the fifth consecutive year the Caisse des Dépôts is launching a call for applications to support research and innovation in the field of architecture and landscape in France. Caisse des Dépôts is fully committed to reducing the territorial and social fractures in our country and intends to promote research work that contributes to these objectives by taking the measure of the environmental and social challenges facing our society.

[6] Lempereur, Hubert, 'Une brève histoire de l'isolation', épisode 4/10 : l'air et la matière', *D'A n°250.*

[7] Charpentier, L, 1932: 'Études techniques : Isolation thermique des bâtiments', V : 'Le pouvoir des matériaux', l'Architecture d'Aujourd'hui, April.

from a technical, industrial and performance point of view (Fig. 19). Today, the increasing use of bio-sourced materials shifts the focus from pure thermal resistance performance to a more complex balance between inertia, thermal conductivity, and mass heat. Hempcrete meets these ambitious objectives. The internal structure of the hemp fibre coupled with the lime constitutes a heterogeneous whole whose internal structure generates porosity networks at different scales. This structure gives the wall high hygro-thermal properties. Our research focuses on revealing these internal, microscopic structures, which are at the origin of the performances observed. Both trapped and moving air plays a major role.

The microscopic structure of the material, at the origin of the internal dynamic phenomena of the lining, leads to the thickening of the insulator, upsetting the hierarchy between insulator and structure, to the point where the need for fullness is affirmed. This statement leads us to find architectural issues in technical problematics and thus replace the insulator in the architectural field. The fullness having as corollary the notions of surface, thickness and continuity – three key-subjects to commit some profound theorical investigations.

The intrinsic properties of the material as well as its thickness are determined by the very nature of its microscopic structure, which is by definition invisible. One of the axes of our research consists in making this dimension of the material visible, in order to reveal the nature of the cou-

ple relations between its mineral part, lime, and its vegetal part, hemp. This becomes an issue of representation, an architectural issue in essence.

The images are obtained by Scanning Electron Microscopy (SEM). They reveal the three types of porosity in this material (one visible inter-particle, the other two invisible: intra-granular and microporous). The SEM offers magnification
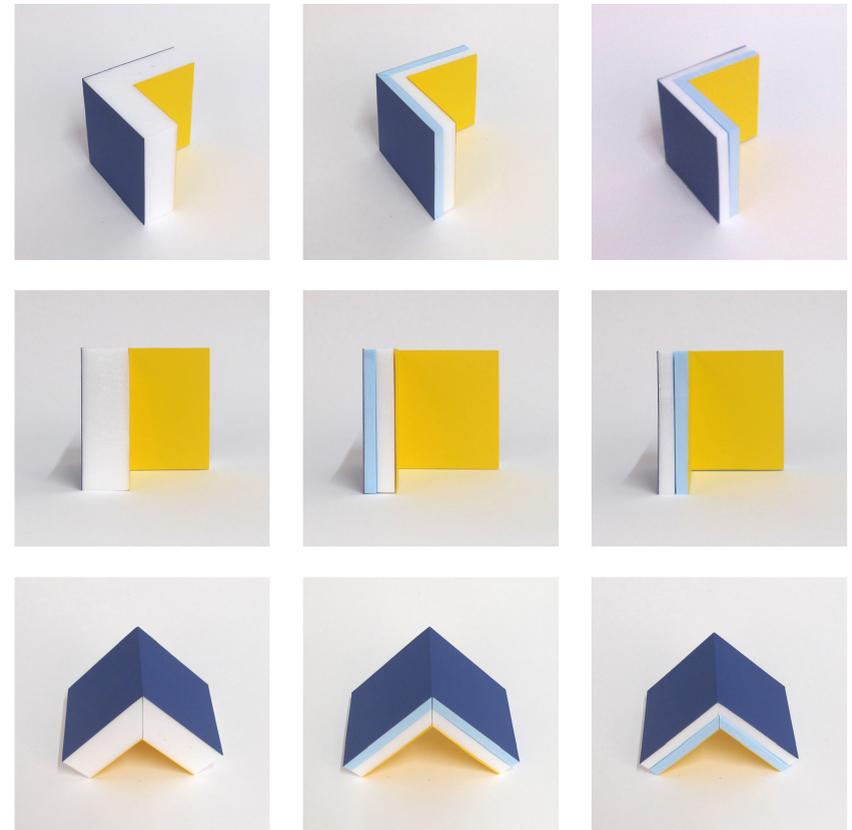
Fig. 19 - The models expresses the evolution of the composition of a wall. Hemp Insulation subverts its purpose, and suggest a homogeneous organism which doesn't separate the function of its elements.
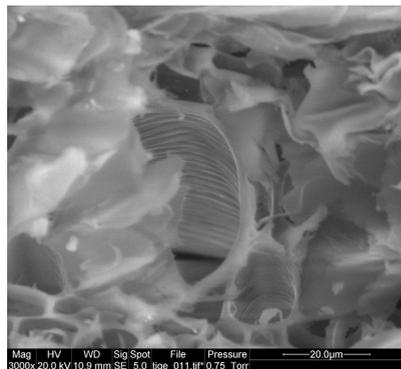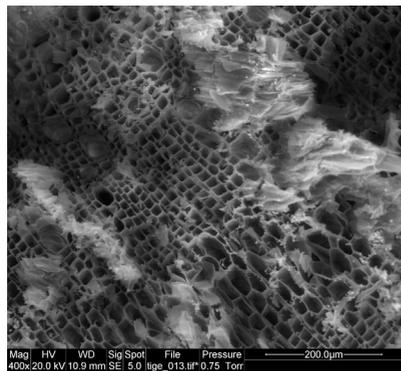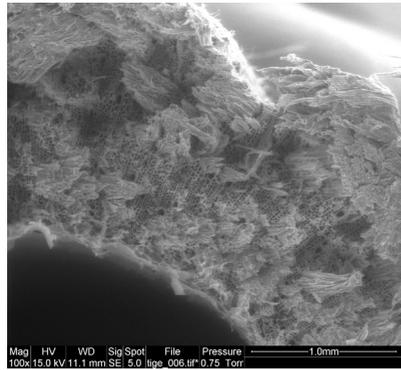
Fig. 20 - Sample of hemp shives alone.

The SEM allows us to visualise the repetitive honeycomb structures of the plant. Each cavity traps a portion of air and thus contributes to the thermal resistance of this natural material. The microscope reveals an aesthetic universe of striking abstraction.
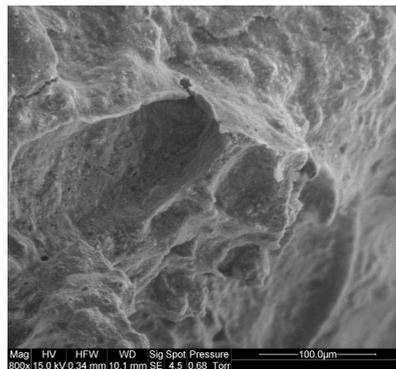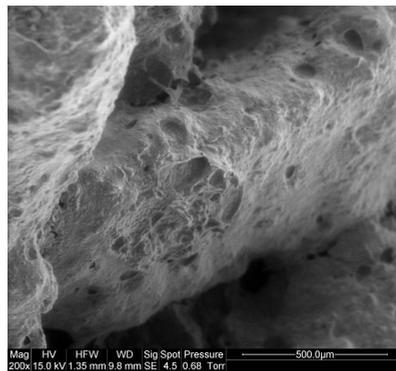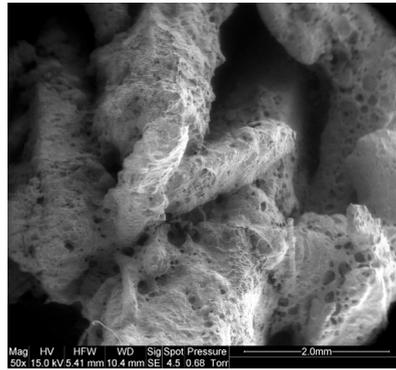
Fig. 21 - Sample of hempcrete.

The different magnifications reveal the different types of porosity. Between coated aggregates and on the surface of the binder itself. The presence of air and its potential circulation in the material allows us to understand how the material works.

possibilities allowing the visualisation of both the covering of pieces of hemp shives by the binder (x10) and the structure of the fibre itself (x800) (Fig. 20 and 21). All these porosities are as many voids, with different shapes: closed porosities that trap air or open porosities that allow hygroscopic exchanges. The void, essential for insulation, is everywhere. This void is inseparable from the full, the fulls, which surround it. The full is therefore necessary to generate this highly complex void, a void with high thermal performance. This void cannot exist without the full (the reciprocal being possible), so we take an option on the full by affirming its architectural necessity.

The architecture of full insulation shifts the notion of architectural rationalism, in the sense of reasoned knowledge, from construction rationalism to what might be called thermal rationalism. The manipulation and consideration of the insulator, which until now has remained relatively outside the field of ideas, defines new architectural problematics and opens up new formal potentialities.

Normatives experiences

Since 2019, we have been developing a project for 100 housing units for the 2024 Olympic athletes' village. SOLIDEO, the developer of the Olympic facilities, finances innovation projects. Our proposal, selected by an innovation committee in October 2020, concerns the construction of a prefabricated, perspiring, load-bearing wall made of wood frames insulated with hempcrete. This innovation is based on the state of the art of existing technical solutions and on our experience gained from previous projects. Hempcrete construction solutions are currently validated in France not as a standard technique through the DTU (Documents Techniques Unifiés) but through professional rules in a relatively restricted application framework. This experimental stage should allow the definition of a new normative framework for the technical deployment of hemp-concrete construction. It entails an undeniably collective dimension. The test protocols set-up is defined in the framework of an ATEx procedure. [8]

Parts of the construction system are subjected to a series of extreme loadings, known as limit states. The constructive mode must prove its technical maturity, its durability and by extension its potential reproducibility.

[8] 'The Appréciation Technique d'Expérimentation (ATEx) procedure contributes to the development of innovations in the building industry by facilitating their access to experimental applications. The ATEx is an evaluation for the benefit of innovative products, processes, or techniques in construction, established by experts under the aegis of the CSTB (Centre Scientifique et Technique du Bâtiment), at the request of parties interested in obtaining a rapid technical evaluation. Specially created to facilitate experimentation in implementation, this procedure applies only to innovations that have been sufficiently studied and developed to justify such experimentation.' https://evaluation.cstb.fr/en/technical-experimentation-assessment-atex/

Through this experimentation it is also the role of architecture as a driving force for innovation that we consider interesting to question. More and more frequently, we find ourselves in a situation where the initial technical state we know is insufficiently reliable to respond to the innovative solution we are asked to develop. To solve this technical problematic there is never a sole solution, but a multitude. The choice of one technical solution over another does not therefore refer to the technique itself, but to architecture in its cultural dimension. Architecture is a laboratory of technical innovations where the reference to the technical question alone is not sufficient to solve the technical problem. Like Jean-Pierre Séris, we can consider the resolution of the technical problem as an aspiration, a desire for technique beyond technique itself: *'Technique conceives of aporia only in reprieve: technique is inseparable from a decision to seek further, except in cases of satisfied stagnation.'* [9]

This *'will to technique'* leads us towards action and opens-up a field of reflection that goes beyond the technical problem to engage architectural and cultural issues. *'To pose problems beyond what we know and can solve is to access problems of a very particular essence and status.'* Mastering this technical dimension is also a necessary condition for building, for doing. Our experiences on the building sites open-up fields of possible questioning and reflexivity, as we have created the conditions for the possibility of doing things upstream. The mastery of the technical design is always alongside the uncertainty inherent in the building site.

[9] Séris, Jean-Pierre, 1994: La technique, PUF, p.20

[10] Ibid

The documentation of these tests plays a fundamental role in the experimentation process, beyond the final result determined by its success or failure. This recording is twofold. On the one hand, a record of the values obtained, which constitute the measurements to be analysed (fig. 22 and 23), and on the other, a photographic recording of the conditions of the test and the experiment itself (fig. 22, 23 and 24). This work of scientific imagery refers to the mechanical objectivity [11] described by L. Daston and P. Galison or to the work of Berenice Abbott [12] who took scientific photographs at MIT in the 1950s. The abstract forms she then unveiled made it possible to visually represent complex mechanical concepts and physical laws that were hitherto invisible.

Uncertainty and risk are inherent to the process of experimentation. Risk represents *'an educated audacity, drawing on the lessons of the past. This is why technology is not just the quiet possession of solutions to a few problems, but the aspiration to change, the creator of problems, the provider of solutions that never prevent the question from bouncing back and persisting in another form'.* [13] It is in the unpredictability and instability of experimentation that the ferment, the potential for discovery and the unexpected, lies. As a condition increasingly necessary to the possibility of construction, experimentation plays an essential role in defin

Fig. 22 - Fire resistance test.

This is a fire resistance test of a load-bearing hempcrete wall with timber frame. The aim is to evaluate the load-bearing capacity «R», the thermal insulation «I» and the fire-resistance «E» of the wall, subjected to a thermal action according to the standardised temperature-time curve of standard NF EN 1363-1. The prototype is a wood-frame wall filled with hempcrete with a dimension of 4 x 3 m and a thickness of 40 cm. It is equipped with numerous sensors (pyrometers and thermocouples) and subjected to a compression load of 38 tonnes applied by a system of jacks.

Fig. 23 - Water resistance

6 wall prototypes were subjected to alternating humidification (8 hours) and drying (40 hours) cycles. The objective of this test will be to confirm the ageing protocol of the hempcrete prototypes (with or without lime coating), in relation to the conditions to which the wall is subjected under real loads. The resulting protocol will then be applied to the driving rain test. Both the penetration of moisture into the wall and the durability of the plaster are measured.

[11] Daston, Lorraine & Galison, Peter, *2012: Objectivité*, Les Presses du réel

[12] Abbott, Berenice, *2008: Documenting Science*, Steidl Interart.

[13] Séris, Jean-Pierre. Ibid. p.44

ing the place of technique in the architectural discipline. *'Architecture is not a field of application of construction techniques, thought of as instrumental means elaborated upfront, but it is a medium of experimentation of techniques, essential to their development and their adaptation in complex situations. Architecture is also a field of critical reflection on our ways of acting and building, in which technique is in project'.*[14] These constructive experiments maintain invention in the field of architecture, at a good distance from the research laboratory or industrial prototyping: *'The awareness that no constructive system reaches maturity without a phase of experimentation in a complex project situation, is a major challenge for the exercise of the architect's profession and the definition of its scope of competence.'*[15]

Fig. 24 - The photo shows the drying bench which generates a temperature of 80°C for the drying cycle.

[14] Berthier, Stéphane, 2017 : 'Création architecturale et industrialisation de la filière bois : l'architecture comme milieu d'expérimentation des innovations techniques', in *Architecture, aménagement de l'espace*. Université Paris Saclay, p.3

[15] Berthier, Stéphane, ibid

Conclusions

The office was founded in 2009. The first vectors of reflection and the first conversations to initiate the design of projects were directly derived from a common education between the two partners, and structured mainly around history, construction, and architectural theory. The act of building is considered a cultural process and answers a question that would have been asked before. We provide an answer that is both aware of the canons it calls upon, committed to current concerns, but also nascent. Today, these lines of thought allow us to share production ambitions with the whole team and to define a framework in which we want to include all conversations. We have constructed methods and envisaged processes through which knowledge can be defined and accumulated by all. Through research, enquiries and investigations, we identify questions and assert our positions.

In 1974, Roland Barthes published *Au séminaire*, in which he depicts the structure of exchanges between teachers and students. Research and the production of knowledge organise the relationships between the different participating individualities and allow for the establishment of a horizontal scheme that overturns any hierarchy in the exchanges. Barthes identifies three spaces: institutional, transferential and textual, and in the second, he specifies: *'I am neither a sacred (consecrated) subject nor a friend, but only a stage manager, a session operator, a regulator: one who gives rules, protocols, not laws. My role (if I have one) is to free*

up the stage where horizontal transfers will be established.' [16]

The articulation between research and project within the agency involves the collaborators in a reflexive approach, and no longer one that is only productive. The methods constantly interrogate the universal discipline to which they belong, and question without restraint the means and devices by which we act on the world. The agency is a stage on which different individualities move, seeking, sharing and pooling experience and knowledge. The working conditions and processes linked to research allow us to go beyond the opposition between those who know and those who do not and involve each actor in a role that is both responsible and non-hierarchical.

Research repositions the architect in their collective and cultural mission. It is a state of mind, an agency structure, an ambition that manipulates the uncertainties of the world in which we evolve, and that accepts doubt as a system of relations between people and for the design of projects. It transforms the posture and allows the role of the architect to evolve from being solely the one who knows to being the one who seeks.

[16] Barthes, Roland, 'Au séminaire', in *L'Arc,* N°56, 1974

PRIMARY STRUCTURES

Factories

Floris De Bruyn
Philippe De Berlangeer
Frederick Verschueren

KU Leuven Department of Architecture (Belgium)
Master Studio Primary Structure icw Olivier Goethals

GAFPA

GAFPA has always been fascinated by the qualities that can be found in contemporary vernacular architecture. We are triggered to understand how a purely functional construction could transform into what we call architecture. It is the notion of necessity and the undesigned everyday quality that intrigues us.

We like the contrast between the almost anonymous quality of the raw built form and the human qualities it can generate. We spend a lot of time analyzing what is already there. Until you understand it to a degree that you can take it apart and put it back together again. We see our practice as rearranging found 'ready-made' elements, both historical, contextual, and material, composing them in a new meaningful way. A method reminiscent of Aldo Rossi who, lying in the hospital after a car crash, made the analogy with the skeletal structure of the body made of fractures to be reassembled. Rossi's main obsession could be described
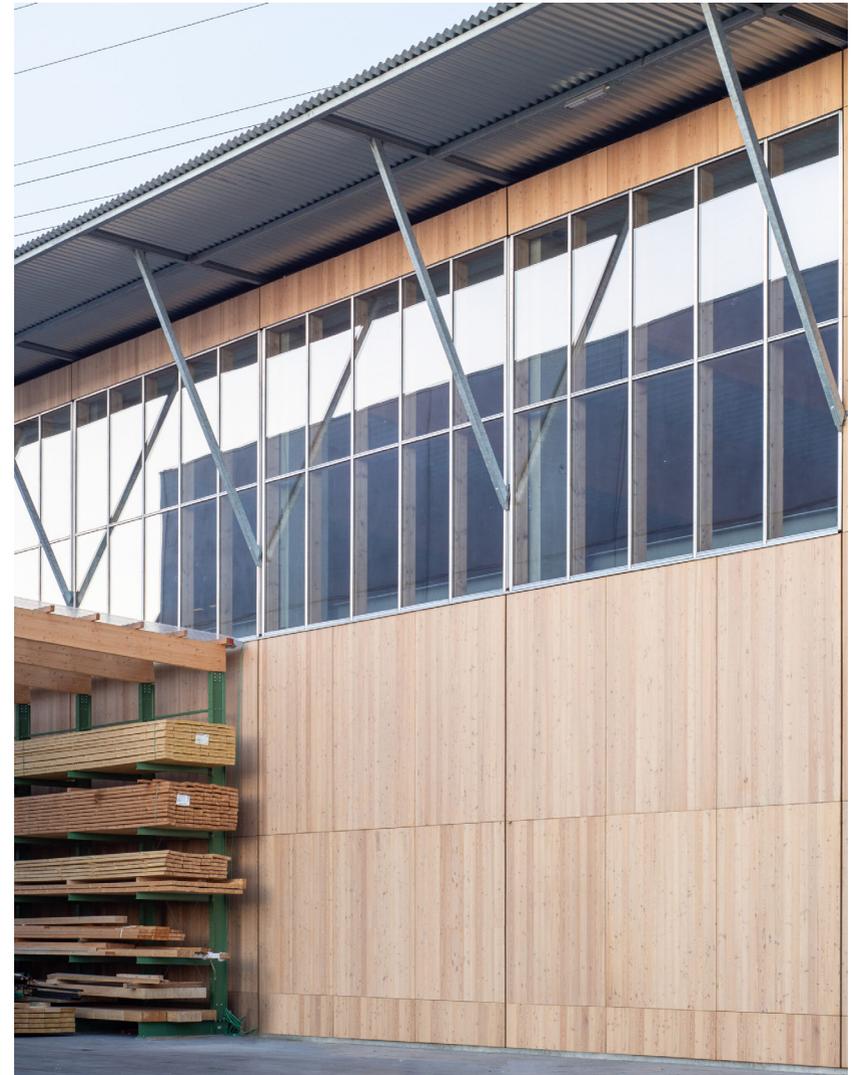
G1812 Industrial building, Gent (BE), 2021, GAFPA

as finding a general order or structure with which to arrange 'as found' fragments into a meaningful whole. In his Scientific Autobiography he writes that he 'loves things that are broken and then reassembled as in archaeological and surgical operations'. He refers to observation as being his most important formal education. It is this aspect of appreciation of what exists in combination with the act of recomposition that interests us. Although the fragments Rossi deals with are historically charged and our office is maybe less concerned with this Post-Modernist sensibility, he speaks of the desire to re-make. "Similar to retaking the same photograph: no technique is ever sufficiently perfect to prevent changes introduced by the lens and the light, and in the end, there is always a different object anyway." This notion of an architecture that creates the same thing again and again illustrates Rossi's concern with continuity. It shows his confidence that this attitude invariably produces something interesting without desperately looking for invention.

Confronted with a project we try to construct a syntax or grammar by means of observation and analysis of the surroundings. Sometimes it's the specific shape or atmosphere of a site, the constructive logic applied in the neighboring buildings, or a found building material that triggers the initial concept. It's the thrill of finding new ways of expression by using what is found, the transposition of a building system, and the beauty of the space produced by the result, almost as a side effect. The naked 'primary' structure, the most essential part of a building, is our focus, to be inhabited or used in the way people feel like. The

program is an excuse to create space which can only exist in that place, and at the same time is universal in its nature.

In the 1940's Nikolaus Pevsner qualified a bicycle shed and by extension any space big enough for humans to move around in as a building. He argued that the term architecture applies only to buildings designed with a view to aesthetic appeal. It is enough to think of the bicycle shed designed by Rietveld to show the predicament of this statement. It would be more precise to say it is a question of quality, not size or program. However, the main issue that seams important to Pevsner is the intentional aspect of the design and the focus on aesthetics for a building to qualify as architecture. The bicycle shed by Rietveld was a temporary construction. Constructed of wood and

1967 Gerrit Rietveld, Temporary Bicycle Shed, Utrecht

metal, painted in the typical primary colors. A large canopy makes a generous gesture to the street. White light-boxes for advertising look like the protruding windows of a façade. Every element is functional and yet the result is strongly architectural. Although a late work in his oeuvre it is not included among the works in his Wikipedia page. The building mediates between the utilitarian and the architectural and if it would have been built in England it would be interesting to know if it would made it into the 50 volumes of Pevsners publication.
The issue of qualification is maybe less interesting, but it generally is the case that what is not labelled as architecture is less studied or simply neglected. Vernacular buildings are usually studied in the context of historically accepted typologies or the exotic primitive examples of man-made structures.

The fascination of architects who had the undesigned as a source of inspiration has a longstanding tradition. Laugier cultivated a romantic longing for the primitive hut as an undesigned fictional ideal. Factories, ocean liners and the mass of the industrial grain elevators were presented as an ideal of engineer aesthetics by Le Corbusier in Vers une architecture. Venturi Scott Brown analyzed in their book on Las Vegas the undesigned buildings on the strip. Although the main preoccupation was the image and the symbol, the openness of what architecture could be in their work is refreshing. In his book Architecture without architects Rudofsky covered picturesque examples of indigenous

building. Ungers spent years analyzing Berlin surrounded by the Wall. This in turn gave the spark for Koolhaas manifest Delirious New York and the theory of the Automonument, a building that by its scale renders design pointless.
The above examples are theoretical works that were almost invariably idealistically motivated. The analysis of the existing is often used as a metaphor to make a statement. The grain elevators were not to be taken literal. The maison-Domino was a translation of the steam liner.
And yet we think a lot can be gained from a direct analysis of the thing itself. The talent of the architect lies in the discovery of what can be useful or beautiful in the as found. Additionally to an understanding of the masterpieces in architecture, these structures of necessity can be excellent teachers if one is willing to listen.

Canadian grain stores and elevators, Le Corbusier, Vers une architecture.

In our teaching we have tried to find a way to address these issues by introducing methods of observation and analysis. By applying them to 'anonymous' architecture the discussion with the students transcends the aspect of style or authorship and is only aimed at understanding how the building was made. Together we look for architectural qualities or interesting structural systems.

In the master studio Primary Structure, we have been archiving for the past years' different types of built structures. We examine anonymous buildings, industrial artefacts, historic factories, barns, and supermarkets. We deliberately postpone the design act and start by drawing and discussing in detail every aspect of the building. At the end of this first phase the student presents the work as if it were their own design. Without explanation the drawings have the structure must be clear. Important details must be highlighted and specific parts that have architectural potential made in a 3d model.
This analysis has equal value to the second part in which the students use this knowledge to make either an adaptation or a new design depending on the situation. This group research is considered as a shared grammar that can be used by anyone, as is the growing archive of the former years. The analyzed building is presented as a standalone primary structure stripped of program and site. Its potential quality as a resilient structure is evaluated.

We are influenced by the methods of Giorgio Grassi and his search for necessity and understanding in architecture,

Venturi Scott Brown and their book on Las Vegas or Bernd and Hilla Becher and the Dusseldorf photography school. These authors could be linked by the desire to find a methodical analytical approach that structures observation. The Dusseldorf school is famous for its neutral framing of industrial objects that can be compared in a sequence of images. Used In the context of this studio this last approach could be accused of being 'superficially' concerned with the surface. Because of the 'absence of the architect' in the chosen examples however there is often a direct link between the internal structure and the image it generates.

