



Social Adventure through Design & Making: Experiences of the IDIS Chair - *Industry, Design & Social Innovation*

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Abstract: How can the process of making objects create meaning and belonging for the agents involved? Through two objects and their process of making, we propose a journey in a territory, its people and a continuing history. This journey is meant to expose how meaning and belonging can be created by the process of making (objects); and moreover how this aim could be reached in the situation of a research through design. According to a heuristic approach, each situation created by the IDIS Chair is an opportunity to probe models of production and reflect on the ability of design to mediate experimental

and valuable social experiences of work and creation. The IDIS Chair has thus invited design students and young designers to meet and engage with various local companies and know-hows. It also helps them to develop communication tools to make social innovation visible and graspable, so that the general public understand the added human value of such objects. With the help of graphic designers and an anthropologist, experiential books, production cartographies and social mappings are under construction and probing for this purpose.





Left: *Heart of Fusion* by Yoann Moyeuvre / Right: *Vegetal Folly* by Jules Levasseur (c) ESAD de Reims - Baptiste Heller





Introduction

How can the process of making objects create meaning and a sense of belonging for the agents involved? This paper will address this issue through progressive experiments developed by the Chair's 'Industry, Design & Social Innovation' (or IDIS) team. The IDIS Chair is an educational and research programme developed in a design school, to help investigate the concept of social innovation defined as milieu-centred:

“within this context, social innovation would be acknowledged for the positive social consequences it entails, that is to say the positive shifts it produces on a defined territory. Thus, it would be a ‘new way of acting’ which would contribute on one hand to solving economic and social issues (Dedijer, 1984 ; Henderson, 1993 ; Sabel, 1996), and on the other hand to enhancing quality of life (Gabor, 1970 ; Gueron, 1984)” (Cloutier 2004)

How then can designing objects help “solve economic and social issues” in a territory or region? And how does one make social enhancements tangible and graspable, if they are not visible and materially embodied in the produced objects themselves? We intend here to address these questions as a research through design programme.

In the first part of this article, we will present the local historical and economical context, which led the IDIS Chair team to design a specific experimental framework to explore the creation of meaning and the feeling of belonging for the various actors involved. Through two objects and the realisation process, we will describe how the history of a territory and its people can be renewed and revived. Finally, a concluding section will explain the emergence of new tools for designers involved in such processes.

1. The Ardennes Region – An Issue of Affective Ecology for the Community

1.1 Local history

The Ardennes Region, at the North of France, has a long tradition of metallurgic and forge industry, which goes back to Middle-Age. Despite the evolution and development of expertise, this industry is struggling to survive today (Bazin 2014). Could this particular knowledge of production be the basis of a revival? And how can this renewal be embodied through a design experience?

In the 19th Century, in the valley of the Meuse River - knows as an “industrial street”. From the skills and technologies developed in this region, a very specific activity emerged: the moulding of cast iron. Molten metal was poured from a kiln into sand moulds, to produce heating and cooking stoves. These products, as a result, became a highly emblematic produce of the area. [Fig.1]

In the following pictures, one can see that the original Arthur Martin factory in Revin, along the River Meuse, still exists today [Fig.2]. The history of this factory is quite representative of many others in the area. Mr Martin, son of a line of smelters before him, created his own company in 1882 in Revin. The family-owned