A similar academic attitude can be found in the work of Grassi in his preoccupation to avoid the act of 'invention' in architecture and build upon what is already there. Venturi Scott Brown combine this methodical approach
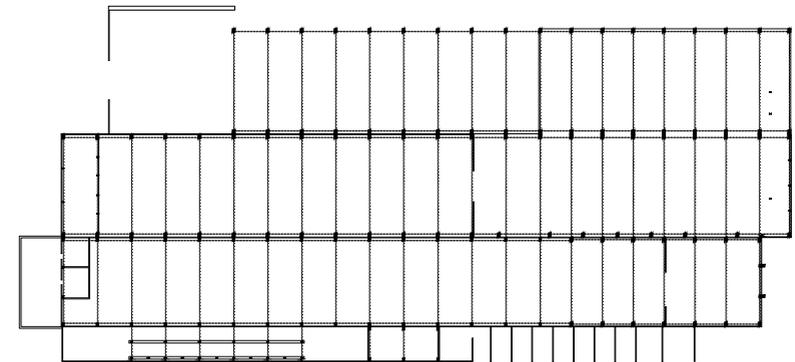
Primary Structure 2021, ElBeton prefab factory, Aalter. Plan by Tycho Maes and Alexandre Moens. In this drawing the system of different sheds built alongside each other is shown.

with an interest in the ambiguity of structure and image. The selected method can be varied corresponding to the situation. By adopting this form of visual analysis the students are invited to look through the lens of a specific artist or architect to alter their view on reality.
The aim is to find a research method which generates continuity devoid of stylistic restrictions or a fixed formal language. We want to find a way to generate meaningful space which is specific and flexible at the same time without being generic or isotropic. It comes from a general concern with what will be left of the architects' endeavor after it is stripped of its ornaments, façade, and function. The quality of the primary structure determines the quality and hence the corresponding label. Or in the words of Auguste Perret. Architecture is what makes a beautiful ruin.

This year we analyzed factories. We specifically looked for recent 'non architectural' industrial structures in Flanders.

We assembled a grid of industrial buildings following the method of the Bechers. Photographs were taken without distortions and with a clear sky. We asked students to make photographic series according to different principles they found. Aspects such as symmetry, repetition, proportions, or typology were discussed and illustrated by means of a serial composition. In the next step the students were asked to choose and analyzed one industrial artefact for each group. We discuss how the structure works, determine the different phases in which the factories were built. If the building system was compromised by the site or how certain abnormalities could have arisen. Because there is no

Primary Structure 2021, Model of an Airoplain shed, Wevelgem. Helene Callewaert and Lennert Verbrugge
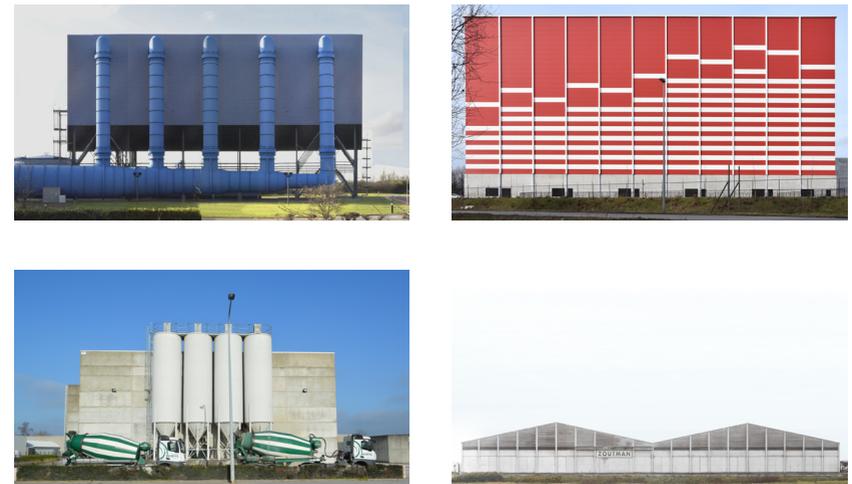
Primary Structure 2021, grid of the industrial vernacular. Group exercise adopting the method of the Bechers.

signature of the architect, every solution is generated by a contextual economic or pragmatic reasoning. We encourage them to find out what determines their anonymous quality. Additionally, theoretical research is done on the topic of structure and how architects dealt with this issue in history. An (industrial) construction site had to be visited and documented and examples from the practice were shown and the problems and constraints in budget and construction process explained.After the presentation of the existing building the students are encouraged to look for an interesting building system, a beautiful proportion, material use or a strange detail that can be the start of the design.

The site we selected for the student assignment is an industrial site in Ghent. Located in the vicinity of the harbor


Primary Structure 2021, industrial site, Wiedauwkaai, Ghent. Located in the centre in between a railroad and a dense residential area on the left and a small stream and industrial activity on the right near the canal.

it sits in between a dense residential tissue. The site was isolated, cut off between the old railroad and the Lieve, a small stream of water. Recent new connections and road network makes it accessible again. The goal is to keep medium scale industry within the city, so mono functional residential developments are banned. Only offices and housing for company purpose is allowed. The result is often a strange mix of pragmatic functional boxes combined with 'representative' office and residential space to brand the company.

We are familiar with the site in the office since we recently built a new factory for Lab15 on one of its plots. The project is an industrial building of 1000m2 consisting of production and office space for a contractor. The client is a woodworking company with which we have collaborated for years. Because it is a young company, we had to find solutions within a tight execution budget of 800.000€. In spite of this we convinced the client to build larger then initially requested. We proposed one big structure housing both the warehouse and the offices, separated by a generous covered space which was to become the heart of the project. The covered space although not asked in the brief could provide dry delivery for trucks and waiting space for finished products to be exported. When not in use the multipurpose space was free for after work drinks, BBQ and simple leisure. As opposed to regular planning regulations it is allowed to build the whole of the plot. To avoid either to completely fill the plot or to create 'non spaces' surrounding

the building we chose to use the plot limits on two sides to keep a maximum of space free on the other side. We argued to the client that the resulting long facade adjoining the main outside space would be perceived as the 'front facade' and not the one facing the street. This façade was clad with prefab wooden panels of equal size as the concrete ones used in nearly every surrounding building. The simple placement of the inevitable big box on the site becomes the most important architectural decision. The observation of the qualities of covered spaces and non spaces in the neighboring buildings proved instrumental to the project.

For the main structure we used the standard elements from which most of the industrial neighbors were constructed. A standard wooden beam was used upside down. This choice resulted in an angled roof that heightens the space on one side to provide an extra 4m high space for natural light to enter.
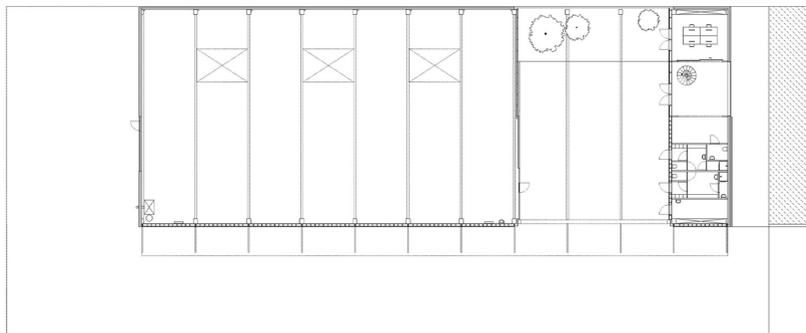
G1812 Industrial building, Gent (BE), 2021, GAFPA. Plan to illustrate the placement of the building in the right corner of the plot. Production hall and offices in one space seperated by a canopy.
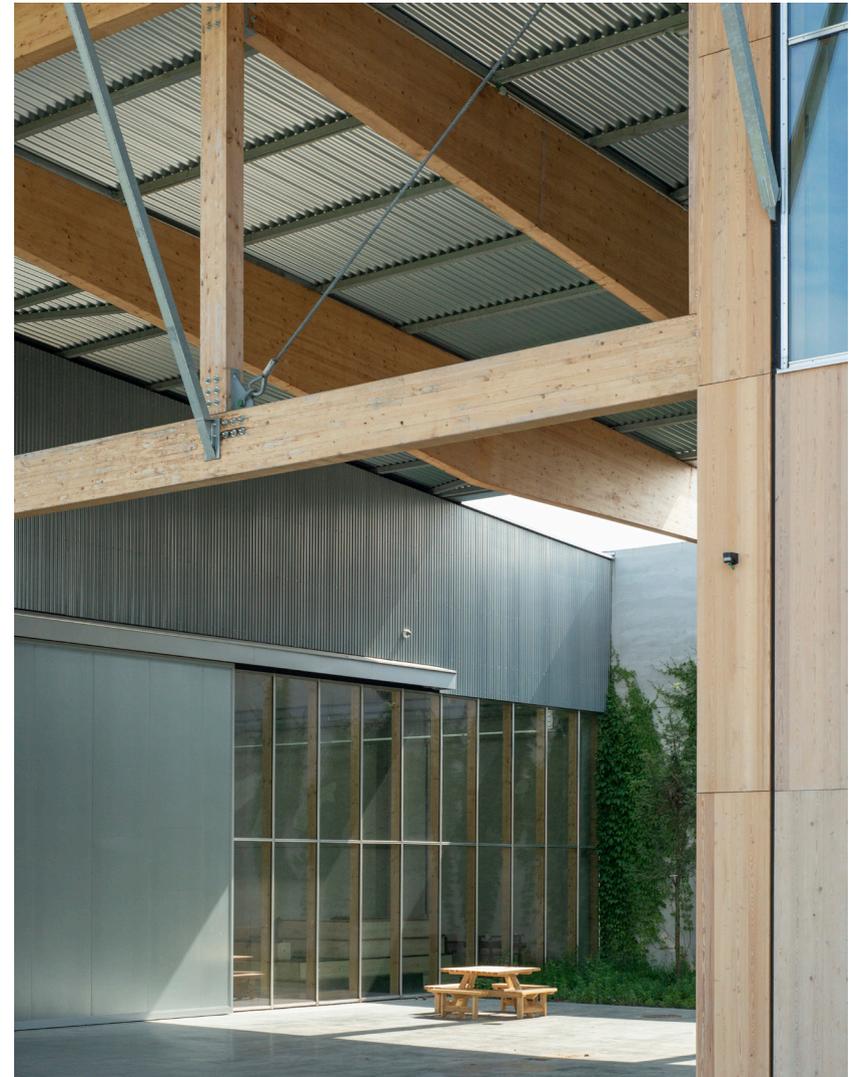

G1812 Industrial building, Gent (BE), 2021, GAFPA

The theme of the concrete panels was used in three walls. The fourth wall was made of panels in wood, prefabricated and identical in size. For the protection of the wood a metal canopy is introduced which almost feels like a vernacular solution. As in the transport factory the columns facing the covered space are cut and replaced by a giant wooden Vierendeel truss. One overall structure is continued throughout the project, the offices are built in the first bay using a metal wood structure that can be dismantled to restore the original primary structure.

G1812 Industrial building, Gent (BE), 2021, GAFPA. A facade of prefab wooden panels mirrors the concrete replica's of the neighbours.

The students were asked to design a factory building for one of the neighboring plots on the site. They were given the cad drawings of the site. The conducted research in the first phase was to serve as inspiration for their design. Direct architectural references were avoided unless they offered a specific structural solution for a problem found on site. Prefabricated solutions had to be economic and illustrated with factory catalogues. Material and building system choices were considered within the principles of circular building. The systems or solutions they found in the first phase had to be updated and adapted to become an architectural system. What was an strange abnormality or pragmatic found solution had to be transformed into a system or a structural logic. In this way the anecdotic aspect has to be overcome and incorporated in the architectural language of the student. A form of appropriation in which the found element and the adaption are difficult to entangle.


Primary Structure 2021, overview of all the projects outlined on the site
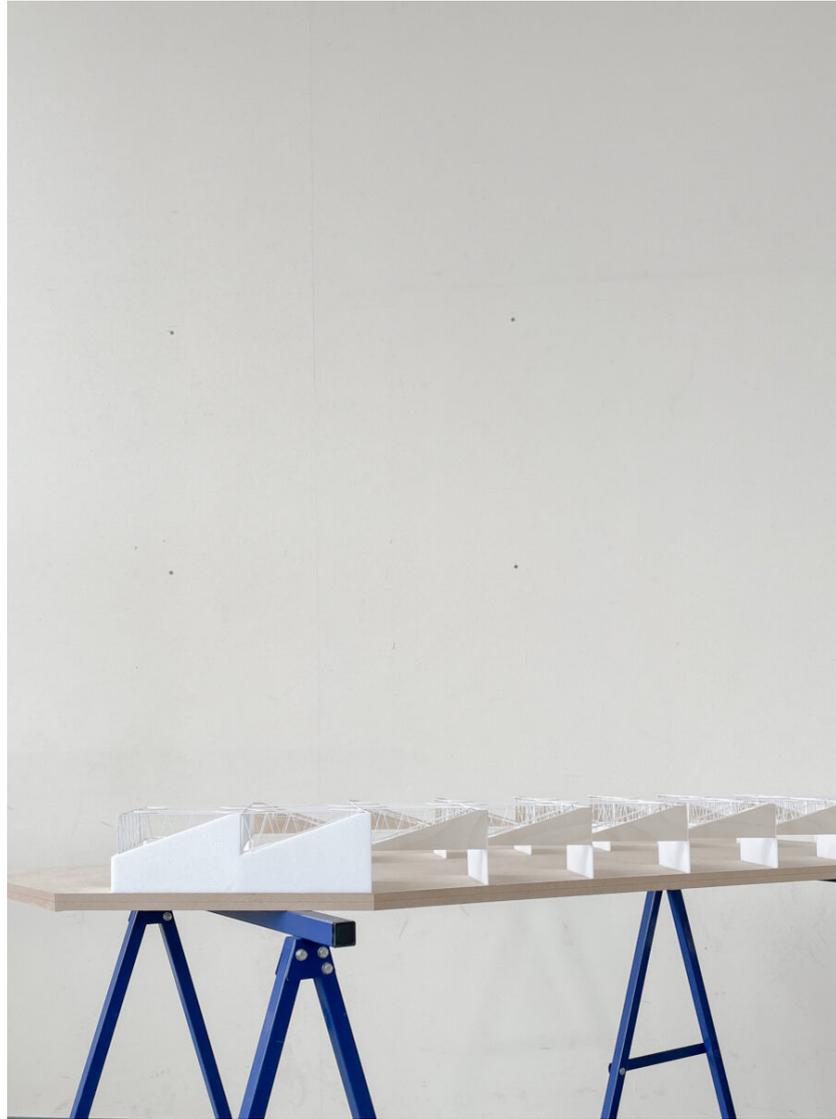
Final model showing the primary structure of the project, Art frame factory, Maxim Lannaux and Corentin Lefebvre

To make room for expansion in a transport depot an existing column was cut and held up by means of an improvised red painted truss. This resulted in a sort of gravity point as the intervention was clearly felt in the space. In the student design this exception was used as the engine for the main solution of the roof construction. On both sides of the space a vierendeel is put on top of a concrete wall made to extend by one bay. In between these 'gravity points' a new lighter 'W' truss is suspended. The light enters the space trough these structures. The initial found idea is thus sublimated and translated into the new project.
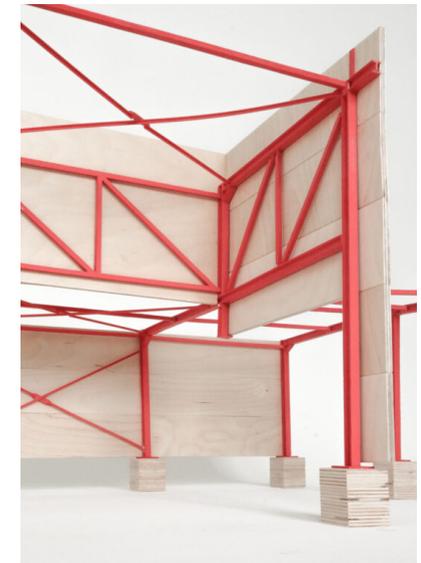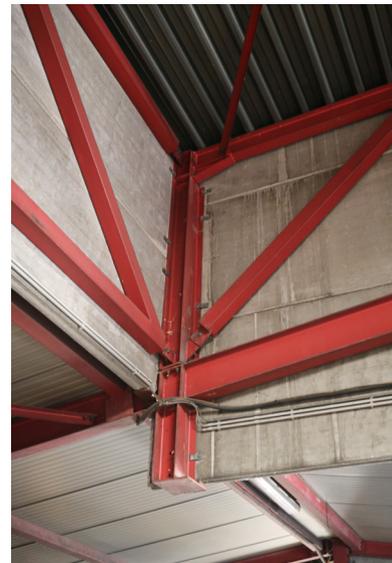
As found detail of 'gravity point' in picture and model , Transport van Caudenberg, © Maxim Lannaux and Corentin Lefebvre
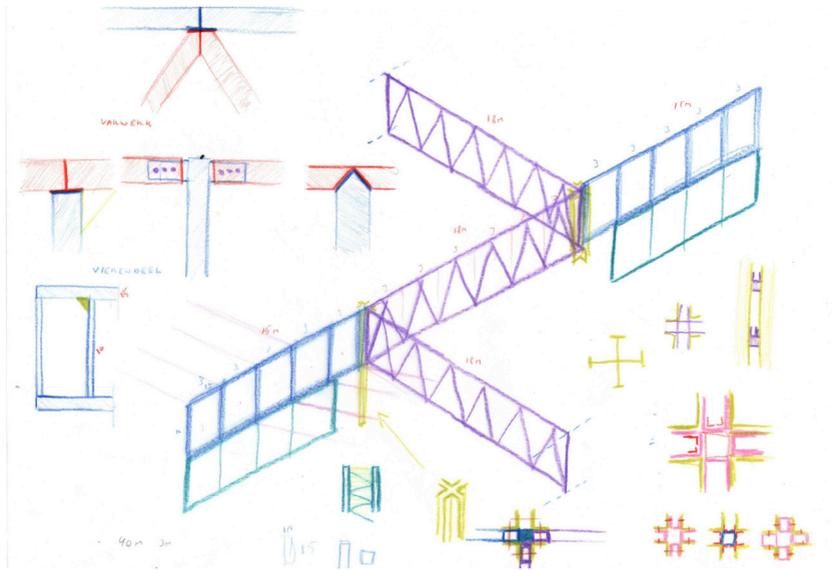
Sketches investigating the translation of the initial found idea into a system, Art frame factory, Maxim Lannaux and Corentin Lefebvre

From the research on a granulates storage the idea of a concrete base with a light metal structure on top was adopted in the final design. Here a temporary stack of stones provides a play with transparency .
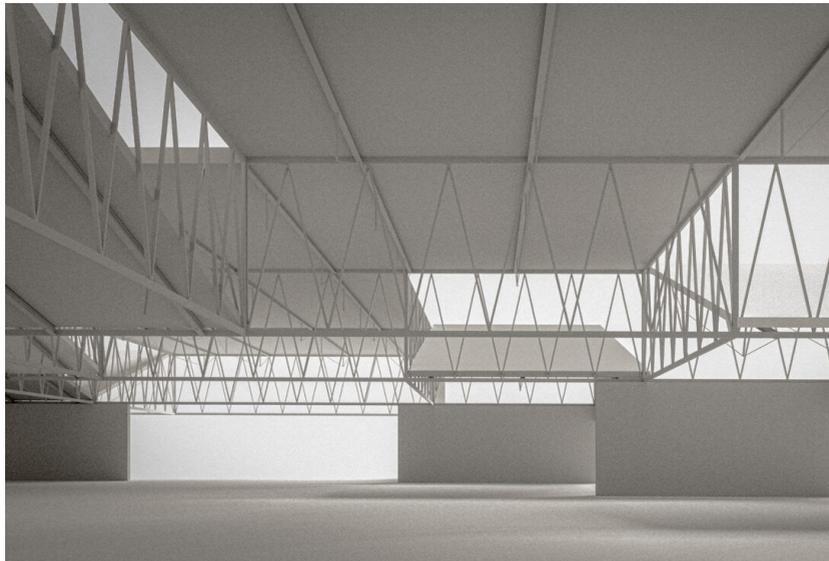
Interior final model, Art frame factory, Maxim Lannaux and Corentin Lefebvre
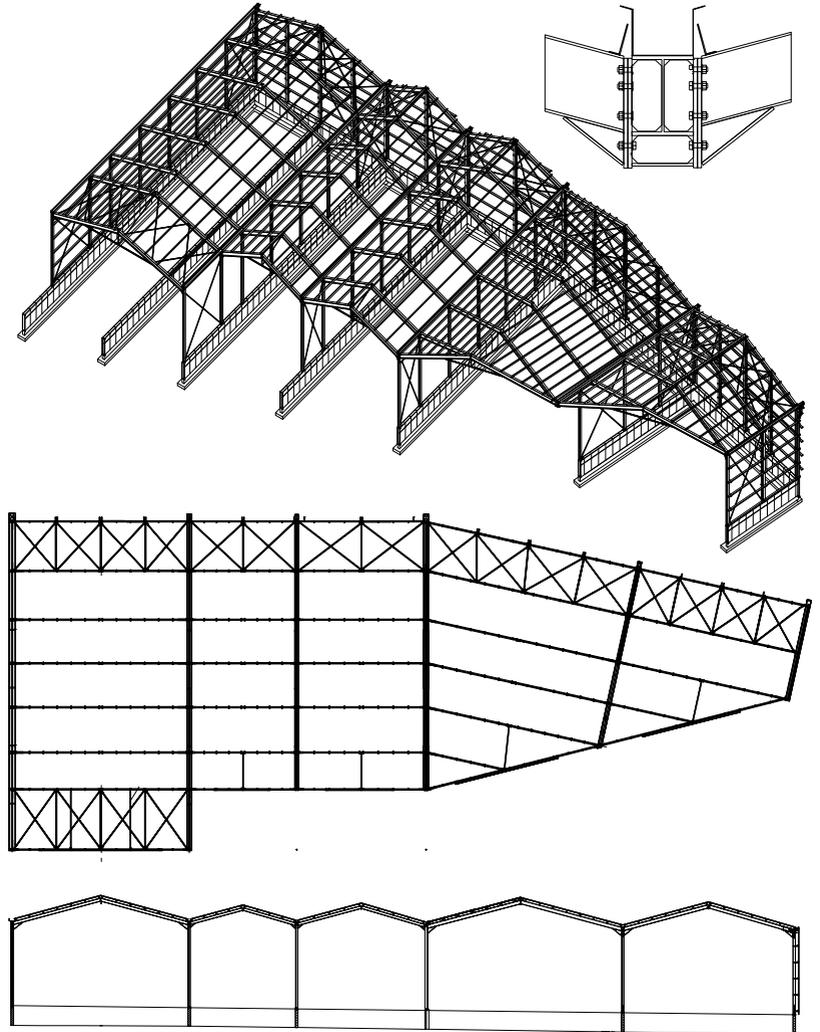
Storage for granulates, Wannes De Brouwer and Brecht De Roose
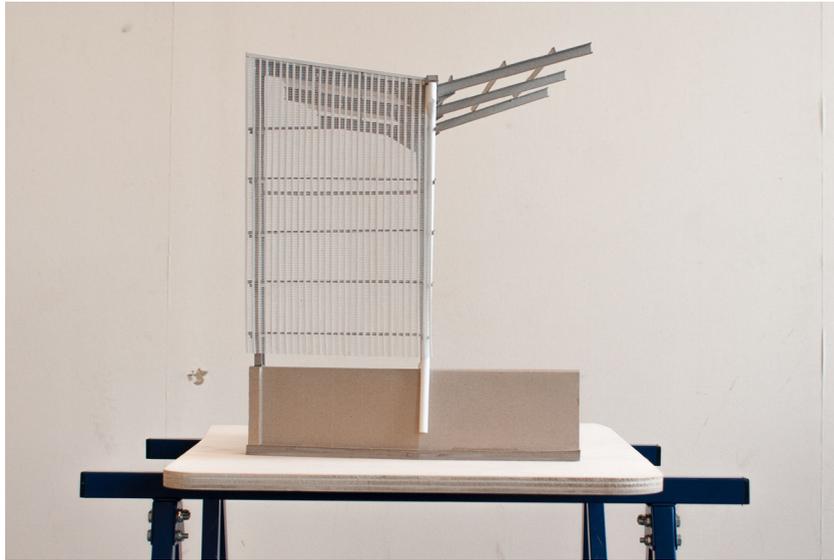
Model of a fragment of the analyzed factory, Wannes De Brouwer and Brecht De Roose.

A design for a new warehouse originated from the concrete block system found on site. This approach recalls practices such as Lacaton and Vassal with their appropriation of green house structures for housing.

The use of local material inforces the link with the place and yet it is rarely used within an industrial context.

The temporary stacking is used and inspired for the roof to follow the same logic. A solution was found to stack all the different layers in a way they could be dismantled at any given time. The circular aspect of the chosen material and the fact that this choice is continued in all following design decision elevates it from a mere aesthetic choice to an architectural defining decision. The steel joint elements fixing the roof beams are integrated using the weight of the concrete blocks.

Image of final jury, Wannes De Brouwer and Brecht De Roose. The conrete base is used as a design element. The perforated corrugated metal of the example is translated into a temporary storage of stone fragments extending the play with transparency.
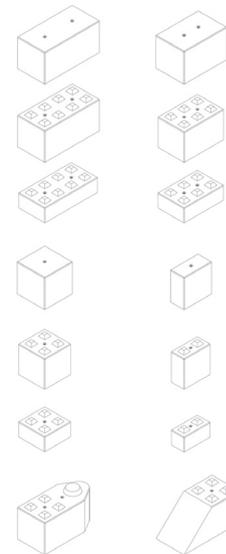
As found picture of on site building material. And factory catalogue of building system, Pieter-Jan Van Steen and Evgeny Kupriyanov

Image of final jury. Warehouse, Pieter-Jan Van Steen and Evgeny Kupriyanov
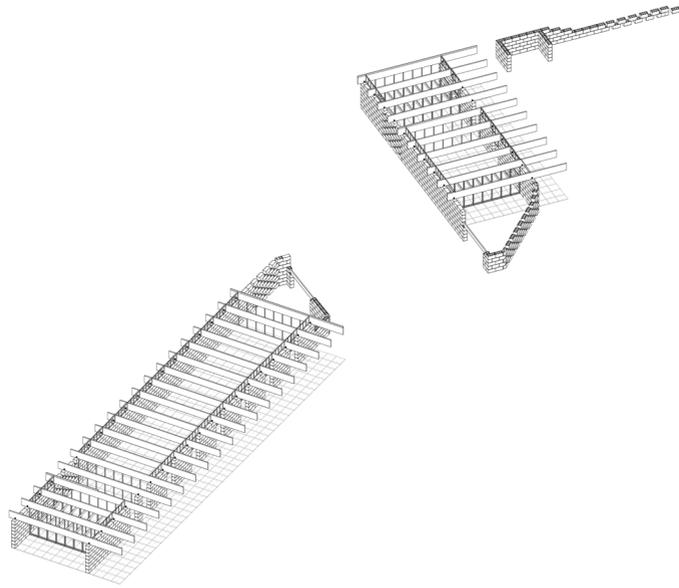
Both in practice and in teaching we try to find a way to make architecture with a low degree of personal signature. To, as Rossi puts it, 'forget the architecture' and achieve the anonymous quality we find in buildings encountered in everyday life. It is of course precisely this aspiration of creating a 'neutral' architecture that could result in its exact opposite. One can recognize a work of Grassi or Rossi from far away despite their aspirations of blending in the environment. This neutrality or 'degré zéro' in architecture, writing or photography is an illusion or as Roland Barthes writes it results in a style of its own. The method of the Bechers for example has transformed from an objective tool into a widely adopted stylistic academic method. And yet without this rhetoric or research aspirations the 'house without qualities' by Ungers would never exist. We have found that adopting this way of working and teaching helped us to open up a door into architecture.

FLÂNEUR123

Els Van Meerbeek

KU Leuven Department of Architecture (Belgium)
research groups OSA & L/A/P

Carton123 architecten
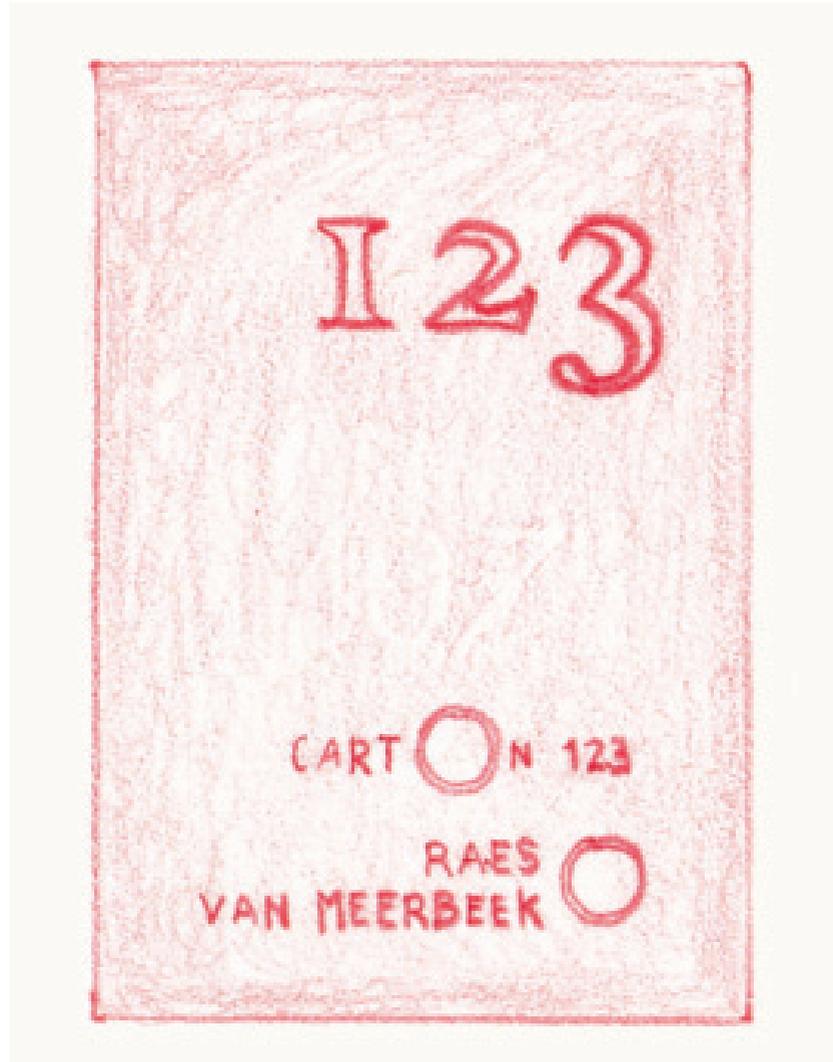
'Explorations & Cartographies' – it is simply not possible for an architect to resist such a call. There is this ever present need to know where we are, where we might go, and why. It is the 'terra incognita' of an architect's mind, at the very start of every project. The joy of possible discoveries and the urge for control make a great combination.

The title of the call was the promise for a delightful adventure, a mind-stretching exercise. It soon became clear that the goal was not to simply draw a map of our practice. We did however take on the attitude of a cartographer : exploring, looking closely and scouting. The findings were described afterwards, a set of office discoveries was drawn.

They were the starting point for 'The not so clean desk', a 9-minute video presentation, made for the PIR#03 conference. It consists of 162 drawings, accompanied by a spoken text. Twelve of them are shown on the following pages. They were made by Pauline Vermeulen, in close collaboration with Els Van Meerbeek.

In the end, the whole exercise aimed at letting the viewers reflect and connect with a world of imagination. The PIR#03 exploration of our office as unknown territory is not 'the story of mapping a world' but rather 'mapping the world of a story'. Let it be an invitation to imagine other possible stories.

drawings :
(c) Pauline Vermeulen, Carton123, 2021
(c) Joost Raes, boat drawing, 1989
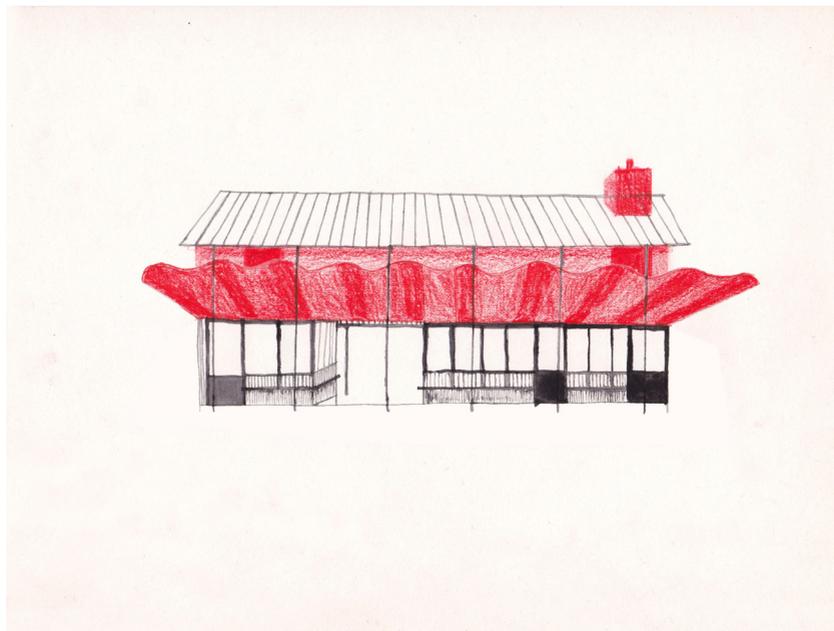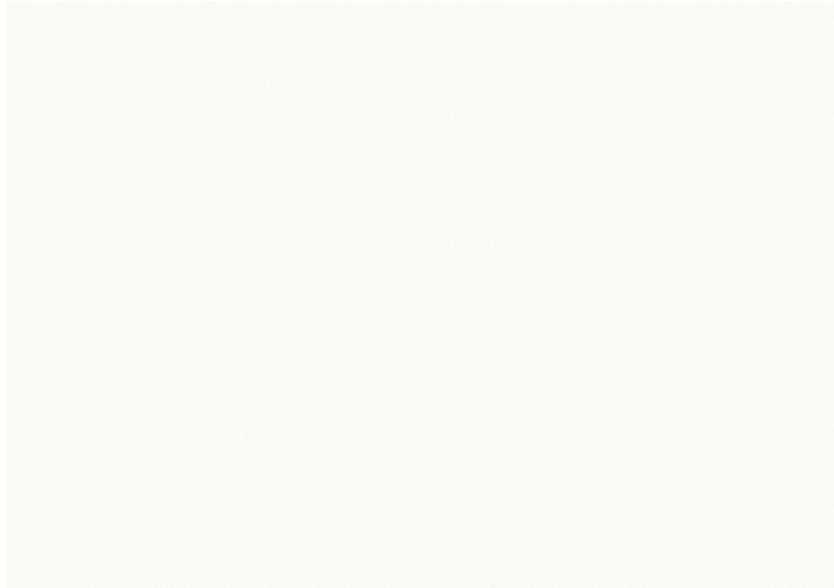
"The principal motive of the wanderspirit is curiosity - the desire to know what is beyond the next turning of the road,
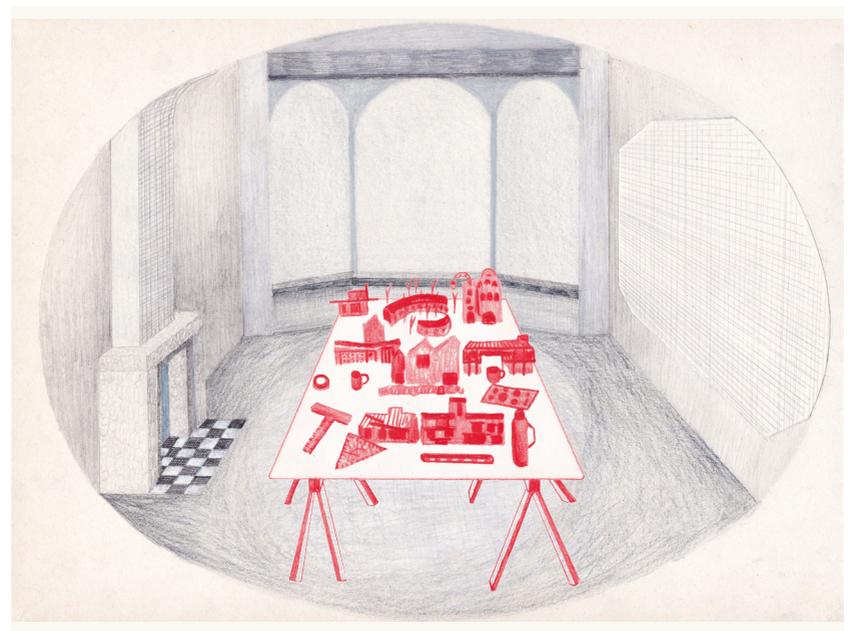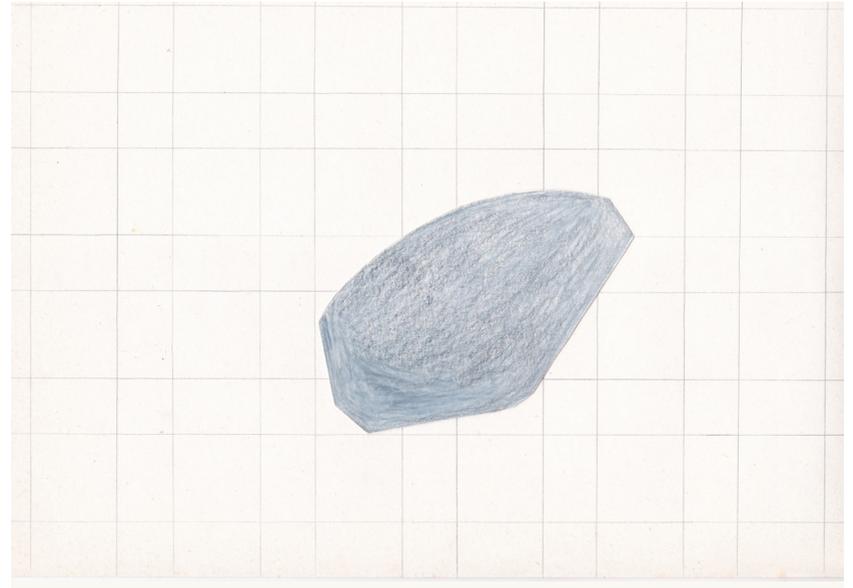
and to probe for oneself the mystery of the names of the places in maps.
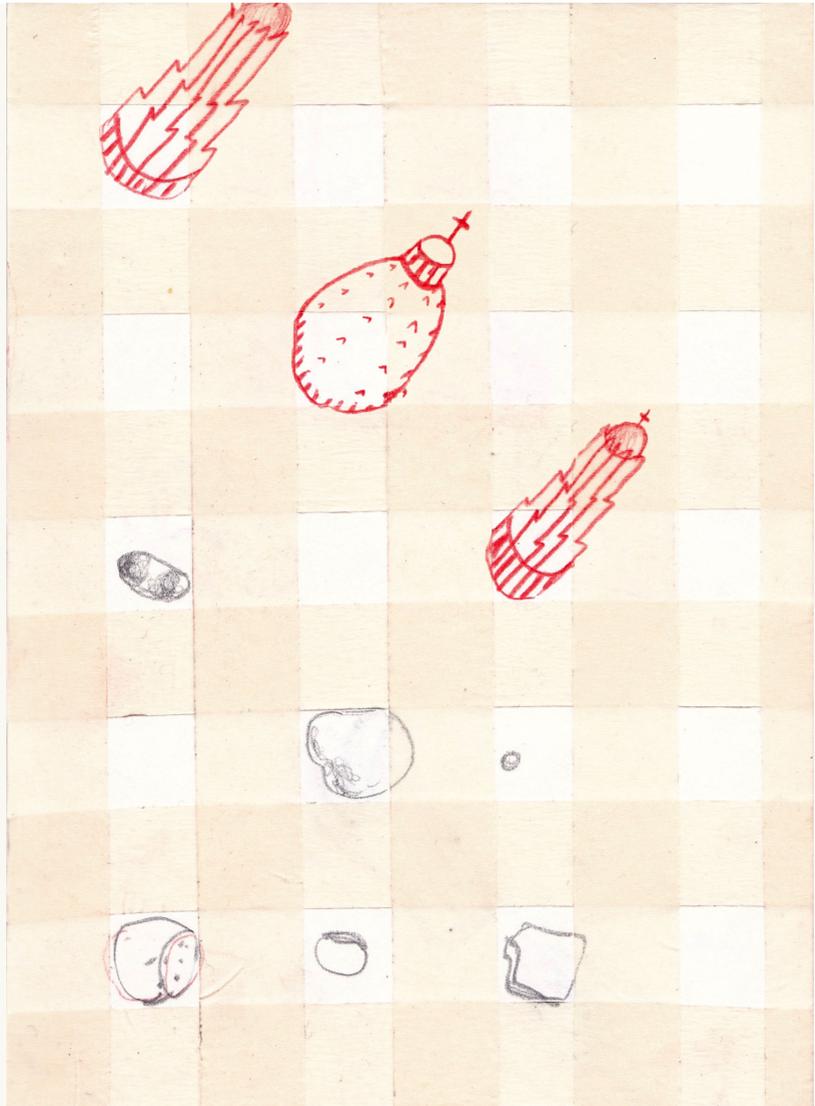
In a sub-conscious way the born wanderer is always expecting to come on something very wonderful - beyond the horizon's rim.
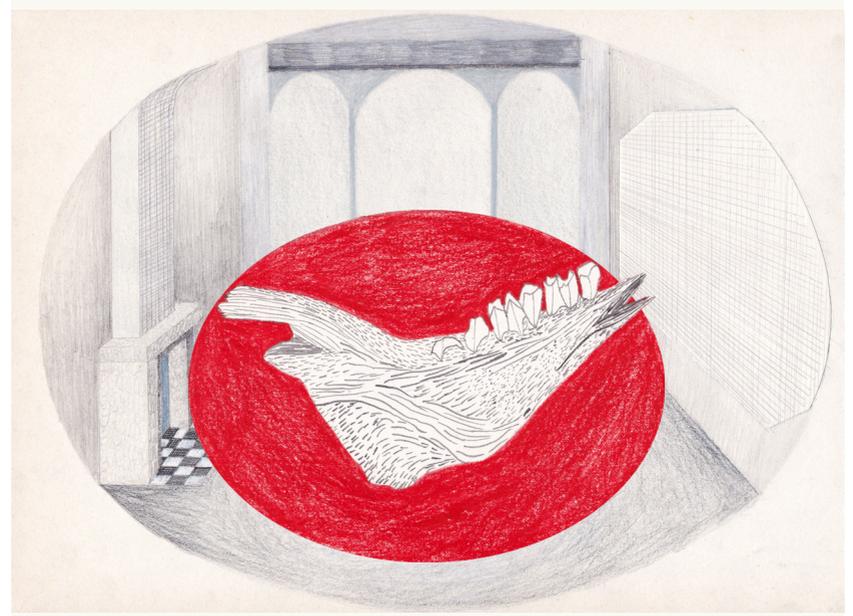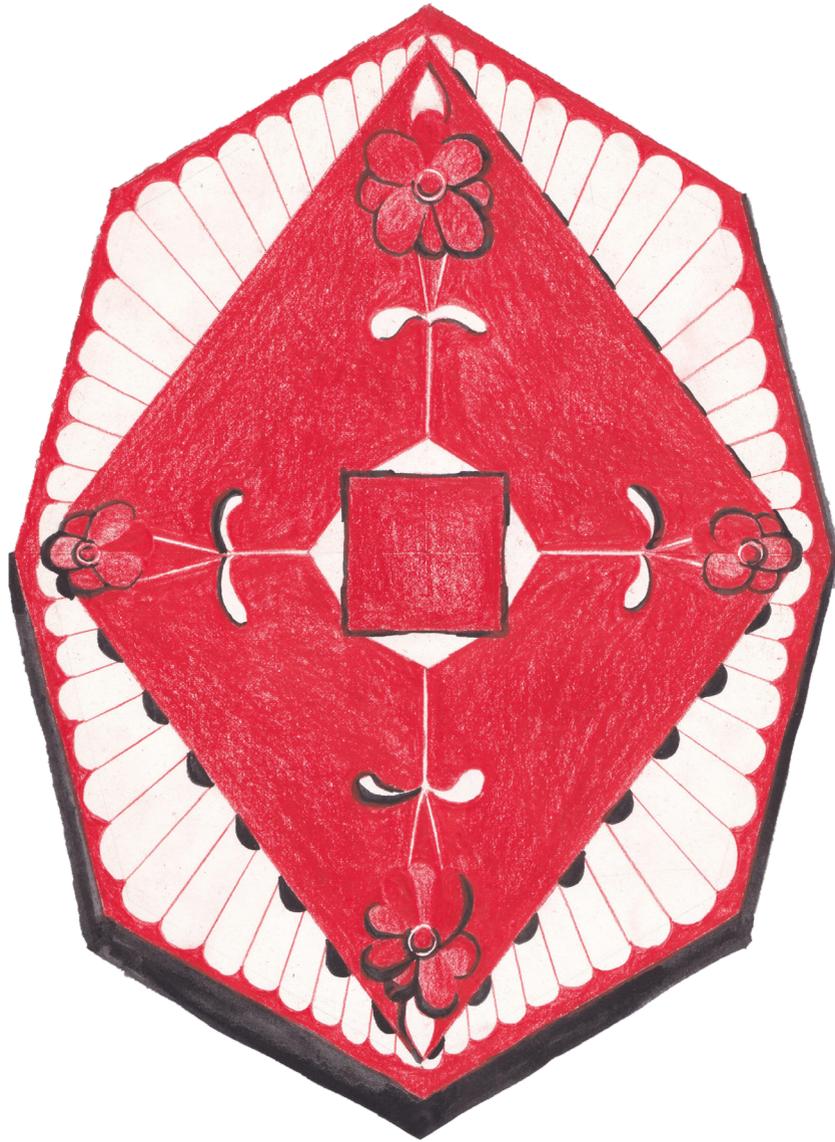
The joys of wandering are often balanced by the pains;
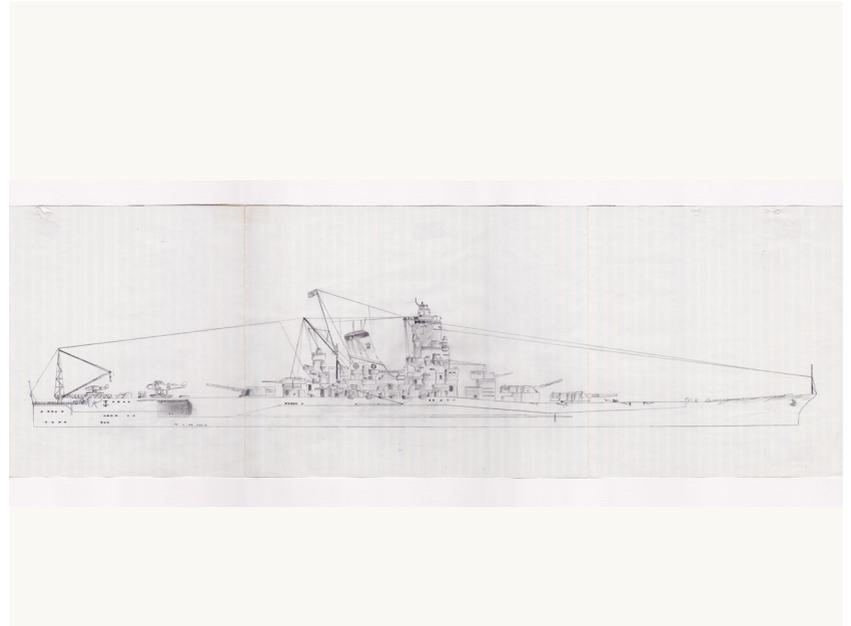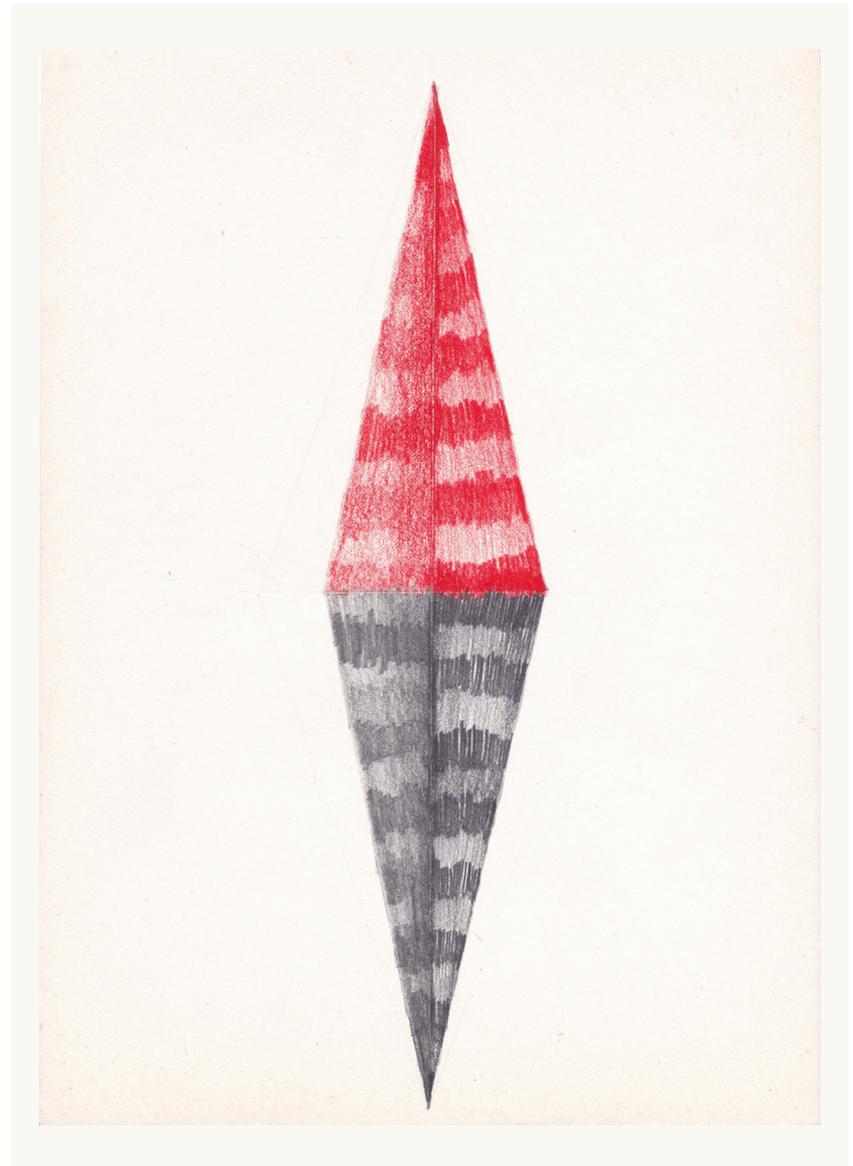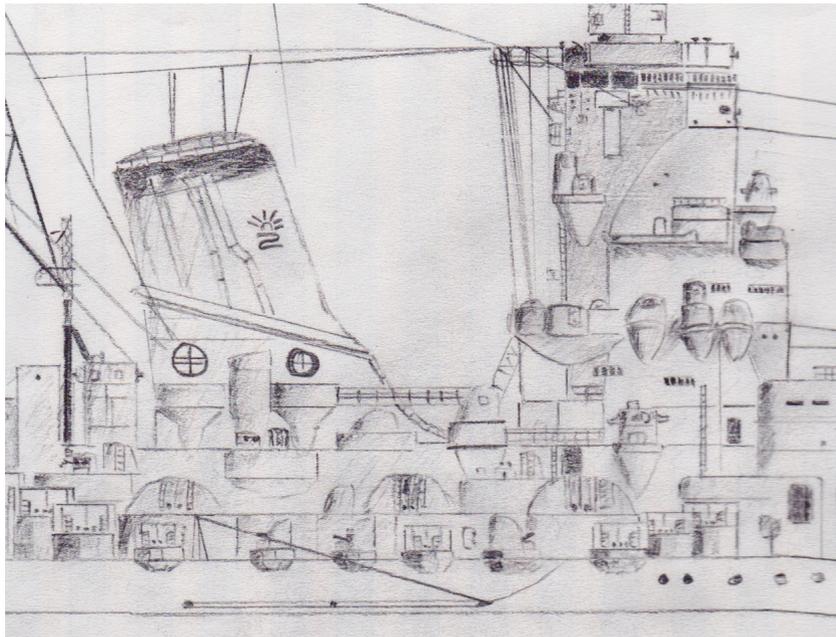
but there is something which makes the desire to wander or explore almost incurable in many human beings."

Graham, Stephen (1927) 'The gentle art of tramping', The Garden City Press: Letchworth, pp. 45

EPHEMERAL ARCHITECTURE

Pavilion architecture as a tool to bridge academic research and professional practice

Salvator-John Liotta
ULB Faculté d'Architecture La Cambre-Horta (Belgium)

Fabienne Louyot
ENSA Paris-Belleville (France)

Laps Architecture

This text focuses on a specific component of our architectural work: ephemeral architecture built in the form of temporary pavilions. From the earliest days of our practice, we have put much thought into deciding which aesthetic, epistemological, programmatic and material approach to adopt as a driver for developing our practice.

The fact that both of partners are practitioners who are also involved in academic teaching and research has created favourable conditions for maintaining a research-based approach in our professional practice. As part of our broader strategy to keep our practice connected to research, we started designing and building temporary constructions and exhibition spaces as a research tool.

Established in 2009, LAPS Architecture is a Paris-based office that focuses on both practice and research. LAPS Architecture believes in contributing to creating a high quality architecture for a better society. To date, it has built residential, cultural and educational projects in France, Italy, Spain, Germany, Morocco, and Japan.
As our practice grew older, we came to realize that our creations started to become more conventional. The most common reason for this is the idea of "playing it safe" so as not to scare a client or a jury, or in response to building codes.

To avoid creating conformist designs and being sub-

ject to the norms, the will of clients, or even worse, the dictatorship of a budget, we integrated a recurrent practice of producing ephemeral architecture in the form of pavilions into our strategy, allowing us to experiment freely.

The word ephemeral comes from ancient Greek ephēmérios, which means "of, for, or during the day, living or lasting but for a day, short-lived, temporary" and it refers to temporal dimension.

The word pavilion comes from the Latin word for butterfly, papilio. Roman soldiers used the word to describe their tents, which were shaped like a butterfly's wings. Thus, the origin of this word is morphological, originating from the description of a shape; at the same time, it is also evocative of the ephemerality of its use: easy to deploy and transport from place to place, moving lightly, like butterflies do.

Today's pavilions have not retained the original function of the ancient roman soldiers 'shelter with its butterfly wing shape, but are characterized by their ephemeral functions. Over time, the word pavilion has become associated with exhibition spaces that welcome visitors and with places of experimentation. A small pavilion, as a tool to test new solutions, serves to rethink and trace the limits and perspectives of architecture. Because pavilions are quicker to construct and are not subject to building regulations, building permits or other types of construction constraints, they have proven to be an invaluable tool to advance our understanding of architecture and to test ideas that are not appropriate for normed construction. The design and construction of pavilions also present a certain set of constraints, however, which are different from those encountered in more durable construction.

Experimental use of pavilions
Giuseppe Pagano, director of Casabella magazine from 1931 to 1943, was among the first to understand the theoretical and experimental importance of temporary architecture for advancing architectural practice. In 1939, he wrote that "the construction of a pavilion is an exercise of extreme synthesis, which by exacerbating the use of traditional elements of architecture has, however, the remarkable capacity to communicate in an instantaneous way, thus placing itself within the reach of all and leaving a strong imprint in the memory of the visitor. The pavilions are often projects of high quality and futuristic notions, with spatial dilations and contractions, which pave the way for the further development of architecture in the strict sense of the term" (Casavecchia, 2005).

For Pagano, pavilion architecture was a vessel for the ephemeral, a playground for the staging of architecture and its most advanced experimental industrial and artistic production. With this in mind, we have been using the design of pavilions as a cognitive tool to advance experimental visions, test ideas and develop new knowledge since the founding of our practice, aiming to bring design and the act of building closer together. Doing research using design as a mode of investigation leads to unique and singular achievements. The design and construction of a pavilion thus becomes a strategic means of experimentation in architecture (Geissbühler, 2014): it requires little investment while at the same time constituting a valuable tool for advancing applied research by testing new solutions in terms of materials, shapes, performance or assembly techniques.

The history of pavilions is long and multifarious. Several architects have tested different conceptual and practical dimensions of this approach to architecture. Jean Prouvé's Aluminium Pavilion, for instance, introduced the notion of reusability and rebuildability. His application of these two concepts was ahead of the times, because it addressed scarcity of resources and the necessity of reusing structural elements for different purposes. Commissioned by Aluminium Français for the centenary of the production of aluminium, this building was designed by Jean Prouvé in Paris in 1954, to house an aluminium manufacturing plant. In 1956, it was transferred to Lille, where it served as an exhibition hall until 1986, when it was repainted and subsequently reclad.

Jean Prouvé's Aluminium Pavilion was then disassembled and stored until it was bought by the Société Immobilière du Palais des Congrès (SIPAC) and reassembled in the Paris Nord-Villepinte exhibition centre to host exhibitions and activities related to major events. Far ahead of current topics in architectural debate, the Aluminium Pavilion illustrated the potential for a second life and proved that architecture can be built for reusability and rebuildability while conforming to legal norms for construction. This approach questions not only practical issues relating to materials, assembly and industrialization, but also the notions of time (the durability of architecture), space (its adjustability), context and functional program. The approach of Jean Prouvé justifies our own approach to building pavilions for the purpose of experiments that translate theoretical concepts into physical realities.

It is precisely in this way that we have chosen, since the creation of our office, to design and build pavilions. They have increasingly become a tool for us to bring design closer to the act of building, a way to shorten the distance between conceiving an idea and building its physicality. This offers us the opportunity to experiment with new "conception-visions", to test out proposals which would be impossible to put in practice because they are too risky for a more permanent project, to put forward ideas and to produce new knowledge on the making of our architecture. Today, the design and construction of pavilions forms part of a global (academic and professional) approach to applied research in architecture. Thus, constructing an exhibition pavilion is in no way comparable to constructing a building intended to last. This activity is

fundamentally different from our regular work as architects. Envisioning, designing and implementing a pavilion allows for more freedom; the constraints are fewer and less severe on several levels. The construction of an exhibition pavilion is mainly a question of focusing on its materiality and tactile qualities, as well as its plasticity and ergonomics. Fed also by our experiences in the design of ephemeral architecture, our design brings into play new relationships and interactions between its constituents: programs, materialities, components and structure.

One of the most interesting recent examples of a team that experiments with the construction of pavilions is the French Encore Heureux. An architect collective founded in 2001, Encore Heureux claims to be a generalist practice, constructing buildings, installations, playgrounds and exhibitions. Their experiments explore the notion of temporary appropriation and use of existing materials to produce their architecture. The idea is to explore the potentialities of existing materials for producing something that will eventually have a third life. Materials in this sense have a past that the architects acknowledge (by recognising it), a present that the architects design (by reusing materials), and a future that they leave open to possible reuse. Their ideas of reusability, rediscovery and adaptation are similar to the approach we use in our general practice, which is not limited to the classic notion of construction with architecture in need of a building permit, but is informed through a mix of applied research and installations aimed at experimenting with different uses and appropriations, different types of assembly, materials and temporalities.

The images on these two pages concern some of the projects developed in academic setting by the asscoiates of LAPS Architecture as organizers and instructors. The main idea involved in building a pavillon is to shorten the distance between conception and construction and offer students a knowledge which is based on a more organic integration between architecture, materials and structure. These researches help to integrate research into practice.

The external surface of the pavilion is a smooth continuous curve while its internal surface is irregular due to the different depths of the triangular units. These units posed a challenge in terms of connections to each other due to their wide range of angles; finger joints resolved the issue by increasing the contact surface area.

Conceived during a workshop held in 2013 in the Archaeological Park of Agrigento, this pavilion explored the design and construction of lightweight, temporary structures to shelter archaeological excavation works otherwise exposed to the weather. The traditional bracketing system was reinterpreted in the design, yet, it keeps an essentiality both structurally and aesthetically, and present an intrinsic elasticity, which lessens the impact of lateral forces by acting as a shock absorber.

These two images show some of the small pavilions built during Pop Up School workshop held in 2015 at Farm Cultural Park. The main topic involved experimentations of different pop up educational structures for children made by upcycling plastic containers used for cheese.
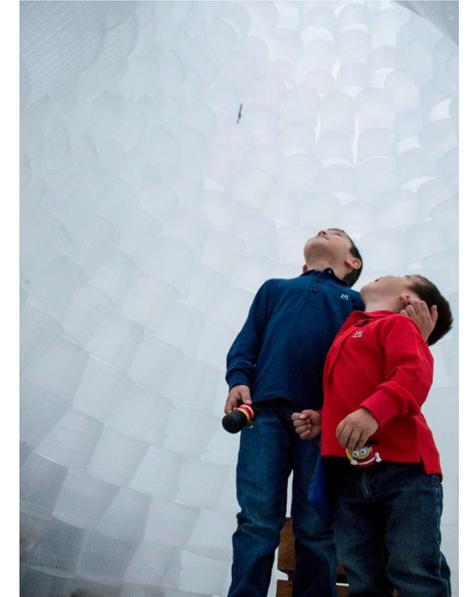
It is with this same philosophy that we intend the design and construction of small architectures: it is of major importance in our working process; it is a tool that serves to inform our reflections and building choices used for other, larger-scale projects and it allows us to accumulate knowledge for future intellectual speculations and for anticipating and avoiding some issues we may face in more permanent construction projects.

When we started our practice, we began applying this idea of using temporary architecture as a research tool, and over the last ten years, in addition to small pavilions, our office has designed several medium- and large-scale ephemeral constructions, including a pavilion for the Milan World Expo (2015), the installation/scenography for the "What is co-dividuality?" exhibition realised at the Farm Cultural Park (2017), the pavilion/installation designed for the exhibition "999 Questions on Contemporary Living" at the Triennale Museum in Milan (2018) and the "Human Nature" pavilion (2020), designed for the Italian Architecture Festival in Favara.

Pavilion design serves as a kind of bridge between research/academic activities and architectural practice. Regardless of the scale – small, medium or large – the exhibition pavilions we have built present a "real scale", built experiments entirely devoted to advance our research in architectural professional and academic settings.

As architects, building a pavilion is a different experience from erecting a building intended to last.

Indeed, this construction process reveals a whole new dimension that no longer relates solely to the architectural program and its functions (Doyle & Senske, 2016) but rather focuses on the way spaces are built and on creation intended as a process in relation to design. In this way, the project can foster the birth of a real material experience that is no longer merely virtual or theoretical (Paranandi, 2013).

Our projects The following selection of four projects illustrates different experimental approaches to ephemeral architecture. Each of these projects involves a different material and a different program.

Island, Sea and Food Cluster Pavilion, Expo 2015 Milan
The central idea of the Islands, Sea, and Food Cluster presented at the 2015 Milan World Expo, entitled "Rhythm of Discovery", was to retranscribe the anthropic and natural experience of the exoticism of the islands located between the tropics of Capricorn and Cancer, by proposing a multisensorial experience: tactile, auditory and olfactory. The pavilion was located near the main arena of Expo 2015 and was characterised by its two narrow, long volumes, organised to create a large, open central area, which functioned

as an exhibition space and meeting point. The two volumes were wrapped in a white, flexible pvc skin, its geometric shape reminiscent of fractal clouds or ship sails. The walls on which these clouds rested were treated as infographic surfaces on which multilingual content was scattered, providing a narrative describing the islands represented inside the pavilion.

In this central space, the visitor experience was amplified. Our idea was based on the fact that in a World Expo, visitors have a limited amount of time and are generally not attracted to pavilions that are not in a central area or don't belong to the most prominent countries. International exhibitions are often characterised by the presence of national pavilions, but at the Milan exhibition, the idea of the cluster was presented for the first time: several nations exhibiting together in a pavilion characterised by a common theme. The clusters of the 2015 World Expo were designed as collective pavilions that grouped several countries around transversal themes such as fishing and islands, agriculture in arid environments, the Mediterranean diet, and coffee and herbal tea culture.

For the Islands pavilion, these considerations led us to design a place of easy access where visitors could sit and relax in the middle of greenery, offering a strong and multiplied experience. For this purpose, the central area included a thick patch of dense bamboo planted on the ground as well as a hanging bamboo forest consisting of 7.000 reeds. The ground bamboo and the hanging bamboo reeds reflected each other in a subtle play of resonance between nature and artifice, with a hanging forest hovering over the heads of the visitors, producing a soft

and familiar sound atmosphere. The reeds subtly swayed and clashed, reproducing an ancestral low-frequency sound that alternated with the tinkling of pre-recorded wave sounds. A pathway led visitors into exhibition spaces dedicated to each island, where the ceilings were carved with large chimneys that functioned as wind towers, promoting natural ventilation and bringing natural light to the exhibition space. The two volumes were made of glued laminated wood, forming 12-metre-high modular portals. The Cross Laminated Timber (CLT) structure of this ephemeral building was designed to be easily dismantled after the Expo and reused elsewhere.

Co-dividual Architecture Capsule Workshop - What is Co-Dividuality?

In 2017, we presented an exhibition/event entitled "Japanese Architecture and the Shared House of Farm Cultural Park" at the art gallery of Farm Cultural Park in Favara, Sicily. The exhibition offered a panorama of shared house typologies and examined the broad theme of the redefinition of public and private space in Japan, transforming the Farm Cultural Park art gallery into a place of experimentation and rumination on the uncertain boundaries between private and public space through 1:1 architectural experiments. Through a selection of projects conceived by the most important names in Japanese architecture, the exhibition questioned the concept of co-dividual architecture – an architecture that proposes a new response to the question of the commons in the era of post-individualism, social networks and the sharing economy.

The overall concept alternated between green spaces, fountains (used for aquaculture) and paths, and was inspired by a network of traces from old nautical charts of Polynesia and the Marshall Islands. The CLT structure of this ephemeral building was designed to be easily dismantled after the Expo and reused elsewhere.
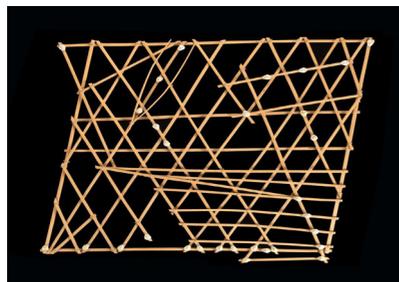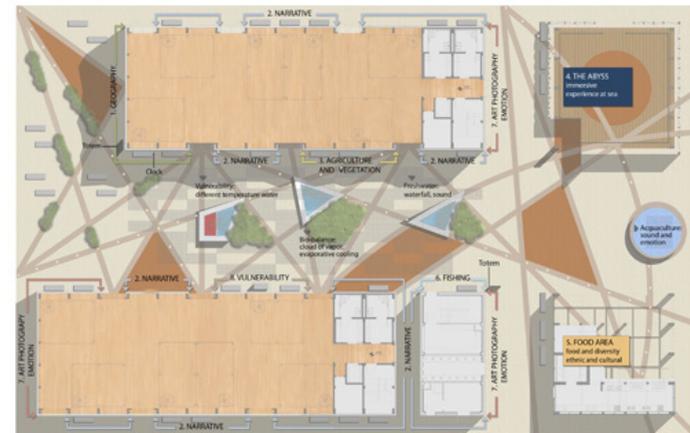
Sea and island temporary pavilion for Milan EXPO 2015. The hanging structure is realised in bamboo and the structure is built in CLT posts, beams and panels. The pavilion was deconstructed and used afterwards for another project.

The exhibition was conceived as a promenade, but also as an experimental lodging place within the gallery, so that visitors and guests could cross paths in the exhibition in a new way. The design of the pavilions within the gallery created a strong impact in the exhibition space, as many of the architectural projects on display were presented in 1:1 scale, with images of the projects printed in large format so that visitors could be immersed in an intense spatial experience. Thanks to the real dimensions of the models, the spectators visiting the exhibition were able to appreciate the spatial qualities of the projects and to experience the different spaces. In addition to the exhibition, visitors could also physically participate in the notion of co-dividuality, by living in the art gallery and staying overnight in bed capsules designed specifically for this experience. The art gallery also provided a kitchen, and a community shower was installed on the terrace.

The capsules were designed during an international design workshop organised and led by Laps Architecture, Politecnico of Milano, Kengo Kuma Lab of the University of Tokyo and the faculty of Architecture La Cambre Horta. This workshop took place prior to the exhibition and lasted a week. It allowed a participatory reflection on how to use the pavilion not only as a space for representation, but also for meetings and encounters. The capsules were scattered inside the art gallery among the artworks on display, allowing visitors to sleep in a unique environment. In this way, unexpected encounters took place between the visitors and the ephemeral residents in the art gallery, encouraging reflection on new ways of living together. The result was that the audience in the art gallery was made up of both visitors
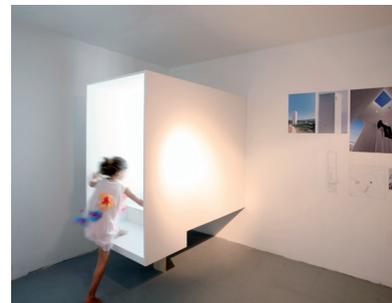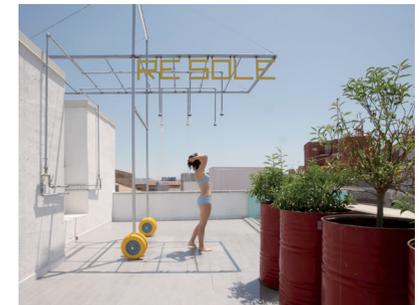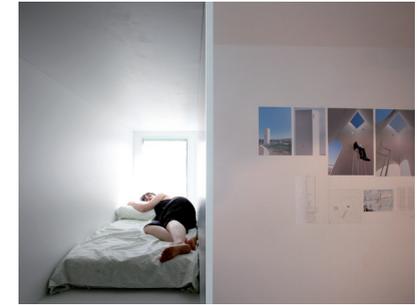
and guests staying overnight. Residents were asked to send in ideas and plans for open activities (for example cooking workshops, guided tours, seminars on different topics) with the aim of encouraging encounters. The temporary residents "paid" for their stay by acquiring the role of accelerator of social exchange. Being able to wake up in an art gallery as if it were a shared house, to cook with strangers and to experiment with various activities gave the exhibition/event the opportunity to activate experimental participatory practices and to propose new forms of transversal communities. The design of this installation/exhibition pavilion required the creation of new spaces. These spaces generated new experiences and interaction between individuals, rethinking programmatic expectations and pushing the boundaries between private space and public space. This project allowed programmatic freedom and its ephemeral nature opened up room for experimentation.

This project references the work of Thomas Hirschhorn, an artist whose work frequently addresses the political and cultural imbalances of the contemporary world by integrating instability and precariousness at the heart of his approach. In 2004, he gave life to the "Musée Précaire Albinet", a project carried out at the invitation of the Laboratoires d'Aubervilliers, which installed an ephemeral museum near a disadvantaged housing estate in the northern suburbs of Paris, where neighbours were invited to participate in the construction of the museum and related activities. Similar to Hirschhorn's work, our idea of rerouting the usual activities expected from spectators is a way to turn people into more than passive actors.

This action produces different results: spectators are no longer there "just for seeing", but also for "doing something"; their engagement affects the design of the exhibition space, which is conceived not only for consumers but also for use through different degrees of interaction.

999 Temporary Pavilion, Milan 2018

The exhibition "999 Questions on Contemporary Living", curated by Stefano Mirti, was held at the Milan Triennale in 2018 and was hailed by the press as one of the most innovative events at the Triennale in recent decades. Stefano Mirti came up with the idea to invite 100 co-curators who, in turn, invited others. The exhibition was essentially a collection of a thousand ideas about contemporary life. When Stefano Mirti asked us to join him, we inquired about the space available for our pavilion at the Triennale. When we learned that we were limited to five square metres, we proposed an additional exhibition space outside the Triennale premises. This off-site space was intended as a location to host guests and to experiment with the notion of post-individual architecture. We installed cameras linking the two spaces so that visitors to the Triennale could make contact with visitors at the off-site space. The combination of these two spaces thus produced a dynamic tension that made it possible to question spatial and relational issues through the link created between these two sites, one calling the other and vice versa. The small installation/pavilion within the Triennale space consisted of a podium made up of three steps, each 45 cm high, whose archetypal silhouette echoed that of a small house.

The concept is atypical in the sense that rather than exhibiting something (as one would expect at an exhibition), the design team decided to propose a pavilion designed to accommodate the visitors themselves, so that they could make it their own and sit, read, discuss or lie down in it. The pavilion is complemented by lecterns with books on them, offering visitors the opportunity to sit in a space where they can read each other stories. Video projections complete the installation. After three months at the Triennale Museum, the installation was transferred to the Politecnico di Milano (Polo Territoriale di Lecco), where it is now used by students as a relaxation space. This prototype of a shared-house minimum space explores new ways of using the public space of an exhibition in an informal way. The pavilion resulted in the design of a platform that welcomes visitors to sit or lie down while at the same time capturing the attention of passing visitors.

The Triennale's off-site pavilion was designed as a shared space, located at Via Ventura 3. The design was the result of research into new ways of living, working and meeting, characterising a type of space that we call co-dividual. It hosted different functions: two private spaces for sleeping (Japanese-inspired capsules that can be booked on sites like Airbnb), semi-private spaces where people could work in a calm environment, and open and semi-public spaces where people could gather for different kinds of creative production and playful activities, ranging from cooking together to coworking. The communal spaces were open to the people living in the neighbourhood, who could use the coworking space, the communal kitchen, and a meeting room to organise exhibitions and activities open to associative life.

These semi-public spaces facilitated activities related to being together and made it possible to experiment with new ergonomics and uses of public space within private space.

Through its duality, the project redefined the idea of the archetypal pavilion. By linking two distant spaces, we have shown that it is possible to connect two physical entities in different locations. At the main site, the significance of the exhibition has been inverted by welcoming visitors not to see an exhibition, but to experience a new way of making connections. In the Triennale's off-site space, we reversed this idea by opening the pavilion to local residents and strangers, and in doing so, we transformed an exhibition space into an opportunity to meet other people and establish a sense of community. In this sense, we proposed the idea of a 1:1 co-living space as an act of sharing through the use of a new typology, creating new types of links – not only material but also social. The message inherent in the creation of this project is that if the twentieth century celebrated individualism, we believe that the twenty-first century will be one that embraces sharing, or rather rediscovering community ties, building spaces designed to be together and places where new possibilities for encounters can be woven.

In metropolitan areas today, thousands of people share spaces in housing that was not originally designed for living together, for practical reasons such as saving on rent or common expenses. We believe that the experience of living together can be richer and more intense. Therefore, there is value in experimenting with a new housing type: the co-dividual house. The bonds that are created when sharing

999 Questions on Contemporary Living installation in Milan Triennale main site (above) and in the off-site space of Via Ventura in Lambrate (on next page) periphery of Milan. In the main site, the significance of the exhibition has been inverted by welcoming visitors not to see an exhibition, but to experience a new way of getting together.

999 SHARED HOUSE
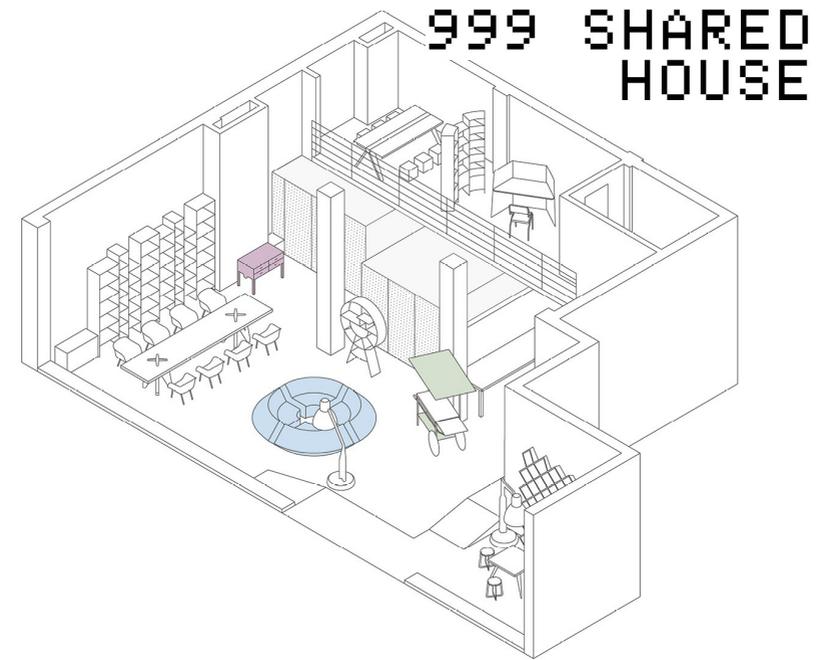
In the Triennale's off-space, we reversed this idea by opening the pavilion to local residents and strangers and, in doing so, we transformed an exhibition space into an opportunity to meet other people and establish a sense of community.

a flat with people outside the family nucleus are proving to be a way to forge lasting and meaningful connections. In general, shared flats are not designed for the users who occupy them, but rather for single-nucleus families, with a living room, kitchen and bedrooms. Thus, only 15–30% of the space is dedicated to shared activities.

The shared-house project intended to revise the proportion of private spaces in favour of common spaces. This opens up the domestic space to other people. In addition to experimenting with new practices of being together, it became possible to experience sharing between strangers, to facilitate unexpected encounters and fortuitous situations, to feed the collective subconscious and to pay tribute to the exceptional banality of idleness and everyday life.

In the case of the exhibition "999 Questions on Contemporary Living" the research problem is reflected in the proposal to question ways of inhabiting a place while putting oneself on display. Today, through social networks, people tend to share a large part of their personal lives in the digital space. What we proposed was to put forward this notion of virtual space in real space. The shared house in Via Ventura reflected this: it was a space of exposure of the everyday, in the sense that everyone who stayed there decided to expose themselves to others and be available to share this experience. A form of giving a new sense to life in real space with a critical refelction on new behaviours developed through the use of social media.

Both local residents and guests of the "999 Questions on

Contemporary Living" exhibition could benefit from these exhibition spaces. The rooms could be booked on Airbnb: by booking in this shared house, guests knew that they would be accommodated in a place open to the neighbourhood. The idea of creating this innovative typology is rooted in the criticism of the hotel model: places that consume space and energy while offering nothing in return to the city. Through this reflection, we imagined different degrees of porosity: spaces with different degrees of space accessibility such as individual, semi-individual and group type.

All the furniture in the shared house was designed to be flexible. The people who decide to stay there are aware that they are not simply spending a night in a neutral or impersonal place, but rather experiencing a place where they will participate in a proposal for social dynamisation. The walls of the bed capsules were made of two layers of insulation and perforated sheet metal that filters the light. The fronts of the capsules turn them into giant lanterns, a way of revisiting an object as an element that structures the space. The pattern designed on the fronts of the capsules contributed to creating a subtle and pleasant atmosphere. The shared house was designed to be used for a limited period of one year, during which various parameters related to comfort, ergonomics and the general functioning of this co-living architecture were measured and analysed for the purpose of a kind of post-occupancy catalogue. Our conclusion is that people are ready to share spaces designed to facilitate the mix of public activities within a private space. In 2022, the shared house is still active proving that there is room for this kind of experimentations.

Human Nature Pavilion at Palazzo Micciché
For the Italian Festival of Architecture, held in September 2020, we were involved in the Human Nature Pavilion: a garden planted inside Palazzo Micciché, a 19th century aristocratic building in the historical centre of the town of Favara in Sicily, which was partially restored for the occasion. With a selection of over a hundred plants of twenty varieties including ivy, tropical palms, ferns and various other species, we imagined a secular sanctuary focused on the relationship between humanity and nature. Human Forest is an experimental pavilion, an artifice that draws attention to the civic role of new citizen-gardeners, who, by caring for their immediate environment, establish a new way of inhabiting the city and the planet. The idea was to invade the decrepit spaces of Palazzo Micciché and revitalise them with living things instead of solely through the traditional means of renovation. This installation is a kind of trees sanctuary. It is thus a space of decompression, an environment that invites visitors to be in tune with the world around them.

The project was realized thanks to the know-how of a multidisciplinary group of architects (LAPS archtiecture and Analogique), botanists (Radice Pura), psychologists and musicians. The space hosts audio-visual shows, conferences and concerts. Initially conceived as a temporary space, the pavilion unfolds within the rooms of the Palazzo Micciché. The palace, destined for ruin, was transformed by this pavilion, which remained there after the end of the festival, thus reversing the initial destiny of the building by offering it a new life.

The idea of designing a forest came from the observation that Favara, like many other urban environments, does not have many places where one can be intensely lost, surrounded or enveloped by plants. Human Forest, thanks to this path offered to visitors, is imagined as a sanctuary, exposing the relationship between humanity and plants (the ratio of buildings to nature is questioned here) and it offers the possibility of abandoning oneself to one's own mental and intimate space, facilitated by an artificial nature that has appropriated the exhibition space. The public is granted entry in a limited and controlled way, to allow for the experience of a moment of contemporary urban spirituality.

Conclusions
In his writings, Cyril Stanley Smith (1975) argued that aesthetic selection is central to genetic and cultural evolution. Without aesthetic curiosity, human beings might not have survived or might have remained in the Stone Age. The MIT professor emeritus of materials science and metallurgist opined that most human inventions originated from

decorative applications: the wheel, for example, first appeared in decorative jewellery and children's toys. Smith surmised that innovation and discoveries are not born out of the pressure of need, but out of an aesthetic curiosity that can take precedence over function, especially when it comes to the design of temporary architecture: a perfect ground for experimentation in architecture.

The knowledge accumulated through these activities is not productive in economic terms, but it is beneficial for advancing our research in architectural design. We have learnt that integrating reusable materials in the first design phase is

With a selection of over a hundred plants and twenty varieties including ivy, tropical palms, ferns and various species, this installation is a secular sanctuary of the relationship between man and nature. Human Forest draws attention to the civic role of new citizen- gardeners, who by caring for their immediate environment establish a new way of inhabiting the city and the planet.

key for implementing the design correctly in the following phases. In this sense, the pavilion for the 2015 Milan Expo is exemplary in including some of the constraints common to temporary events. Working with a pregiven structure limited us in the design, but it has an impact on implementing circular economy linked to construction. After this project, we acquired a kind of reflex for thinking of potential second lives for building as a first design option and we started designing and building the so-called *filière sèche*.

Another result of our experimentaions concerns the concept of co-dividuality that has been built in the off-site pavilion of Milan Triennale. This experience led us to the publication of a book (*What is co-dividual Architecture?, Jovis, 2020*) and helped us to define a different proposal for shared life and co-living in our design. In particular, in 2022, our experience with spatial models of shared space, demonstrating the viability of co-dividual architecture, proved decisive in convincing a real estate company (after many attempts with several failures) to build a large scale innovative housing project. This project was shortlisted among twenty excellent projects by the French ministries of Housing and Research for its innovative answer to the problem of low-quality housing in France for people who are living alone (due to career paths, divorce, age or other reasons).

Our proposal received a seal of excellence because it addressed several problems associated with the nonlinear life paths of a significant portion of our society. This endorsement

reinforces our belief that while in the short term, this applied research is an investment of time, energy and cognitive load and we cannot be certain that it will achieve any results, it helps keep our research convergent to our practice. We develop our ideas based on information regarding specific topics which are not merely theoretical, but concrete.

In the present day, young people in many cities are faced with scarcity of resources and migrate from depressed areas that do not have adequate economic, material or intellectual resources. Nevertheless, the necessity of renovating abandoned cultural heritage sites raises serious questions about what to do with buildings that time turns into ruins.

These different projects taught us that once structural restoration is completed, the rest of the interventions can be achieved with limited budgets and by engaging local communities. All the projects realised at Farm Cultural Park, Human Forest in particular, are low cost, and they were the result of workshops with students or with local citizens. Bruno Munari's quote summarises what we have learned about urban regeneration: "for doing nice things we have at least two options: with a lot of money or with a lot of creativity." The latter is far more important than the former in contexts where funds are lacking.

The ephemerality of a pavilion allows us to approach architecture from a different angle, freed from some of its constraints, where experience becomes central as a new way of appreciating space in all the complexity of its components,

whether aesthetic, social or material. The pavilion is a tool for the architect that allows for an in-depth analysis of the practice by making a more comprehensive approach to the discipline possible. We feel that this tool keeps our practice open to research on programmatic and material aspects and helps us avoid conforming to time constraints and the burden of capitalistic and commercial architecture.

References
Geissbühler, D. (2014). Research by Design, in Book of Abstracts of Fourth International Conference on Architectural Research by Design (ArbD'14), Lisbon, Portugal
Paranandi, M., (2013). Making Ripples Rethinking Pedagogy in the Digital Age, in International Journal of Architectural Computing, 4 (11), 415-436.
Smith, C. (1981) A Search For Structure, Selected Essays on Science, Art and History, MIT Press
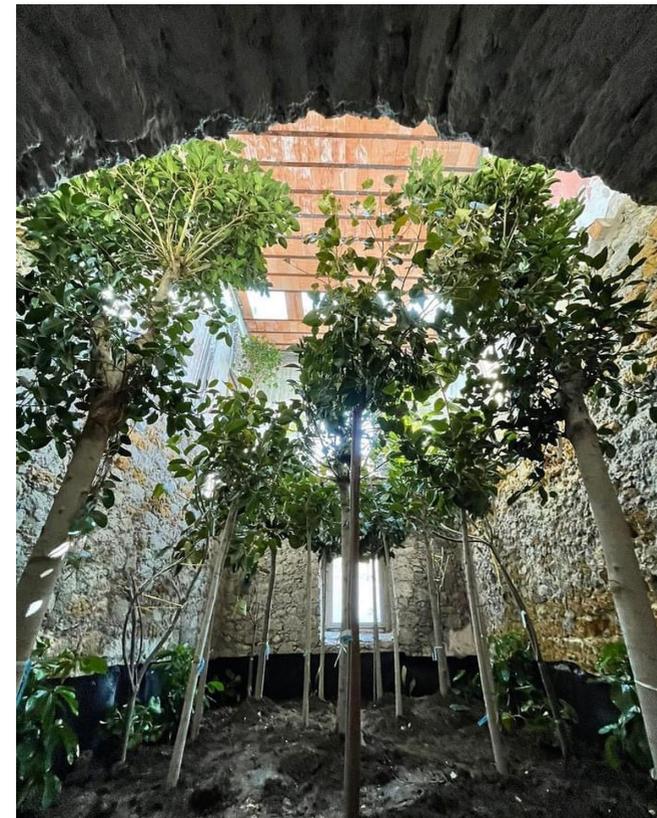
MAPS OF AN INHABITED TERRITORY

About *"Atlas de récits d'un terroir habité* - Walcourt"*

Virginie Pigeon

ULiège Faculty of Architecture (Belgium)

Pigeon-Ochej Paysage

*Atlas of stories of an inhabited territory

Introdution

This research project, which has been ongoing for three years, is about cartographic practices and how they convey worldviews. It was developed around a study of cartography as a tool for knowing and sharing an inhabited territory. It involves concrete experience of cartographic production in a situated territory based on commissions from public institutions, the Wallonia-Brussels Federation (WBI) and the Cultural Institute of Architecture (ICA), whose results were presented in a variety of "In practice" seminars.

Our research provides support for the hypothesis that the multiple graphic modalities deployed in cartography in different disciplines, as is more generally the case in constructing scientific images, underlie worldviews connected to different scientific and philosophical paradigms. In our view, the way in which we understand and use these graphic regimes, just like the way in which we conceive the inhabited territory and give it expression, have a political impact that could offer prospects for the possible constitution of something in common. This would also have direct implications for the way in which we conceive the expertise involved in design projects.

In the 1990s, the geographer Ola Söderström noted how city maps, which have been graphically frozen for decades, prioritize things that are visible and material at the expense of what is particular and immaterial (Söderström in Cattoor and Perkins, 2014). According to him, such inertia conditions design practices. This is perhaps what limits them too often to problem-solving and management of functional matters.

To understand the inhabited territory, to hear it, to traverse it, to feel it from the point of view of the landscape designer, but also from that of its adherents, of its citizens, in terms of their expertise; delicately to describe it by bringing out the fabric of relations that comprise it, making them exist, is also to take care of it, to maintain it and to make this attention available in common. The emergence of something in common could happen by way of cartographic practices, and cartographic practices are rich as an attentive activity.

Recent recognition of the role of cartography in consolidating power, its participation in the history of colonialism and its ability to manipulate readers has shaken up cartography as a discipline. "Counter-cartography" or "re-cartography"[1] have given themselves the mission of retaking possession of cartographic practices that have been appropriated by the experts. Historically, the advent of the printing press gives rise to the proliferation of atlases, whose dissemination functions like the propagation of a truth: that of showing the world by communicating new knowledge. This dissemination is accompanied by the claiming of an enormous power: the power to say how the world is and how it should be seen. These geographic representations gradually come to inundate the school curriculum. The atlas becomes a mode of inscribing each reader as citizen of a nation or of a continent, and we learn to think that a world cut up into states and into different forms of belonging is the natural order of things (Kollektiv Orangotango+, 2018).

1. The Anglo-Saxon literature speaks of Counter-mapping (Peluso, 1995) or Counter Cartographies (Counter Cartographies Collective et al., 2012), as well as Re-cartographies (Cattoor and Perkins, 2014).

Nonetheless, the dominant Western-centric view of modern official maps is far from having the neutrality and objectivity proclaimed by its authors. Counter-cartography maintains that maps cannot be reality: They articulate temporary states, which cannot but be unstable, since they are the product of social relations, discourses and practices. As Rekacewicz (2006) has suggested, "in the relationship between facts and interpretations, cartographers are both witnesses and actors, creating or even inventing their worlds and thus gradually arriving at this subtle mix, the map, between the world as it is and the world as they want it to be."

Critical geography deconstructs the mechanisms in play, led by the famous texts by John Brian Harley, "Deconstructing the map" (1989) and Denis Wood, "The power of maps" (1992). The community is calling for new maps. Our analysis of contemporary counter-cartographies suggests that we still need to explore cartographic practices that combine both the sophistication of academic landscape descriptions and the commitment of critical geography and activist collectives to showing relationships, power relations, injustice and forms of collaboration among the inhabitants of the territorial space: the map would thus be a tool that is receptive to the controversy surrounding spatial issues and that could potentially launch the project in a different way.

It is in this spirit that we have carried out cartographic experiments in the framework of this research, in order to explore possible graphic regimes of a map as space of negotiation. The created maps are the graphic outcome of a field study organized around three axes: the walk with residents, the meeting with experts, and drawing.
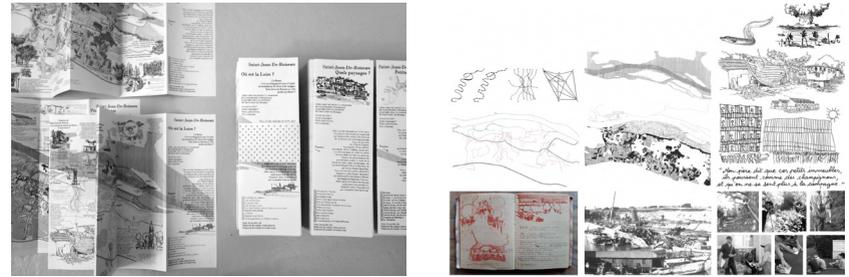
The aim of the "Architects and Illustrators" residency organized by WBA (Belgium) and the Maison de l'Architecture des Pays de la Loire (France) is to examine peri-urbanity and the role of contemporary architecture in the densification and reinvention of these territories. In this context, the proposed multidisciplinary team (Virginie Pigeon, an architect and landscape designer, Anne Ledroit, an architect, and Eric Valette, a visual artist) presents reflections, using maps, on the entity of Saint-Jean-de-Boiseau: a town on the outskirts of Nantes. The initial aim is to represent this place by giving expression to the point of view of the inhabitants: in particular, as concerns the rapid change that their rural region is undergoing due to the pressure on the real estate market on the outskirts of the metropolis.

The study brings out practices, customs and emotions that are anchored in specific territories : in short, all things that official cartography does not show and that are, nonetheless, constitutive of our relationships to space, of our landscapes. It also brings out stances, tensions, questions, and those relationships between fragilities and attachments whose mechanisms and affects the map can reveal.

The first experiment (Saint-Jean-de-Boiseau, 2020) makes apparent the relationships between the map and what we would have in common in our subsistence landscapes[2] : Firstly, maps allow us to see the commons – the landscape – which is revealed and interpreted in a representation that is specific to a situated terrain. Then maps take part in the constitution of something in common: the artefact co-constructs the inhabitants and brings them together. This new cultural object belongs only to them and unites them. Finally, the map can open a space for nuanced and inclusive debate about the future of the site.

2. Charbonnier P. (2019). Abondance et liberté. France: La découverte. In Latour B. (2020). Consortium Ou atterrir ? présentation de la démarche par Bruno Latour. [online video].

By regarding what we have in common as an assemblage open to controversy, the map unites the conditions for it, establishing a framework that it would seem has urgently to be made to exist: a framework that is receptive to debate as the soil for possible negotiations.
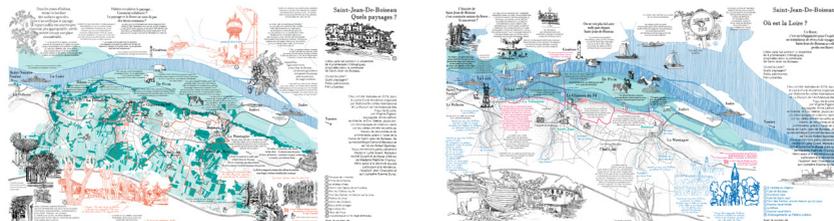
Saint Jean-de-Boiseau maps, Virginie Pigeon, Anne Ledroit, Eric Valette, 2020

The second cartographic experiment (Walcourt, 2021) builds on these findings. Its aim is to augment the heterogeneity of the networks of witnesses and disciplinary fields involved, to specify the mechanisms for exploring and raising questions, and to multiply the potential graphic regimes – the postulate being that what is multiple and hybrid encourages the sharing of perspectives, potential debate and an emergent attention to the political field.

The objectives are therefore:

• firstly, to specify the modalities of the constitution of networks of witness-actors of the experiment (*the study*) and to find better ways of making them exist in the map. On the basis of a re-reading of Félix Guattari's ecosophy (Prignot, 2010), our approach tries to grasp the mechanisms of the "regime of proximity" (Thévenot in Sébastien, 2016) that should make it possible to mobilise things and beings and to see their involvements materialised. The theory of the network actor (Latour, 1991), the ecology of practices advocated

by Isabelle Stengers (1997), and the concept of care (Puig de la Bellacasa, 2017) round out the reflections.

• secondly, to stabilise the topics used for gathering the stories and organising a possible series of maps (*the montage*) (Pigeon, 2021): the study is constructed on the basis of two notions, fragilities and attachments, and then brings out a series of particular sets of relationships to the territory that constitute the themes of the maps.

• Finally, graphically speaking, the initial intuition is that the hybridity of intertwining graphic regimes should allow us to avoid the smoothing that is associated with an overarching and objectifying point of view and should strengthen the capacity of the map as tool to propose a common, shared space. The hybridity of the drawing opens up possibilities of a co-construction of the map as founding practice of a community. In order to avoid smoothing and to bring out the interactions between spaces and things, the significance of the graphic choices made thus comes into play in the mapping process: choices that are constructed via *multiple backgrounds and times*, via *hybrid unfinished collections*, via *borrowed words*, and via *experiential itineraries*. This division does not in any way correspond to a chronological order of constructing the map nor to impermeable categories. It is a structure that can be reconfigured, a narrative thread like any other that emerges in the course of the cartographic experience, during which the elements have been put together and taken apart many times.

Rereading them in the light of a collection of significant images in the history of representations allows us to make them conscious, to make implicit choices explicit, and to link them to other practices. This is the main purpose of the present article.
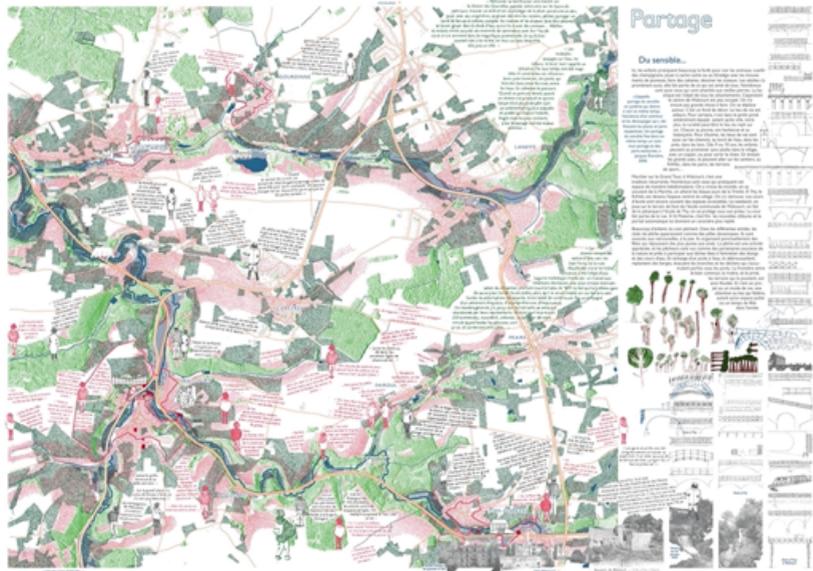
The cartography experiment in Walcourt is led by Virginie Pigeon as part of the "Desired spaces" project, which is financially supported by the Wallonia-Brussels Cultural Institute of Architecture in partnership with Walcourt Cultural Centre and the University of Liège. L'Atlas de récits d'un territoire habité - Walcourt (Atlas of stories on the territory of Walcourt) is published in July 2021. Walcourt is a rural township on the outskirts of Charleroi.
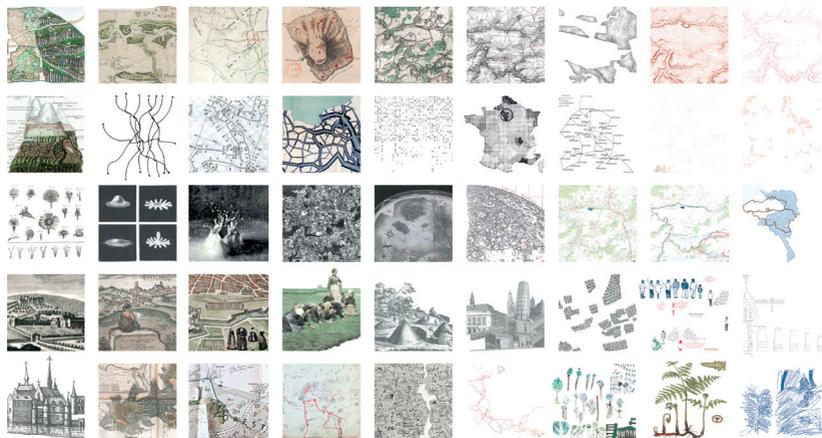

Multiple graphic regimes questioned during cartographic research in Wacourt.

Mapping

Multiple backgrounds and times

A map is, above all "a graphic representation of spatial relationships between places, objects, phenomena" (Dumasy-Rabineau et al. [eds.], 2019). In this sense, it does not entail precise modalities of drawing or of spatial or semiotic projection; the multiplicity of graphic productions in time and space makes this clear.

Artists are undoubtedly the first to have taken up the contemporary issues raised by critical geography, even before they explicitly emerged. Think of Guy Debord, Robert Smithson, Öyvind Fahlström or Mark Lombardi. Each of them calls into question the metric background imposed by modern cartography and puts forward an interpretation of it in which the persistence of a few conventions allows us to grasp that we are indeed still confronting a cartographic object. Counter-cartography aims to question the order of the world and graphic codes as political practice. It gives itself the mission of producing new imaginaries and showing the dominant structures in a critical light. It thus goes into battle to defend indigenous territories, shared spaces, endangered habitats; it gives shape to practices of resistance and takes up a cause.
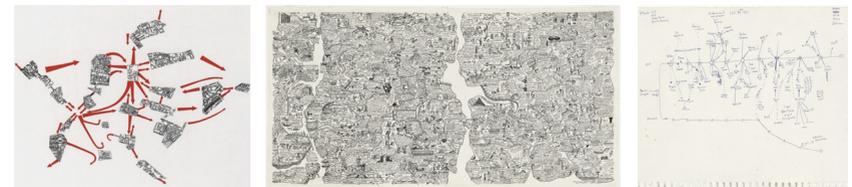
The naked city, G. Debord 1957, Sketch for world map, O. Fahlström 1972, IOS to mid 1970, M. Lombardi 1994.

It is the entire cartographic process that entails a form of political engagement in Walcourt, and it is not the sole purpose of the maps to be critical or to dismantle mechanisms of domination. They aim to be, above all, a space of negotiation that reveals multiple ways of perceiving reality. The physical territorial structure of Walcourt may seem complex, and discussions with residents confirm how difficult it is, in general, to describe the organization of the territory simply or to evoke the routes that allow the different places to be connected. It thus seemed important for the maps to allow users to locate where they are and at least partly to respect the normal cartographic conventions, which are regarded as potentially hegemonic or Euro-anthropo-centric, but that offer easy readability based on established usage. Respecting dimensional scales and positioning the north at the top were thus obvious choices.

Extensive work on decomposing layers discovered in the available maps for this territory allows us to undertake a reappropriation and a reassembly that varies according to needs.

To be as close as possible to sensible experience, however, certain

Likewise, the idea was not to use a standardizing neutral background, like those of France's official IGN geographical institute, which make all Western regions appear similar and in which the road network and administrative divisions offer the main interpretive grid, thus instrumentalizing the territory. On the contrary, to avoid this homogenization, it would be tempting to produce "landscape painting" maps, giving the terrain an image of an abundance in which we would like to plunge and whose every nook and cranny we would like to explore: a spectacular image that pays tribute to the scenery it presents. But the aim is also to dissect and analyse an underlying structure and landscape systems, and this is what our specific forms of expertise allow us to do, by accepting the blank areas on the map, by helping viewers to feel certain layers that are particularly evocative vis-à-vis certain topics, by selecting what to show. IGN map of Walcourt, Wanderers in the Wliderness, E. Wallis 1844, Traité du Lavis des plan, planche VII, L-N. de Lespinasse 1801.

of these layers are provided with an evocative material, a certain depth. The forests and prairies have a texture, as if the vegetation was being bent by the wind. The topography is reinforced by the areas of shadow, giving it a certain breadth. Some phenomena, such as orchards or quarries, take on an augmented scale, thus accentuating their visual presence. Other, underground and unsuspected, elements have reached the surface.

Time enters subtly into the maps via the superimposition of layers taken from old maps, which once upon a time were but are no more, via the expression of phenomena of growth or of transformation or via extinctions, like the past hold of larger forest areas, of orchards, of waterways or railroad lines, bearing witness to dynamics that are unknown to most of the inhabitants (Pigeon 2021). In fact, the layers reflect different graphic regimes: sometime sensible, sometimes more mechanical, depending on their content, which bring out the multiple facets of graphic traditions in the construction of images of knowledge.
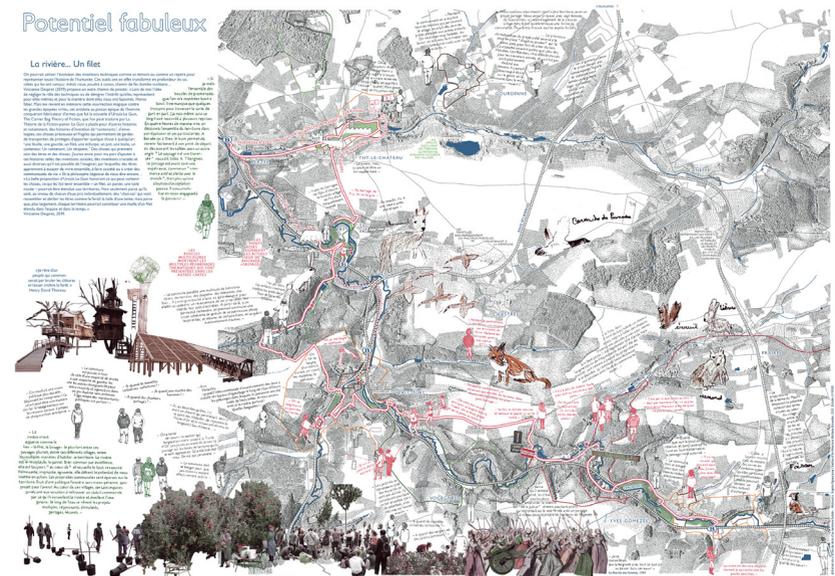
These drawings, which were often commissioned to give legal definition to issues of ownership and entitlement, offer a virtual experience of the place that is negotiated with the protagonists. They combine rudimentary perspective with projection of elevation and provide textures, atmospheres, a typicality, by using a sensible, empirical and experimental method. Taken from Dumasy-Rabineau J. et al. [eds.], 2019.

In our Western societies, graphic traditions of producing territorial maps are marked by modifications in our relationship to the world: notably with respect to the advent of modernity and its tools of measurement. In the High Middle Ages, cartography practices were the responsibility of artists, who were the possessors of a certain figurative know-how, which was the basis upon which the first cartographic styles and traditions were elaborated. In France, topographic maps were to be found on a scale related to observation in situ. Via these maps, artists depicted the state of a territory with which they were intimately familiar, "reducing the topography by drawing it" (Dumasy-Rabineau J. et al. [eds.], 2019, p. 12).

With the advent of the Enlightenment, practices of scientific representation evolve into a collaboration between the artist who "illustrates" and the enlightened savant, who tries to introduce order into the diversity and the complexity of the world and to reach the truth via the production of simplified, purified and idealized images of universal nature. It is regularity that, little by little, serves to organize the chaos of the world.

Science attempts to tame the diversity of natural forms, which has been made still greater by the exploration of new territories, by graphically formulating types: "the type of a class that is able to represent all the individual members of the class without however incarnating any of them (Daston L., Galison P., 2012, p.424). The savants meticulously selected what was to be represented, imbibing nature without being slave to its forms and accepting the subjective element of their work. "Art and science converged in judgments in which truth and beauty were closely intertwined" (Daston and Galison, 2012, p.97).

In this period, there is new interest in the terrain in light of advancements in astronomy and mathematics: in the earthly pedestal as an object of scientific inquiry and how to represent it on a different scale and faithfully to reproduce it. Cartography thus gradually focuses on how to draw the dimensions and limits of the territory precisely, on a topographical survey of it by way of triangulation, as the maps of Cassini or Ferraris show thus.
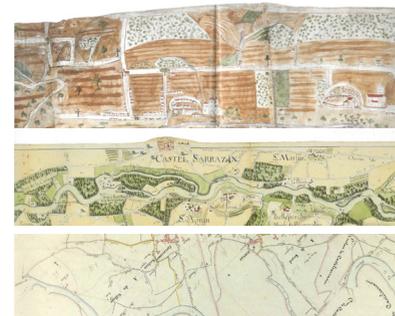
Radically different spatial conceptions are in play in these three maps of la Garonne: the map by Jean Lemesque from 1525, the one by Hippolyte Matis from 1719, and the one from the Napoleonic cadastre from 1832. The first, which was commissioned in a judicial context, was submitted to twelve witnesses who were supposed to come to agreement on the accuracy of the space represented. Truth was based on consensus more than on measurement. There is no constant scale; the main areas are enlarged, but the routes are projected vertically, in order to be able to compare distances.

In the second, which was commissioned to evaluate the navigability of the river, the point of view becomes frankly zenithal: the scale is noted and distances are respected, but since the topography is squashed by the projection, the author tries to create depth by including certain perspectival elements according to the same point-of-view principle as the previous map. One century later, when Napoleon normalizes the status of individuals and their property by way of the civil code, he undertakes the creation of a land registry or cadastre in which none of the features of the landscape are emphasized anymore. "The zenithal projection related to the austerity of graphic conventions shows that it is a specialized document in which recognition of the landscape by the general public is not a priority". (Dumasy-Rabineau J. et al. (eds.), 2019, p. 216)

Cartographic productions thus go from being a basis for collective negotiations, which help to reach consensus on the description of the territory and different issues related to it, to being a tool that is monopolized by scientific experts who establish a codification that is exclusively addressed to and understood by other scientists and experts, without having a connection to the sensible qualities of the land anymore. The aim is accuracy and exact measurements.

The notion of objectivity that we use today comes into being in the 19th century in response to a dual fear: fear of an excessive reduction of the variability of nature due to simplification or idealization and fear of too strong of an influence of the savant's personal considerations on the production of scientific truths. Instruments for measuring and printing become the guarantors of this objectivity, encouraging the thinker to disappear into the production of knowledge related to his or her object of research.
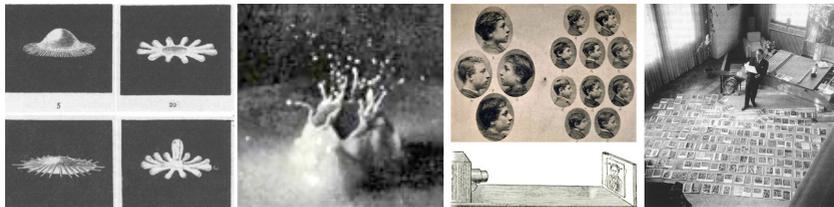
In Objectivity, Lorraine Daston and Peter Galison (2012) recount this key moment. In 1875, the British physicist Arthur Worthington was trying to develop a graphic method for representing how fluids flow: He was producing pictures of drops in free fall, decomposed step by step, and drawn in perfect symmetry. In 1894, when technological progress makes it possible to capture the same decomposition into stages of a drop falling by using photography, the ideal of symmetrical, purified, simplified drawing will collapse, with irregularity taking control of the photographic images. This leads Worthington to wonder how he could have been blinded for so long by the quest for an absent perfection. From now on, he had to try to obtain "objective" images, which are complex and individual, regarding them as a reflection of reality, as opposed to the perfect and imaginary fluids he had been describing for 20 years. (Daston L. and Galison P., 2012, p.11-16)

The new possibilities created by mathematics and instruments of mechanical measurement also allow these risks of subjectivity to be countered in cartography, giving rise to more abstract representations.

It could be thought that these abstractions potentially disconnect us from the real: that they are "bifurcations". This is the term that contemporary pragmatic philosophers[4] borrow from Alfred North Whitehead to describe the modern reduction of the world to just its "primary", objectifiable (measured, geo-localized, etc.) qualities and the tendency to forget its secondary – phenomenological, experiential, sensible – qualities.

Photography replaces drawing in the sciences at the beginning of the 20th century and highlights, thanks to the automation of the process of representation, the specific and individual and the multiple singularities of natural objects, in contrast to the ideal types of the Enlightenment. Starting from the notion of objectivity, scientific thought evolves in two different directions: towards structural objectivity, which, to go even further, aims to dispense with images altogether, since they are regarded as too subjective, and to highlight the logical relationships among natural objects by way of a structuralist theory whose goal is universality; and towards what will be called "trained judgment", a way in which the expert selects and highlights certain information via representation, in order to make an additional contribution to acquired knowledge.

With the advent of modernity, cartography, via the infinite amount of quantitative data produced about the territory, goes from being a tool for describing the terrain to being a tool for mediating and communicating data (Plantin, 2014).

4. Among others Latour B., 2017. Où atterrir ? Comment s'orienter en politique. France: La Découverte; Stengers I., 2019. Résister au désastre. Coll. Dialogue. France: Wildproject ; Hache E., 2019. Ce à quoi nous tenons. Propositions pour une écologie pragmatique. France: La découverte.

The production of maps is marked by structural objectivity, giving rise to conventional systems whose aim is to facilitate information-sharing. The appearance of the remarkable Minard system, which relates quantities and flows, as well as the birth of Bertin's graphic semiology, which notably links maps and statistics, can certainly be related to this.

The use of aviation makes aerial photography possible in the 20th century. The perfect point of view is thus attained, calling into question the role of the discipline of cartography as a realistic and objective description of a territory. IGN cartography puts forward a semiology that, all at once, standardizes information and interprets and explains certain layers of information, as we saw previously, via an underlying anthropo-economo-centric and Western-centric reading. The modes of applying this trained judgment, their appropriation by experts and the underlying reasons for the choice of certain modalities of representing the earth are subjects of debate. Critical cartography takes hold of this debate. Pneumatic postal network, Paul Kortz, 1905; binary language; Flux, Charles-Joseph Minard, 1895; Graphic Semiology, Jacques Beryin, 1967; IGN, 2020.
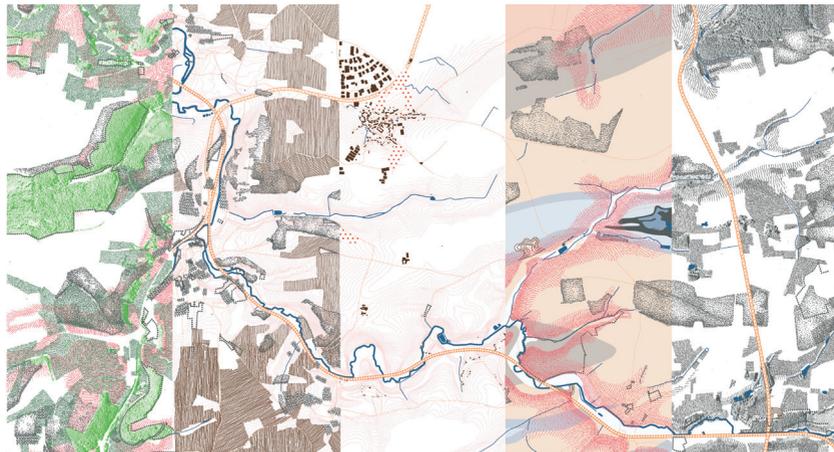
Virginie Pigeon, taken from the Atlas de récits d'un territoire habité - Walcourt, 2021. Starting from operations of drawing and redrawing, of cutting and reassembling, the cartographic research experience brings out different modes of conceiving the map background: from the most conventional to the most sensory. It approximates the hybridity of a geographical language that is sometimes close to direct experience, sometimes mediation, thus uncovering layers of information as a function of the things and relationships that become apparent in the course of the investigation.

**Hybrid and unfinished collections: living and inanimate things**

The field study is the soil for the co-construction of the map. The sessions are accompanied by graphic exercises carried out by each individual and that allow participants to move from the universe of practice to the universe of representations. So many things become apparent by way of language and drawing[5] : things that are loved or unloved, fragile or tenacious, things that no one feel concerned by. Such things are agents of transformation of the territory and put the witnesses into political positions: preservation, protection, colonization, exclusion, privatisation, associations, sharing, communalisation or division... They trigger the adoption of stances, of which the most extreme would be those of invaders or of the abused, but they also make apparent those whose voices are not being expressed.

Virginie Pigeon, taken from the Atlas de récits d'un territoire habité - Walcourt, 2021. The representation in the map of fragile, loved and emotionally-invested territorial things related to certain specific spaces, often with a private status in a landscape as common good, could get individuals involved on a common terrain - that of politics; with the process producing social capital as a side effect.

5. Bruno Latour speaks of "things" in his article "Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern." (2004) Critical Inquiry 30, n°2: pp. 225 – 248. I use each, each being, each thing in the same sense here, the term "thing" encompassing both living beings and inanimate things, as Emilie Hache (2019, p. 22) suggests. It is no longer a matter of taking a glacier for a (simple) reservoir, a car for a (vulgar) thing, a cat for a beast, not only so as not to consider them only as means for themselves, but also for humans, because the latter are also affected by how we address non-humans.

The hypothesis is that, by revealing antagonisms, the communalizing of these attachments in the space of the map makes the actors emulate one another and gives rise to "a collective experience of co-production of the general interest" (Sébastien, 2016, p.35) : the atlas could be the space for this dialogue.
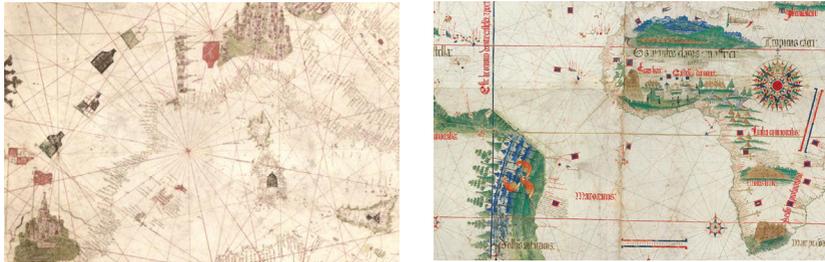
Many historical maps combine heterogeneous graphic modalities and include illustrative inserts: in Gabriel de Vallseca's nautical map of the Mediterranean and the Black Sea from 1447, the cities are represented in elevation and enlarged in relation to the space they take up on the scale. They are situated without any privileged orientation, placed on certain maritime trajectories, thus requiring the viewer constantly to turn the map to look at them. In Cantino's 1502 planisphere, the orientation of the landscape scenery is variable, thus underscoring the geographical line as the limit of what is known – and measured.

Such agents are thus included in maps by way of heterogeneous graphic modalities, which try to bear witness to the process of information gathering (drawings by multiple authors) and of co-construction of the story: animals, cars, roads, architectural heritage, plant settlements, bridges, buildings, practices and installations, both current and vanished, share the space of the maps, are in sketches, in relief, in photographic collage, in excerpts from engravings, in oblique projection or in pictograms. It is hard to fight against the reflex to graphically smooth these drawings from a variety of sources, against the desire to make a fixed portrait out of them. Maps, in any case, aim to be more like a table (Didi-Huberman, 2017) on which things are gathered according to a provisional assembly, which always remains
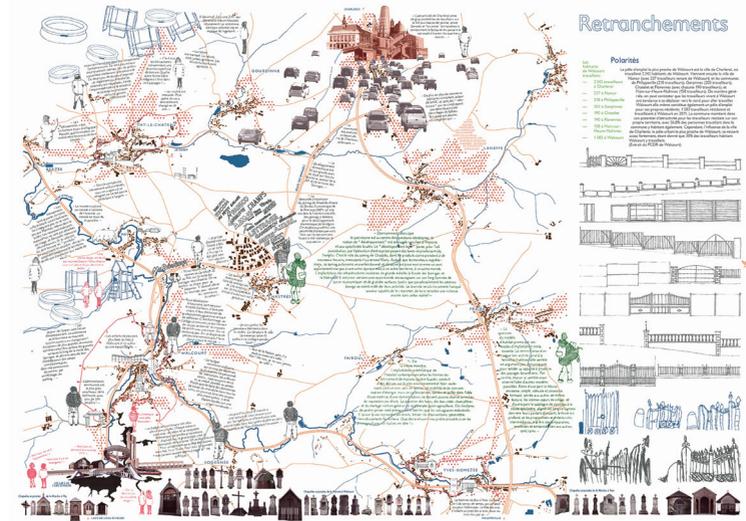
to be finished, is ready to be disassembled or reassembled in a different way, a sketch that is always a work-in-progress and in which dualisms are not fixed, typologies are precarious and exceptions are celebrated. Think of the figures of Donna Haraway, the philosopher of the hybrid and the impure, which circumvent dichotomies (outside/inside, pure/impure, nature/culture, etc.) and embrace their ambiguities. Haraway's thought is not constructed, according to a structured and panoptical view, on the logics of origin, foundation or classification. "Haraway is tireless and unsurpassed in flushing out the refuges of the divine perspective (also referred to as the "Star Wars perspective"): that position from which one claims to encompass everything and that could be described ... as an impregnable stronghold and as an empty chair where no one is ever in a position to sit." (Hoquet, 2010, p. 153) The Walcourt maps try to avoid ideologies, an overarching point of view, definitive representations, fixity. To show contradictions, to go to heterogeneous territories, where there is not any principle of organization anymore, but only superimposed, intertwining stories. (Pigeon, 2021)
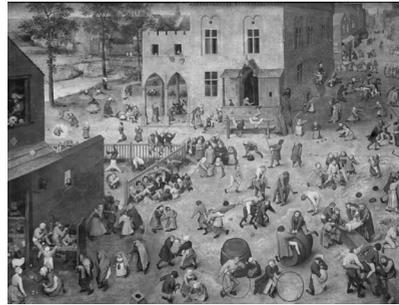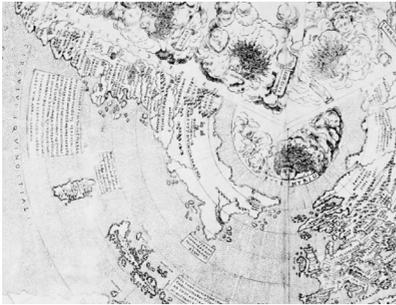
The witnesses are spread around the space of Walcourt maps, and they connect the reader and the terrain. Such little characters creating a link between represented object and reading subject also appear in historical maps: notably, the little angels whose breath indicates the direction of the wind in certain Renaissance maps. In Contarini's 1506 map, one of the cherubs looks the reader in the eyes, as if his or her reflection, whereas the others are facing the earth, part of the image but looking at the territory like us. (Jacob, 1992) The Walcourt maps allude to this in their own way. They are constructed in such as to avoid both the surreal and inaccessible overarching point of view and the excessively fixed perspectival framing of a window that tells us where and towards what to look. They try to suggest multiple points of view, such as those that can be sensed in classical Dutch painting: like the paintings of Brueghel the Elder for example, in which the canvas resembles "an unframed flat surface on which the world is inscribed" (Alpers in Jacob p. 152), an open space without any precise point of observation. As we see in looking at the angels in Contarini's map and from the multiple characters inscribed in the space of the Walcourt maps, we can imagine that points of view are partial and complementary and that an attentive view of the world requires assembly and a sharing of perspectives (Alloa, 2020). Everyone contributes what they know, knowledge is no longer transmitted by the expert but rather co-constructed in the map.


It is also in this way that the position of the author is assumed: a character that finds a place sometimes in the geographical space and sometimes on the edges of it, who comments on the space but also on the map in the process of being constructed, who embraces her involvement in this construction in the same way as the cartographers once liked to represent themselves in their engraving, along with their instruments for drawing and measurement. City of Cabeças, Joris Hoefnagel, 1565.

Landscape things are associated with their relative geographical position, but also find place around the map, like so many collections alluding to encyclopaedic knowledge that allows for an infinite number of combinations. These beginnings of

collections, which are intentionally unfinished, show certain recurring local practices in their creative diversity: a multitude of bridges, from the simplest to the most sophisticated, evoke the link between the banks and the crossing of rivers and routes; assemblages of expressive fences and gates tell about the need to be at home, to protect and distinguish oneself; the innumerable restored shrines and chapels raise the question of the strength of the relationship between walking and spirituality... Such heterogeneous ensembles let us see the singularities as a catalogue of curiosities rather than as a list governed by a universal classification or an intrinsic order.

"The image is a mnemonic matrix that allows for the deployment of a culture of curiosity, of the surprising fact, of what is unique, and, at the same time, to generate pathos and emotions." (Jacob, 1992, p. 221)

Historically, cartographic imagery has regularly resembled the cabinets of curiosity of the classical age: presenting novelties, showing in still unknown spaces a kind of Noah's ark to the glory of a God who gave us this abundant and strange, elusive and indomitable nature (Jacob, 1995). On the other hand, we also find on the edges, in other contexts, the foundations of the taxonomic project of classification: When naturalists were at the same time travellers, geographers and physicists, as the career trajectories of Alexander Von Humboldt or Carl Von Linné show, the map is a means of communication and of memory, in which different forms of knowledge are gathered according to a rigorous and hierarchical principle of organisation. Where Goethe swore only by the sensibility of genius, they try to bring rigor and order into the observation of living things, while combining multiple modalities of representation.
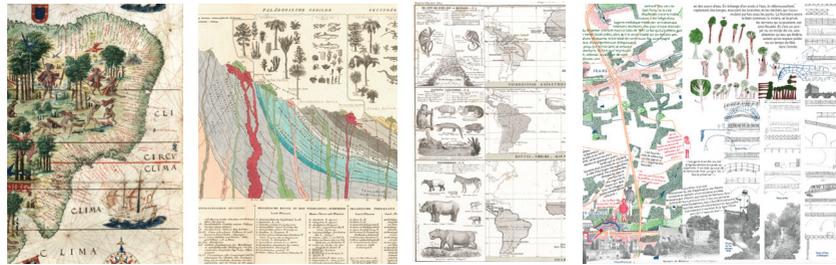
"One of the evolutionary paths of cartography will involve disciplining this iconography of the particular and the specific, in order to transform it into a code of uniform symbolization, eliminating or repressing the vertiginousness of the unique, in order to allow an organised knowledge of a certain level of generalisation to emerge." (Jacob, 1992 p.221). This is undoubtedly how we got from disciplinisation to confiscation by experts.

Atlas Miller, 1519 by Lopo Homem, Pedro Reinel, Jorge Reinel and Antonio de Holanda, (bnf.fr); Comparative Chart of World Mountains and Rivers, 1823, and Diagram of a cross-section of the earth's crust, 1841, taken from Physikalischer Atlas by Heinrich Berghaus; and Virginie Pigeon, taken from the Atlas de récits d'un territoire habité - Walcourt, 2021.

Borrowed words

"The process of mimesis ends where writing begins, and toponymy is just a step towards other forms of commentary or enunciative intrusions. The cartographer creates a world: not the natural world, but a cultural world, which is occupied by one language among other possible languages that bears witness to an organized space, punctuated with significant and constructed places ..." (Jacob, 1995, p.269)

The field studies have revealed so many unsuspected things, and the words used to bring them out were, for the most part, simple, strong, powerful. The question of having recourse to language in a map thus arose. Was the drawing on its own enough, by way of mimesis and description, to make written language superfluous? The text occupies the void. The graphic work consists in manipulating the placement and shape of the blocks to reinforce their structuring effect. They follow the course of the valleys, become denser around built-up hubs, underscore and reinforce the elevations and the infrastructures. The writings placed on the map give greater vibrancy to certain forms and certain connections.
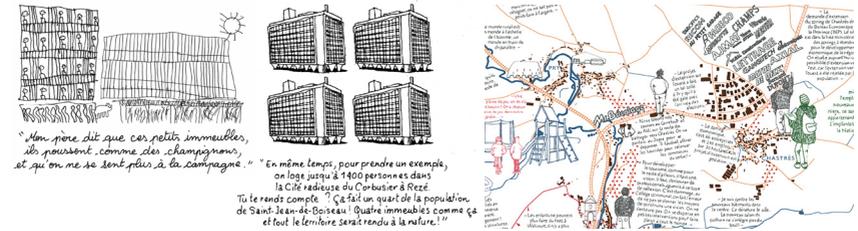
We again opted for hybridity, allowing for the combination of different modalities of representation and the inclusion of text as a complementary means of sharing. By way of careful winnowing amidst the transcribed mass of collected testimony, key phrases were selected and grouped into discussions around topics, related to things in question in the cartographic space. A text like an archipelago reconstructs a debate, it breaks up the unitary page but makes the map autonomous, the comments being included in the product, their origin being embraced and explained. Writing tries to amplify drawing, in order to obtain another level of interpretation and meaning for it. The use of colour codes intentionally did not aim to identify each group of differentiated actors nor to categorize them. The idea was not to reinforce dualisms or polarities. Only the children's comments were distinguished by the attribution of a colour (pink), calling attention to their insight, whereas the comments as author, who is both immersed and involved in the process and the context, but is able to step back from them a bit, also have a specific colour (green), which is associated with a drawn character whose interventions most often consist in making connections between the different points of view, of bringing out assemblages and interdependencies in the form of an open question.

Words themselves and their usage are also an opportunity to rethink the world around us. Using a given vocabulary is never an innocent matter. To make certain terms – such as collaboration, partnership, non-human, interdependencies or social inventions – exist in space also serves as a lever for rethinking how we conceive our actions.

Experiential itineraries

A substantial amount of time is devoted during our research to making the connection between sensible experience and political engagement, based on the hypothesis, which is notably supported by Catherine Grout's (2012) approach, that the physical experience of the landscape involves us in a common mode. (Pigeon 2021).

Moreover, this is why the interviews with the different witnesses who participated in the field study were conducted while walking through the Walcourt landscape, following an itinerary suggested by the inhabitant we met.
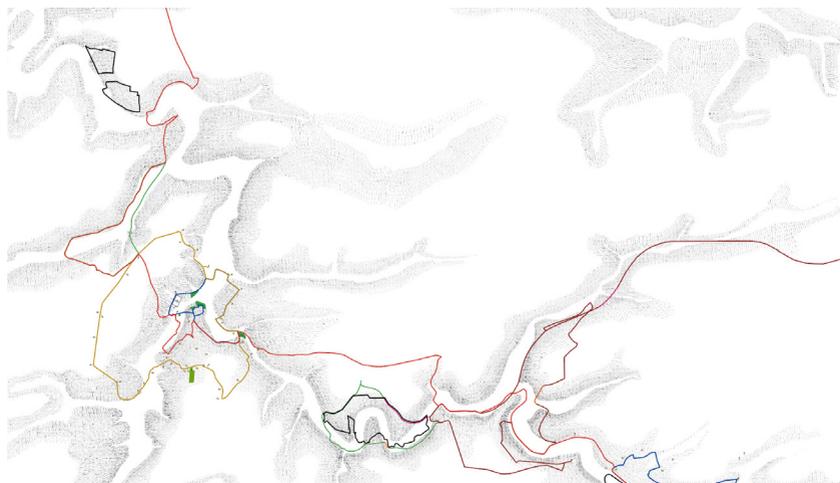
Maps are a tool that in a certain way separate us from the concrete experience of the terrain, offering us the possibility of discovering the territory via this mediation, this representation. In order to continue to encourage experience as a necessity, each map thus proposes a walking route that invites the participants to discover or rediscover the territory in situ, to physically encounter the things comprising these assemblages, their traces in the real space, these markers that allows us to make the territory itself a map to be read. Each map presents a thematic itinerary that can immerse the interested reader in a different layer of the landscape via the path taken by the other. The size of the maps is conceived, moreover, to be able to take them with you on the walk.

A dual voyage is thus proposed: the physical one of the suggested routes, getting close to the landscape by following an itinerary, a circuit that is practiced and commented on by the other; and the intellectual one, of discovering the words and stories of each participant, which invite you to reconsider your own point of view, to grasp the limits and the levers for sharing other perspectives, which is perhaps what Jacques Rancière is describing in "The Distribution of the Sensible": "I call the distribution of the sensible the system of self-evident facts of sense perception that simultaneously discloses the existence of something in common and the delimitations that define the respective parts and positions within it. A distribution of the sensible therefore establishes at one and the same time something common that is shared and exclusive parts." (Rancière, 2004, p. 12.)

Conclusion, continuations

The cartographic experiment carried out in Walcourt confirms the plurality of graphic regimes that can be called upon and their potential. It likewise validates the ability of the map to open up a space for debate and to disclose an ecology of practices.

This cartographic experiment was made possible by the particularity of the context of the commission, which comes from a cultural agency and offers the liberty of expression that is essential in a critical approach.

It also became clear that as much as the printed result, it is the whole process of investigation, of narration and of mapping that amounted to a form of political engagement giving rise to something in commons. When getting feedback from the public, it is especially people who participated, whether close-up or at a greater distance, in the field study who were and are still motivated and convinced by the tool, who disseminate and share it, who regard it as providing impetus to go even further in the discussions about common projects, since the maps suggest new conceptions of the territory and new projects.

This makes us think about what could follow. If the possibility of redoing maps elsewhere should emerge, greater energy could be put into making both the process and resulting object exist. Mapmaking is a long-term performance, which could constitute the core of the proposal: a cartography workshop implanted in the territory, regular collaborative work, letting-go of the total control of the finalized tool, a space in which participants would really

meet around a common, political activity, i.e. that of mapping the inhabited territory.

Ten maps are printed today, but we could have done a thousand. Each of them pronouncing not certainties, but the multitude of potential combinations as foundational value, opening up the perpetual possibility of a redistribution of meanings, of a re-discussion, of a deterritorialization (Deleuze and Guattari, 1980). So many imagined assemblages, so many imaginaries to be reassembled.

If the experiment confirmed this potential, it also made cartography's enormous power of manipulation apparent, as well as the importance of the moral apparatus that underlies cartographic operations.

For the philosopher Yves Citton[5], we live in a society in which imagination has triumphed: It has gone over to the side of power, "by way of advertisements and television series, virtual images and media agendas, it immerses us in small problems and small vanities whose 'iconic and rhetorical expectations',

5. Yves Citton is a philosopher and professor of literature. He has published numerous articles and volumes devoted to the political imaginaries of Western modernity and, more recently, to economies of attention.

by 'deforming reality', prevent us from clearly seeing what is around us and what constitutes us." (2013, p.8) Making connections between Daston and Galison's (2012) Objectivity and objectivity in the recording arts, audio and cinematographic among others, he suggests conceiving a return to the demand for objectivity, in order to counter the colonizing power of "imaginary programmes". If mechanical objectivity consists of letting oneself be surprised by the real, one can also begin to perceive how the concept encompasses the abandonment of a control and sovereignty of the author or creator. Citton evokes the political character of an *echology*: a conception of the world in terms of echoes or resonance, which consists of wanting to be "receptacles of sensations" and "recording devices" (Gasquet in Citton, 2013). This development would directly confront us with the totality of the relations constituting the *milieu* in which our being is constituted, it would invite us "less into a large totalizing whole than into a multiplicity of small taking-sides on the part of nature", cultivating our attention for them, teaching us to "let ourselves be taken by them, instead of always trying to recruit them and control them in our imaginary programmes". Thus, the new objectivities that Citton proposes would not try to suppress interpretative activity, but to subject it to an overriding constraint of "sincerity". (2013) Referring to cinema, Benoit Turquety finds at the very foundation of objectivist art "a necessity that is both poetic and moral, namely that of not altering the objects that it considers or that it borrows" (in Citton, 2013, p.7). "The sole obligation for someone who makes films is not to falsify reality and to open people's eyes and ears with what is, with reality" (Straub in Citton, 2013, p. 7)

The two movements, objectivity and imagination, abstraction and figuration, are always complementary.

An interesting mechanism for rethinking critical cartographic operations as interpreted assemblage of stories or revelation of collected practices.

"The originality of the objectivist theory of art is to affirm that abstraction (objectification) and figuration (sincerity) are not two antagonistic movements, but rather complementary: that sincerity is required for objectification, but also, in return, that it is only objectification that allows for the precision – the detail – that is at the very heart of sincerity". (Turquety in Citton, 2013, p.7)

In the maps of the atlas produced by Denis Wood and his students (2010), "everything sings", as the title of the volume suggests. Each map represents a raw survey of a layer of information patiently gathered from the lived experience of the studied neighbourhood, in order to discover and reveal some of the routines of its inhabitants. It is the radicality of the process that makes the information poetic.

Bibiography

Cattoor B. et Perkins C., 2014, Re-cartographies of Landscape: New Narratives in Architectural Atlases, The Cartographic Journal Vol. 51 No. 2 pp. 166–178 Cartography and Narratives - Special Issue May 2014

Counter Cartographies Collective, Dalton, C. et Mason-Deese, L., 2012, "Counter (mapping) actions: mapping as militant research",ACME No. 11, pp. 439–466.

Citton Y., 2013, Le retour de l'objectivité, Revue des Livres No 9, janvier, pp. 4-9. [En ligne], consulté le 15 octobre 2021. URL : http://www.yvescitton.net/wp-content/uploads/2013/10/Citton-RetourObjectivite-RdL-9-2012.pdf

Daston L. et Galison P., 2012. Objectivité. Coll. Fabula. Bruxelles : Les presses du réel.

De Biase A. et al, 2016, Paysages en récit. Pour une approche anthropologique des atlas des paysages de la Seine-Saint-Denis, France : éditions LaaRecherche,

Deleuze G. et Guattari F. 1980. Mille plateaux. France : Minuit.

Didi-Huberman G. 2017. Atlas ou le gai savoir inquiet. L'œil de l'histoire 3. France : Éditions de Minuit.

Dumasy-Rabineau J., Gastaldi N. et Serchuk C. (dir.), 2019, Quand les artistes dessinaient les cartes. Vues et figures de l'espace français Moyen Age et Renaissance. Paris, France : Le Passage Paris-New York Éditions et Archives nationales

Grout, C., 2018, Le Sentiment du monde : expérience et projet de paysage, Bruxelles : La Lettre volée.

Grout, C., 2012, L'Horizon du sujet. De l'expérience au partage de l'espace, coll. Essais, Bruxelles, La Lettre volée.

Hache E., 2019, Ce à quoi nous tenons. Propositions pour une écologie pragmatique. France : Éditions la découverte.

Harley B., 1989, Deconstructing the map, Cartographica: The International Journal for Geographic Information and Geovisualization, Vol. 26, No 2, [En ligne], consulté le 6 décembre 2018. URL : https://doi.org/10.3138/E635-7827-1757-9T53

Hoquet T., 2010, Insaisissable Harraway, Sociologie et sociétés, vol. 42, No 1, pp. 143-168. [En ligne], consulté le 10 décembre 2020. URL : https://doi.org/10.7202/043961ar

Jacob C., 1992, L'empire des cartes. Approche théorique de la cartographie à travers l'histoire, Paris, France : Albin Michel.

Kollektiv Orangotango+, 2018, This is not an atlas. A global collection of counter-cartographies, Berlin, Allemange : Ed. Kollectiv orangotango +

Latour B., 1991, Nous n'avons jamais été modernes. Paris, France : Editions la découverte

Latour B., 2004, Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern, Critical Inquiry No 30. pp. 225 – 248, Etats-Unis: The University of Chicago. [En ligne], consulté le 21 décembre 2021. URL : http://www.bruno-latour.fr/sites/default/files/89-CRITICAL-INQUIRY-GB.pdf

Latour B. 2020, Consortium Où atterrir? presentation of the approach by Bruno Latour. [video online].

Peluso N., 1995, Whose woods are these? Counter-mapping forest territories in Kalimatan, Indonesia, Antipode No 27, pp. 383 – 406.

Plantin J-C, 2014, L'avènement de la carte comme médiation. Généalogie des rencontres entre cartographie et théories de l'information, Questions de communication, 2014/1 No 25, pp. 309-326. [En ligne], consulté le 15 aout 2021. URL : https://www.cairn.info/revue-questions-de-communication-2014-1-page-309.htm

Pigeon V., 2021, Cartes de paysage – Horizons à partager, Projets de paysage, No 24 | 2021. [En ligne], consulté le 01 octobre 2021. URL : http://journals.openedition.org/ paysage/20243

Pigeon V., 2021, Atlas de récits d'un territoire habité – Walcourt, Bruxelles, Belgique : Editions de la Cellule architecture de la Fédération Wallonie - Bruxelles

Prignot N., 2010, Retour sue les trois écologies de Félix Guattari, Etopia – Revue d'écologie politique, No 7, 2010, pp. 157 – 184, [en ligne], consulté le 21 septembre 2020. URL : https://etopia.be/05-retour-sur-les-trois-ecologies-de-felix-guattari/

Puig de la Bellacasa M., 2017, Matters of Care. Speculative Ethics in More Than Human Worlds, Londres : University of Minnesota Press,

Sebastien L., 2016, L'attachement au lieu, vecteur de mobilisation collective?, Noroi No 238-239, 2016, pp. 23-41. [en ligne], consulté le 30 avril 2020. URL : http ://journals.openedition.org/norois/5846

Stengers I., 1997, Inventer une écologie des pratiques. La Recherche, No 297, p. 86-89. [en ligne], consulté le 3 mars 20212021. URL : https://www.larecherche.fr/isabelle-stengers-%C2%AB-inventer-une-%C3%A9cologie-des-pratiques-%C2%BB

Wood D., 2010, Everything sings: Maps for a Narrative Atlas, [En ligne], consulté le 3 mars 2019. URL :http://sigliopress.com/book/everything-sings/

Wood D., 2015, Mapping Deeply, Humanties, vol.4, No 3, pp. 304-318. [En ligne], consulté le 6 juillet 2019. URL :https://doi.org/10.3390/h4030304.

ARCHITECT DESIGNED

Influences, observations and their outcomes.

Thomas Finch

Morales Finch Architects
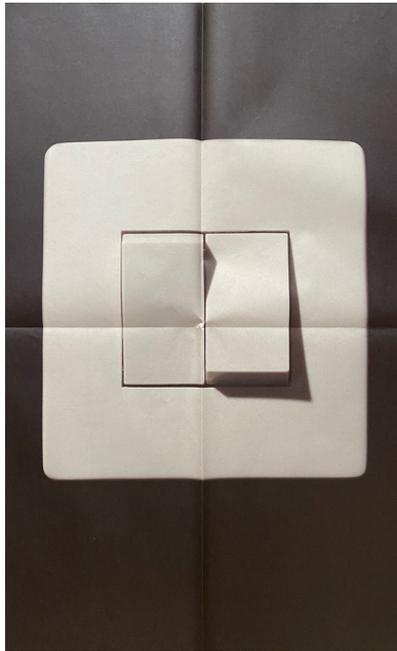
1. (top left) Kilimanjaro Magazine (2010) 'Switch on' - What is Happening Now', Issue 10. p.2. London; Kilimanjaro magazine, © Tom Finch

The archetypical and an on-going search for it; our 'image' of an object is often the hardest to find yet seems so obvious.

2. (top right) Gabriel Curi (2019) 'Sorted, Resorted'. p.46. London; Koenig Books, © Tom Finch

Amongst other themes, Curi's interest in materials, and our learned expectations of them and their correct use is interesting. Stainless steel, so often found when instilling order, robustness and precision, houses Euro bank notes in arbitrary place, for no practical reason.

3. (bottom left) Kilimanjaro magazine (2010) 'Morlboro', Issue 11, cover. London; Kilimanjaro magazine, © Tom Finch

The intentional mistake, often over-looked as a result of familiarity with certain forms and compositions.
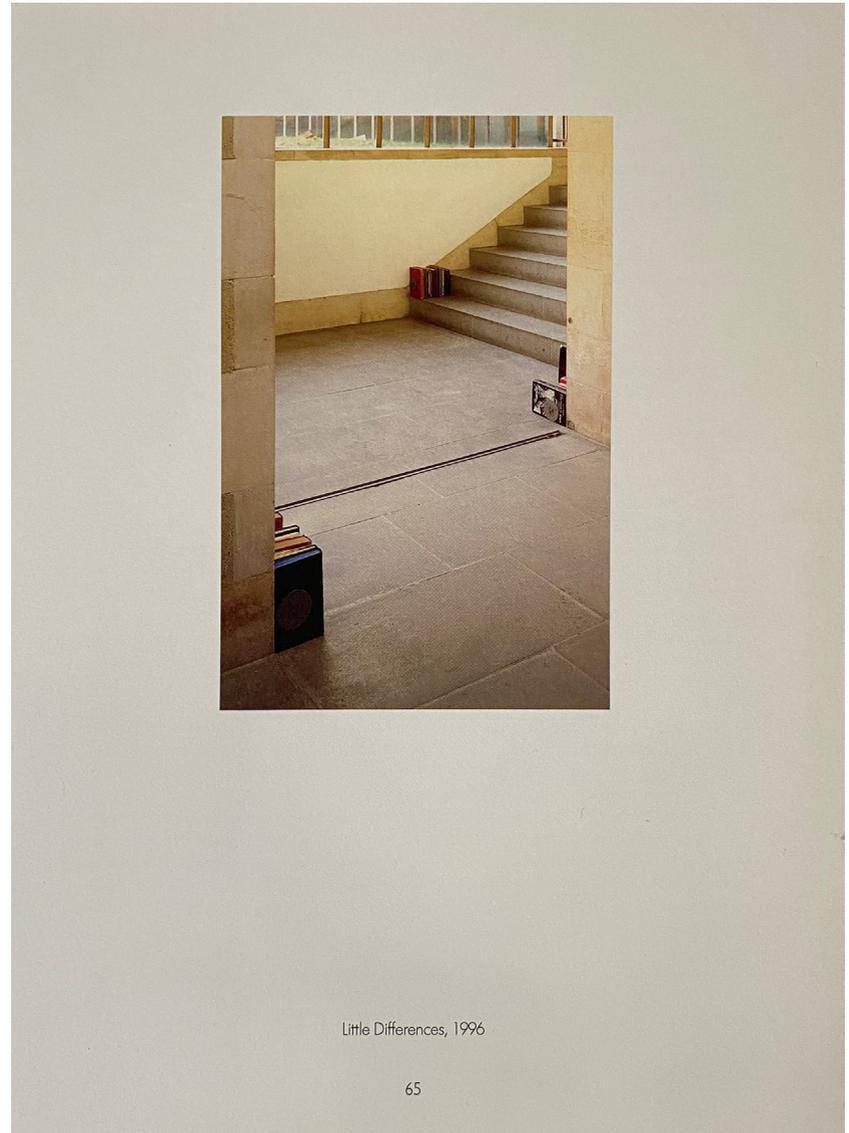
Little Differences, 1996

65

4. Richard Wentworth (1997) 'London, Freiburg, Goppingen, Bonn' p.16. Freiburg; © Tom Finch

The 'improper' use of space and objects.

5. Rue Joseph Wauters, 2021, ©Tom Finch, Wavre, Belgium

An evolving construction site that has intermittently stopped and started over a period of years, with various contractors contributing to a patchwork of construction with no single author.
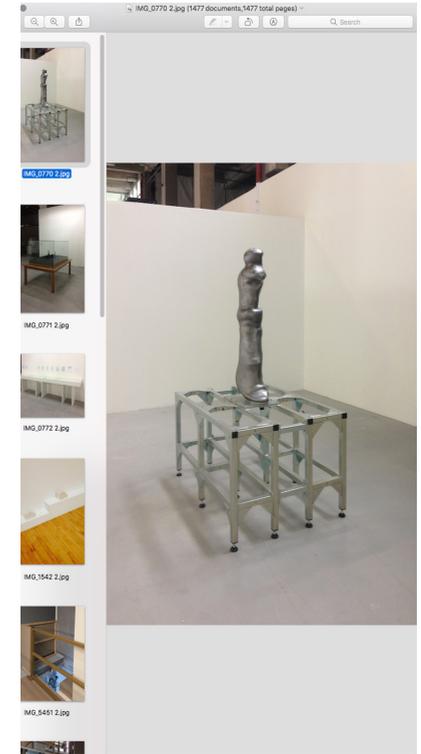
6.(left) 'Comme des Garçons brown paper bag', 2020, © Tom Finch

An everyday, robust object is made fragile and in doing so loses the characteristics that originally gave it purpose.

7. (right) '/Users/tomfinch/Library/Mobile Documents/A000_ADMIN: GENERAL/means of display', 2021, © Screen grab of desktop computer image

A desktop file into which images of gallery, exhibition and everyday life means for construction are stored for periodic reference.

8. 'Disused single storey building opposite Piscina da Quinta da Conceição, 2021, ©Tom Finch, Porto, Portugal

A small, single storey, disused building the lies within the grounds of one of Alvaro Siza's public swimming pools. With no obvious use and a familiar but simplified, abstracted palette of materials seemingly borrowed from the diligently maintained building opposite it gives the impression of a contractors best attempt at a respectful neighbour.
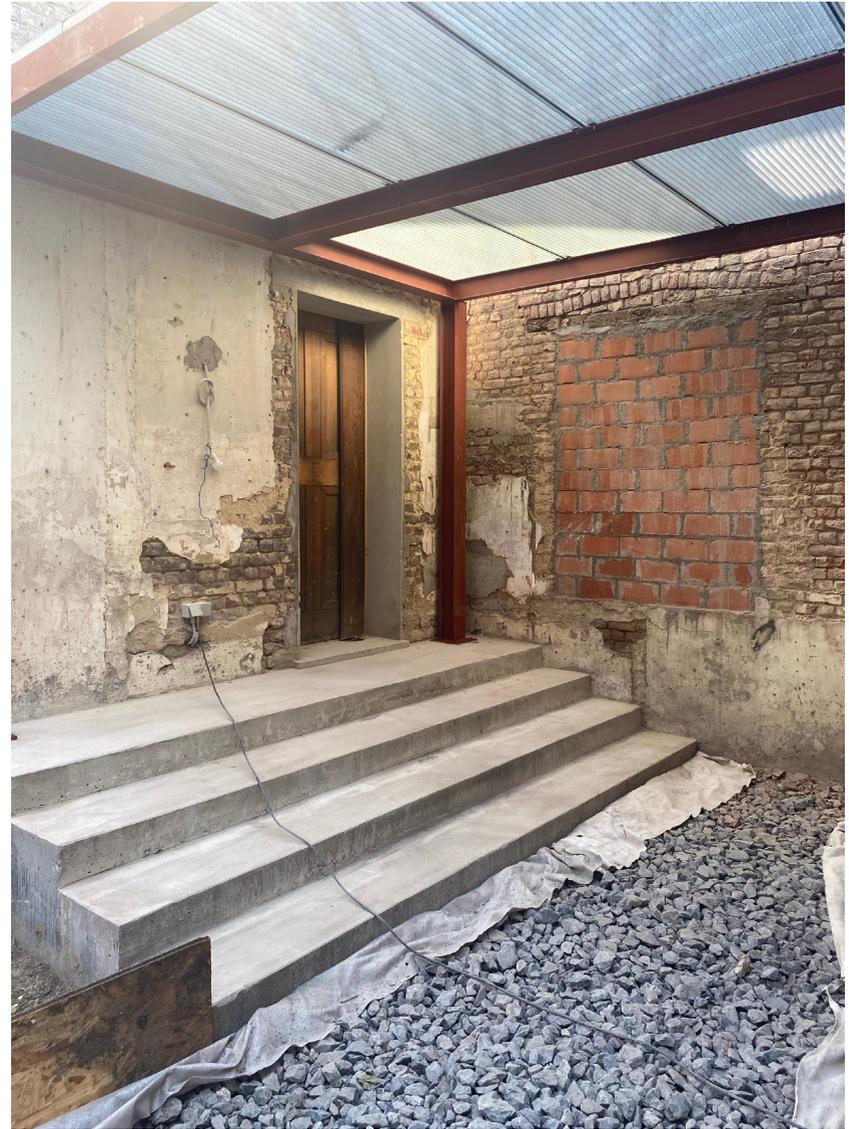

9. Artists atelier, construction photograph, 2021, © Tom Finch, Brussels, Belgium

A projects contractor is tasked with building and then retaining the scaffold required during the formation of the works, leading to an tension in which certain elements have a level of refinement that sits awkwardly between the building site and finished site.

10. Industrial designer's home refurbishment, interior, 2019, ©Photographer Oskar proctor, London, United Kingdom

Retained details such as cornices meet intentionally crude interruptions, highlighting their lack of consistency and giving the building a sense of continuous evolution with no definite conclusion.
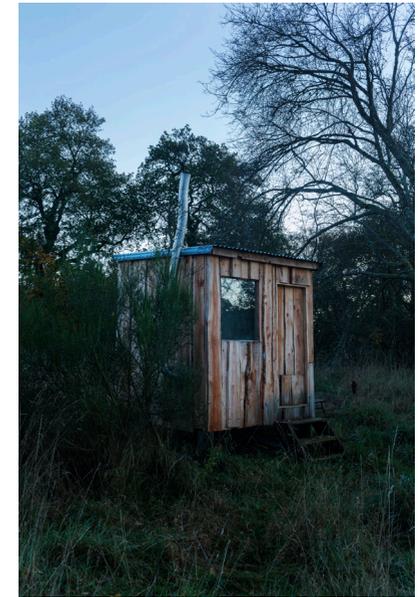
11. (left) Industrial designer's home refurbishment, interior, 2019, © Photographer Oskar proctor, London, United Kingdom

A project's contractor is tasked with replicating the skirting found elsewhere in the existing building using painted MDF of matching proportions. The result is an abstracted, but familiar continuation of the detail in refurbished areas.

12.(right) Painters studio, contractor's sauna, 2018, © Photographer Oskar proctor, Aviemore, United Kingdom

A sauna, one of many ancillary spaces created by a contractor to aid construction during harsh winter months, and built using materials sourced from the main project. Intended as temporary spaces they were retained for later use, confusing the boundaries of the original brief.

13. Sun buddies/ Tres Bien SS19 presentaion, 2018, © Tom Finch, Paris, France

A seemingly haphazard arrangement of what appears to be borrowed display furniture reveals its specificity on occasion

14.(top left) Rue du metal, interior, 2022, ©Tom Finch, Brussels, Belgium

Making good internal alterations. With no code supplier, the contractor was tasked to match the existing colour as closely as possible, ensuring a subtle discrepancy between new and old presented itself.

15.(top right) Kilimanjaro Magazine #8'visual surrealism' presentation, bStore, 2008, © Tom Finch, London, United Kingdom

Photograph of exhibition stand used to promote Kimilanjaro Magazine. Despite being entirely bespoke, the furniture intentionally adopted standardised print media proportions and borrowed a material vocabulary from protective shipping cases - the 'bespoke everyday'.

16. (bottom left) Rue du metal, interior,2020, © Tom Finch, Brussels, Belgium

Decorative gas stove

THE CARTOGRAPHY OF ANNO

Interlocking design roles of the archaeologist, the scenographer, and the architect

Stijn Cools

KU Leuven Department of Architecture (Belgium)

aNNo architecten

INTRO

Since 2007, the studio 'aNNo architecten' has been dedicated to the preservation and renovation of historic buildings, heritage sites, and monuments. The call for contributions "Explorations and Cartographies" of the journal "In Practice" provided a welcome incentive to examine the evolution of the practice through a cartography. The paper adopts a processual cartographic perspective and confines itself to a brief exposition of the discovered conceptual framework. However, the project "Batterij Aachen" will be employed as a case study to illustrate the conceptual framework. The paper starts with a short reflection on heritage to contextualize the working field of the studio.

CONTEXT

Since the late 18th century, when the Conservation Movement emerged, the focus has shifted from single monuments to entire locations, landscapes, and even entire cities (Jokiletho 2001, Glendinning 2013). Ever since Alois Riegl proposed the concept of cultural heritage value typologies in 1903, the number of heritage value typologies that are considered preservable has increased dramatically (Fredheim 2016). A preservation discourse on the basis of heritage value typologies has become dominant in academia and practice and it transformed monuments "from a vehicle of nation building to an instrument of 'world making', in terms of creating a global, cosmopolitan awareness and identity". (Salazar 2020:24). Selection criteria for heritage designation are also based on this widening concept of heritage value typologies, and

as such have resulted in an enormous profusion of all kinds of artefacts and buildings that are considered worth for preservation (image 1).

At the other end, global issues like climate change, energy and demographics are pressuring the field of architecture to shift its focus to urban resource management. In both urbanism and architecture *'reduce, reuse, and recycle'* (Petzet 2012) have become an important new paradigm. As such, sites are now approached as abundant reservoirs of preservable artefacts due to cultural or ecological motives.
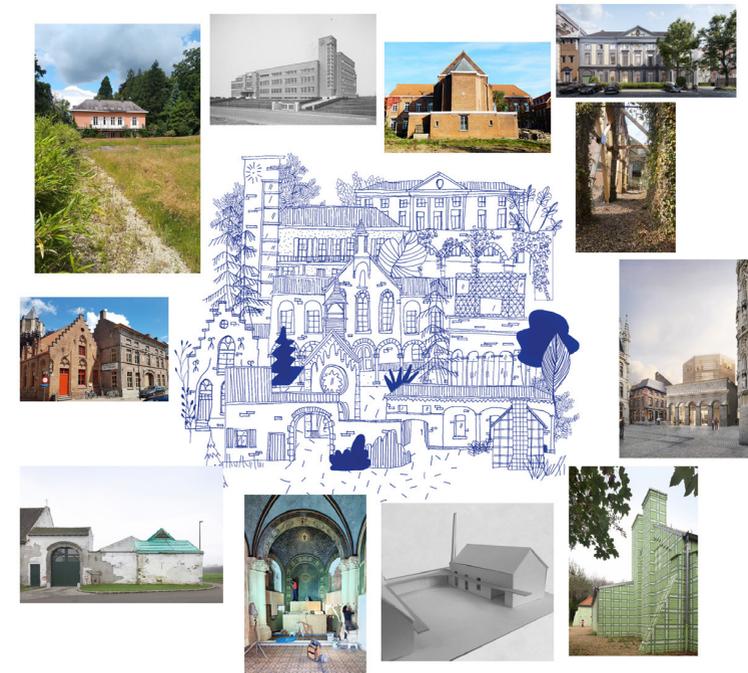
Image 1: Collage of the dispersed spatial and temporal territory of artefacts worth preserving. Collage of fragments of ongoing projects of aNNo, 2021. Starting at the top going clockwise: Hogere Zeevaartschool Antwerpen, Klooster Broeders van Liefde Leuven, Huis van Hamme Brugge, Kerkruïne Hulshout, Stadhuis Leuven, Museum Raversyde, Brouwerij Merchie, Kapel Robiano de Stolberg, Vierkantshoeve Bree-Eik, Schepenhuis Maldegem, Landhuis op site verdwenen Abdij Zevenbronnen. Source: aNNo achitecten, by author

A simultaneous space or palimpsests (Machado, 1976) emerged as "a landscape chronicle of life and dwelling" (Adam, 1998:54) that can be characterized as a Tabula Plena (Roberts, 2016) or Tabula Scripta (Alkemade, 2021).

The scope, scale, and purpose of preservable objects have expanded conceptually and practically, as was briefly discussed above. In consequence, several scholars argue the contemporary heritage paradigm, based upon heritage value typologies like it evolved since the eighteenth century, can be deemed complete in the light of the ecological and social situation on earth (Jokiletho 1999, Glendinning 2013, Bazelmans 2016).

Thus, how could a practicing architect position himself in a world where the past is ubiquitous? Paradoxically, on the one hand there is a growing need (culturally, sociologically, and environmentally) to develop an active engagement with existing architecture, and at the other hand the well known heterotopian heritage strategies founded on heritage value typologies seem no longer matching with the diverse, post-colonial and post-anthropocene world. As a result, the disciplinary gap between architecture and conservation that has emerged during the nineteenth century, which I refer to as the Curated Distance, is called into question.

How might a sensible attitude towards the host structures arise in order to realize culturally, sociologically, and environmentally appropriate presents? The study of the heritage studio aNNo could be a possible explorative entry to delve into such question and track down evolving views on heritage as project and idea. As such the conceptual framework of the heritage practice by means of a cartography could be embedded within the ongoing international debates on the architecture of alteration (Scott 2008, Grafe 2020, Alkemade 2021).

PROCESSUAL CARTHOGRAPHY
The seminal study 'Rethinking maps' (Kitchin & Dodge, 2007) proposes viewing cartography rather processual than representational. As such, cartography is described as a cyclical process that occurs between experienced or imagined reality and its depiction by a map, or vice versa. Furthermore, cartography has a "projective potential that allows greater connection with the earth itself, rendering apparent and vivid the terrain as it departs, as it may be both to the eye and to the thought" (Desimini & Waldheim, 2016:10). As such, the studio's cartography might be a representation built along several processual acts. The paper is guided along the three main processual actions that have contributed to the cartography: documenting and observing, reading and writing, speculating and discussing.

DOCUMENTING AND OBSERVING
Documents, images, and plans from aNNo's archive were obtained. Projects that had attained the conceptual design stage or were part of architecture competition proposals have been chosen for further investigation. Project sketches and images, as well as raw archival data, were organized chronologically in digital folders. As a result, a digitally documented chronological record of the practice emerges as a starting point for further observations.

Image 3: Arranging and interpreting the chronicle on the model table of aNNo (two table of size A0). The A0 mappings were cut with scissors in 10x10cm squares. In this image the 10x10 cm project squares are thematically arranged according to design positions. Top left tends to architecture, top right tends to archeaology and the bottom tends to scenography. Projects in between these corners tend to mix these activities. Format: 2x A0 cutter board. Source: aNNo achitecten, by author

Image 2: Project drawings aNNo 2006-2020, sheet 1/3. Format: A0 poster. Source: aNNo achitecten, by author

READING AND WRITING

The second step envisages a gradual shift from reading the record towards writing new insights. The gradual shift is characterised by processes of abstraction, generalization, symbolisation and schematization.

Abstraction

To begin, all of the selected projects are diagrammatically synthesised by portraying them in the same manner. Every project is represented by a plan and one matching section on the same representational scale in a 10x10cm grid. All plans and sections use the same graphic code: black solid hatches for walls, only black and grey for lines, and all lines are 0.1mm thick. The operations produce three A0-DIN-pages of built and unbuilt projects (image 2). The A0-grid displays the projects in a very exact, similar, and detailed manner.The graphical representation abstracts the projects into illustrative figures or diagrams. It decontextualizes them. The diagrams are devoid of representational differences and maintain spatial accuracy, with the ability to make generalizing statements. Additionally, the abstraction demonstrates effort. The intentional pursuit of abstraction also introduces distance, seeking to shift the architect from insider to outsider in reference to his own designs in order to strengthen the rigour and validity of subsequent observations.

Generalization

Projects were clustered in generalizing combinations by using scissors, tape, and our model table (image 3).

The process explored several themes such as scale, collaborations, typology, built or unbuilt, historic periods, location, topography, budget, materials, surface. More relevant, three interconnected generalising design activities were extracted out of the mingling, labelling and tagging. To varied degrees, projects appear to demonstrate the combination of the following activities: 'deep site learning', 'exploration', and 'crafting'. Each activity has its proper methods and, off course, were iteratively combined during the design process of the examined projects.

- *Deep site learning* (see image 4 and case-study) revisits the simultaneous space like archaeologists whom "unfolds lives and times of predecessors who, over the generations, have moved around in it and played their parts in its transformation. To perceive the landscape is therefore to carry out an act of remembrance" (Ingold, 2013:189). Deep site learning uses methods such as building surveys, archival research, iconographic comparison studies, pathology mapping, photographing, sketching and recording oral history sources by interviewing. The goal is to compose an iconographic record of the site.
The word deep refers to in-depth observations that involves direct, one-on-one engagement with the site based on something one has seen, heard, or noticed (qualitative data collection method). The variety of sources generates a stratified reading of the site's history and current state.

- *Exploration (*see case study), as I approach it, wants to create an interpretation that draws on both the physical and meta-physical features of the site. It employs more

Image 4: Deep site learning project Bree-Eik.
Photographing, building history research,
documenting, surveying.
Source: aNNo achitecten, by author
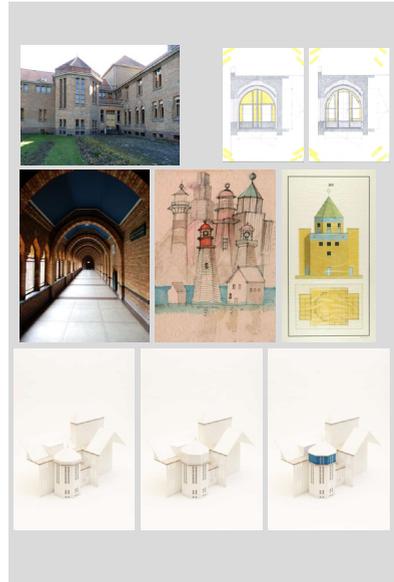
Image 5: Crafting project Visitatie.
Sketching, model making, referencing .
Source: aNNo achitecten, by author

narrative techniques such as storytelling, interpretation, re-contextualization, brainstorming, imagining, and writing.

While deep learning is framed by objective principles (e.g. deviation standard on topographic measurements), exploration is based on a subjective interpretation of the stratified iconographic record by excluding, articulating, disregarding, or enlarging specific findings. The broad data collection of deep site learning is deliberately narrowed to physical and metaphysical elements of intrest (subjective and interpretative vision).

By doing so, we enable objects as potential "scenographic imaginaries". Imaginaries are "socially transmitted representational assemblages that interact with people's

personal imaginings and are used as meaning-making and world-shaping devices" (Salazar, 2012: 864). The word scenographic, in my opinion, ties imaginaries to architecture and as such gives imaginaries a qualification like in "spatial" (scene), in "staged" (scenario) or also in "temporal" (stages).

- Next, these narrative explorations are materialised by means of *crafting* (image 5) to decide how the final project will look and feel. In other word, we look at the architecture project as a thoughtful crafting of artefacts with a documented identity (deep site learning) and a projected narrative (exploration). Crafting is characterised by reflection in action (Schön, 2011) and employs communicative and inquisitive processes such as sketching, drawing, drafting, model making, comparing, criticizing.

Symbolization
- Three archetypes
In short, I represent the aforementioned interlocking activities by their archetype: the archaeologist, the scenographer, and the architect. From this combined perspective the preservationist can put emphasis on an intellectual and philosophical engagement with the existing site in the world.

Rather than ensuring an archaeological stewardship of the past from a technical preservation perspective. In this sense, heritage can be seen of as a conceptualized idea that is cooperatively built in place and time. A viewpoint that is in a similar form also present amongst Experimental Preservationists. This emphasis is significant

because it calls into question the dominant discourse (in western conservation paradigms) with very strong focus on the enduring and complete material preservation of the artefact as found (l' objet trouvé). The theorization of the collaborative archetypes could allow for a more fluid approach towards heritage. Prior to initiating the cartography, the aforementioned roles were implicit and unstated. By theorizing them, new transdisciplinary alliances with some other disciplines may develop over time i(n the context of the practice).

- Discursive-turn projects

Following personal reflections and discussions with the studio staff, peers and colleagues it appeared discursive-turn projects could be identified in the life of the practice. In retrospect, these projects called into question our methodology or approaches, and provided new insights or directions for the practice.

A further elaborate discussion of these discursive-turn projects and description would lead beyond the scope of this short paper. Although, the sequence of the selected discursive-turn projects suggests the practice slowly is shifting from a small scale technical preservation architecture practice towards a maturing interdisciplinary heritage-design studio, where critical thinking about one's own discipline is an emerging topic.

Schematization of the framework
- An open-ended expanding spiral (image 6)
The reading of the practice as a sequence of selected

Image 6: Framework of the practice. Representation of the cartography.
 At the centre, the spiral is composed by discursive-turn projects that navigate across the activities and methods of the archaeologist, the scenographer and the architect. The spiral is surrounded by the cinographies and communities of practice. Format: A0-DIN poster. Source: aNNo achitecten, by author.

discursive-turn projects could be schematized as an open-ended expanding spiral along the design activities and archetypes. The variable thickness of the blue lines shows the lack or presence of the indicated activities or archetypes in the identified discursive-turn-projects. The growing length of the segments in the tripartite spiral schematizes the practice's overall growing experience.

- Iconographies of the practice
Around the spiral, the iconographies for each of the three design activities are symbolised. The iconographies are composed by using 3 x 19 important images such as schemes, drawings, plans, reference books. These images are, currently, both memorial and referential to the studio. The iconographies are a source for new projects, but they also offer critical reflections on projects that have already been done. The iconographies are not fixed, but the image selection evolves throughout time..

- Communities of the practice
In retrospect, certain collaborations have had a significant impact on our design processes or projects. The communities' exterior influence adds collaboration to the discursive-turn projects. Not just with architects, but also with other disciplines such as artists, photographers, landscape architects, craftspeople, historicists, specific clientele, and many more. The heterogeneous group is referred to as the communities of practice.

CASE STUDY: MUSEUM PROJECT BATTERY "AACHEN".
The artillery battery "Aachen" is a listed monument an part of the Atlantic Wall museum in Raversyde (Ostend). It is the only German First World War coastal battery of which enough structures have survived to obtain a fine, comprehensive picture of the coastal defences in 1914-18. aNNo was comissioned to restore its remaines, and rethink the scenography. In retrospect the projects embodies, for the first time, the conceptual framework in its completeness (deep learning, exploration and crafting). As such it could be considered as a discursive-turn project.

The archaeologist. Deep site learning involved the survey of the heritage artifacts (bunkers, structures, pathology) and futher the intersiciplinary recording of the site (biological landscape, the visitors' experiences, historic stratifications, the apllied materials, the disappeared objects and so on). We also looked at old military techniques such as the razzle dazzle camouflage (image 24). Further, we excavated the

Image 7: project plan for "Batterij Aachen" depticting sea, beach, dunes, routing and artefacts. Project zone indicated by black line, an landscape area of roughly 80.000m2. Credit: aNNo..
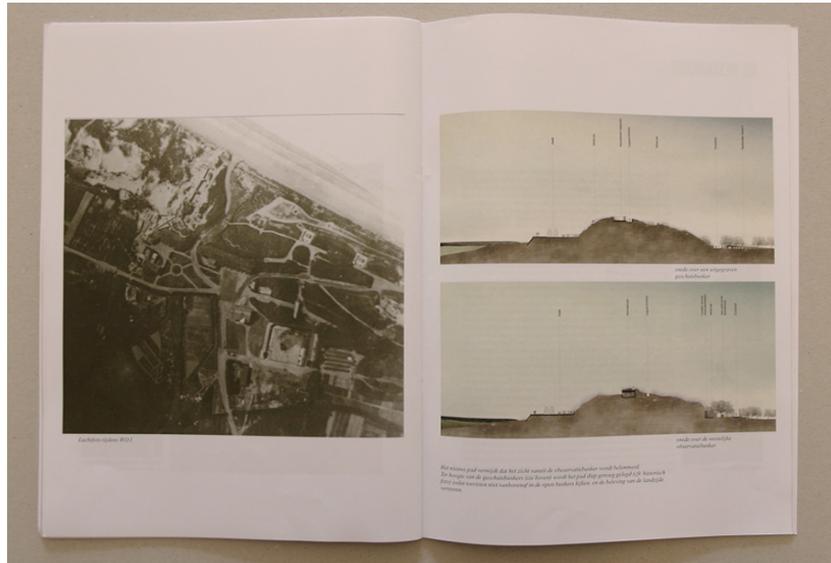
Image 8, left: aerial reconnaissance photograph, 1916. Credit: museum Raversyde.
Image 8, right: study of the pathways in section on the basis of aerial photograph. Collage. Credit: aNNo.


Image 9: study of the pathways, bunkers and artillery emplacements by sketching. Credit: aNNo.

Image 10: scenography. A cabinet of curiosities, linking routing with objects, experiences ans stories. Scheme before and after. Credit: aNNo.
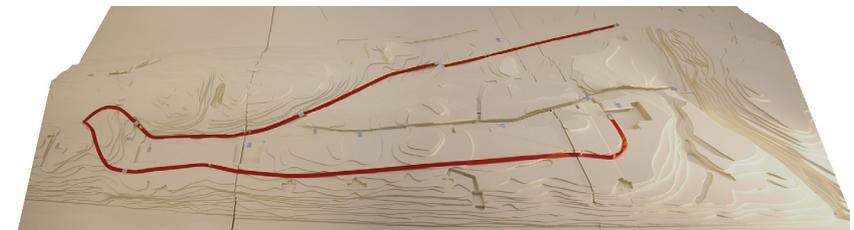
Image 11: crafting the new pathways by means of a model (300cm x 90cm.).. Navigating between topography, historical references (image 9), scenography (image 11), documentation about fauna and flora and accesibility conditions. Credit: aNNo.

Image 12, left: scenograhic installation inside bunker n°4, credit Filip Dujardin 2021.

Image 13, right, scenograhic installation of personnel barracks, credit Filip Dujardin 2021.

memories that were concealed in the location. We found out a fascinating pré-war history (such as the history of the royal holiday villa which had been present on the site, image 29) and an peculiar post-war use of the site by the cultural milieus of Prince-Regent Karel and painter Bastien (image 26) who lived and dwelled on the site.

> *See as examples images 8, 18, 20, 22, 24, 26.*

The scenographer. The deep site research created a context to explore the site's time and memory. We selected the post-war cultural and ecological refuge as idea to develop the project (narrative). From this vantage point, the scattered remnants may be viewed as a cabinet of curiosities that could be rearranged, perpetuated, and staged within the landscape. This viewpoint tansgresses the common understanding of the site as a military structure, and broadens its origins and potetials. In meanwhile, the project demonstrates a gradient in the exploration of heritage as physical (tangible) objects towards metaphysical (intagible) concepts. The following verbs, based upon Alkemade 2021, demonstrate and classify possible steps in this fluid gradient :

 - *To copy*: the material reconstruction of an object, such as a canon in micro-concrete, based on a postcard.

> *see image 20-21.*

 - *To reimagine*: the material interpretation of the former personnel baracks resulted in an imaginary design without direct historical reference to its original typology.

> *see image 13-22-23*

 - *To eliminate:* create by removing. The historic villa is transformed into a blind brick canvas for an artist intervention, inspired on the WWI Razzle Dazzle camouflage

technique, by removing parts of the building such as the complete interior, old windows and doors. The application, of a green table cloth painting, by artist Lilly Van der Stokken, introduces the family lives (household) into the military landscape. Further, the intervention revebrates the cultural milieus of painter Bastien (oral history) and the military camouflage techniques of the first World War.

> *see image 24-25-26-27*

 - *To abstain*: reconstruction of an idea (metaphysical). The royal family's 19th century wooden holiday villa was removed during the war. The royal villa is now mentally *restored* by means of the concrete bench. The villa remains unbuilt.

> *see image 28-29*

The architect. We crafted new pathways by navigating the recorded context of historical references, topography, documentation about fauna and flora and accesibility conditions. Our interpretation of military tracks was reimagined into a closed museal landscape loop.

> *see image 7-8-9-10-11*

Next, a thoughtful sculpting of existing artifacts by adding, removing, expanding and overlaying accompanied the new landscape route.

> *see image 19-21-23-27-29*

As a result, a cultural hybrid emerges. The project echoes our belief that heritage preservation is neither neutral or objective, but can be based on interpretation and a conceptual framework of thought. Furthermore, the project highlights how archaeological discoveries can completely shift our perception of a site

> *see image 24-26-28*

Image 14: preserved shelter of 1914, credit Filip Dujardin 2021.

Image 15: paths in the landscape with at the back bunker n°1, credit Filip Dujardin 2021.

Image 16: paths in the landscape with in front an information model in gray concrete, credit Filip Dujardin 2021.

Image 17: landscape view from bunker n°1, photo credit Filip Dujardin.


Image 18: postcard bunker n°1, credit Museum Raversyde.

Image 19: addition in bricks bunker n°1, credit Filip Dujardin 2021.

Image 20: historic photo artillery emplacement n°2, period 1914-1918, credit Museum Raversyde.

Image 21: canon in gray concrete artillery emplacement n°2, credit Filip Dujardin 2021.

Image 22: postcard of the barracks 1916, credit Museum Raversyde.

Image 23: interpretation of the baracks in the landscape, credit Filip Dujardin 2021.

Image 24: photo of the razzle dazzle painting technique on a ship. WWI. Credit museum Raversyde.

Image 25: tranforming the villa into a canvas, credit aNNo, 2015.

Image 26: villa bastien periode in the 1970's. Credit museum Raversyde.

Image 27: villa bastien transformed into a museal paviljon, credit Filip Dujardin 2021.

Image 28: royal family members in front of the villa. Credit museum Raversyde, 1912.

Image 29: the restored villa by means of its bench, credit Filip Dujardin 2021.

DISCUSSING AND SPECULATING AS FORM OF CONCLUSION

The cartography articulates the framework of the heritage studio aNNo. It suggests mixing design roles across disciplinary boundaries of the archaeologist, the scenographer and the architect. The three archetypes depict a broad approach towards heritage and possible cross-disciplinary relations. Further, they represent corresponding design methodologies in which the studio navigates. By mixing these transitory and relational design activities, heritage discourse could perhaps be broadened to an integrating cultural and creative practice.

Conversations with aNNo team members (image 30) were as important as the cartography itself in terms of the applied processual methodology. The process of building the cartography, in retrospect, represents the distinctive design activities in itself. And might be a promising discursive turn in the life and dwelling of the practice.

Image 30: team discussion on the cartography. June 2021. Source: aNNo achitecten, by author

Bibliography

- Adam, B. (1998). Timescapes of modernity: the environment and invisible hazards. London : Routledge.
- Alkemade, F., van Iersel, M., & Minkjan, M. (2020). Rewriting architecture - 10+1 actions. Amsterdam : Valiz.
- Bazelmans, J. (2016). Waarde in meervoud. Naar een nieuwe vormgeving van waardering van erfgoed. Platform31.
- Clavir, M. (2002). Preserving What is Valued: Museums, Conservation, and First Nations. Vancouver: UBC Press
- Cools, S. (2021). Heritage design in the age of sustainism. Revalueing heritage as scenographic imaginaries in the urban biography. Key-Note Speech, EURAC heritage conference, Bolzano, Italy, april 2021
- Desimini, J., & Waldheim, C. (2016). Cartographic grounds: projecting the landscape imaginary
- Fredheim, H., & Khalaf, M. (2016). The significance of values: heritage value typologies re-examined. International Journal of Heritage Studies, 22, 466-481. https://doi.org/10.1080/13527258.2016.1171247
- Glendinning, M. (2013). The conservation movement: a history of architectural preservation : antiquity to modernity. London : Routledge.
- Grafe, C., Rieniets, T., Van Cleempoel, K., Plevoets, B., & Giebeler, G. (2020). Umbaukultur: The architecture of altering. Dortmund: Verlag Kettler.
- Harvey, D. C. (2015). Heritage and scale: settings, boundaries, and relations. International journal of heritage studies : IJHS, 21(6), 577-593. https://doi.org/10.1080/13527258.2014.955812
- Hann, R. (2020). Notes on 'beyond scenography'. Cena, (31), 27-33.
- Ingold, T. (2013). Making: Anthropology, Archaeology, Art, and Architecture. London: Routledge.
- Jokilehto, J. (2001). A history of architectural conservation by Jukka Jokilehto. Oxford : Butterworth-Heinemann.
- Kitchin, R., & Dodge, M. (2007). Rethinking Maps. Progress in Human Geography - PROG HUM GEOGR, 31, 331-344. https://doi.org/10.1177/0309132507077082
- Machado, R. (1976). Old buildings as palimpsest: Toward a theory of remodeling. Petzet, M., Heilmeyer, F., & 13th International Architecture Exhibition.
- Venezia. German Pavilion. (2012). Reduce, reuse, recycle: Architecture as resource:

German Pavillion, 13th International Architecture Exhibition, La Biennale di Venezia 2012. Ostfildern: Hatje Cantz
- Riegl, A. [1902] 1982. "The Modern Cult of Monuments: Its Character and Its Origin." Translated and edited by K. Foster and D. Ghirardo. Oppositions 25 (autumn): 21–51
- Roberts, B. (2016). Tabula plena: forms of urban preservation. Zurich : Lars Müller.
- Salazar, N. B. (2012). Tourism Imaginaries: A Conceptual Approach. Annals of tourism research, 39(2), 863-882. https://doi.org/10.1016/j.annals.2011.10.004
- Salazar, N. (2020). The heritage discourse. In: T. Nikolić Đerić, J. Neyrinck, E. Seghers, E. Tsakiridis (Eds.), Museums and intangible cultural heritage, (23-25). Brugge: Werkplaats Immaterieel Erfgoed. ISBN: 978 94 6400 720 6. (professional oriented)
- Scott, F. (2008). On altering architecture. New York: Routledge
- Schön, D. (2011). The reflective practitioner: How professionals think in action / (11th repr. ed.). Aldershot: Ashgate

Batterij Aachen
Project Information

- Adress: Nieuwpoortsesteenweg 636, 8400 Ostend, Belgium
- Client: Domein Atlantikwall Raversyde Province of West-Flanders
- Architect and design lead: aNNo architecten
- Artist: Lilly van der Stokken (Villa Bastien)
- Curator: Exponanza
- Engineers: Lime bv (stability) and Studie10 bv (electrics, building physics)
- Expert advice: Lodewijk Baljon (landscape), Westkans (accesibility), Sam de Decker (archaeologist), Aagje van Wallegem (heritage permits), DOVO (old ammunitions), ABG (WWI concrete), Ann Goemaere (project lead client), and Mathieu de Meyer (conservator of the museum).
- Photographer: Filip Dujardin
- Studies and realisation:2013-2020

In Practice, a contact group

After three years of activities and in the aftermath of the *Practices in Research* Conference held in October 2021, three successful conferences and three issues of the Practices in Research journal (published in 2020, 2021 and 2022), it was decided to make work of broadening the base and academic community of the research group.

In this perspective, an application for a "contact group" was submitted to the FNRS in Belgium (*Fonds National pour la Recherche Scientifique*, Fund for Scientific Research). A contact group, which may be disciplinary or interdisciplinary, and which allows a group of researchers to meet at regular intervals during seminars. The application was successful, meaning that future issues of the journal and the organization of future conferences will be the fruit of a collective reflection by professors, architects, teachers and researchers from ULiège, ULB, UCLouvain, KU Leuven and UAntwerpen.

The aim of the *In Practice* Research Group is to create a link between academic research and professional practice through a forum for exchange and publication accessible to practicing architects, researchers and teachers in architecture. *In Practice* explores different modalities for engaging professional practice in the context of academic research and vice versa. The group aims to encourage architects to conduct academic research based on their project practice and to encourage an exchange platform

between reflexive practitioners (D. Schön, 1984) and academic researchers.

This initiative responds to the paradigm shift in the context of architectural education in Belgium with the integration of higher institutes of architecture into universities since 2013. Where in the higher institutes, the design studio was at the centre of the teaching and the professor-practitioner was the guarantor of his teaching, at the university, the place of research has become increasingly important. This paradigm shift opens up new fields of investigation. *In Practice* makes the meeting of these two modalities of production and transmission of knowledge in architecture (research and practice) effective.

The *In Practice* initiative also responds to the EAAE's Charter on Research in Architecture, which calls for 'a strengthening of the links between theoretical and practical research, and thus between the academic world and the profession' .

The research group aims to go beyond the epistemological debate (FINDELI, 2007, CANDY, 2006, VIAL, 2015, HANROT, 2005) on the issue of research in architecture and instead specifically questions the points of convergence or distinction between professional practice within an agency or other organisation and academic research work.

The *In Practice* contact group will build on the activities that the inter-university research group *In Practice* has developed in recent years: the publication of books on project processes ; the publication of the scientific journal

Practice in Research (double blind peer reviewed) ; and the organisation of conferences and seminars for researchers who integrate their project practice into their research.

Members of the contact group :

Benoit Vandenbulcke (President of the contact group, ULiège), Wouter Van Acker (secretary of the contact group, ULB), Éric Le Coguiec (ULiège), Martina Barcelloni Corte (ULiège), Harold Fallon (KU Leuven), Rolf Hughes (KU Leuven), Karen Kesteloot (KU Leuven), Benoit Burquel (ULB), Émilie Morales (ULB), Johan De Walsche (UAntwerpen), Christine Fontaine (UCLouvain), Martin Outers (UCLouvain)

The objective is to further strengthen and precise the research group's epistemological foundations of activities, and to further develop the role of the group as an exchange platform for practicing architects with different research and practice backgrounds.

The editors
Benoît Vandenbulcke, Harold Fallon and Benoît Burquel

Bibliography

CANDY L., (2006) Practice Based Research : A Guide, CCS Report: 2006-V1.0 November, University of Technology Sydney

FINDELI A., COSTE A., (2007) De la recherche – création à la recherche - projet : un cadre théorique et méthodologique pour la recherche architecturale, Lieux Commun n°10, pp.139-161

HANROT S., (2005) De la recherche à la pratique et vice-versa: le praticien-chercheur, Proceedings of the colloquium 'The Unthinkable Doctorate' at Sint-Lucas Brussels, p129-139

VIAL S., (2015) Qu'est-ce que la recherche en design ? Introduction aux sciences du design, Sciences du design n°1, Presses universitaires de France, p22-36

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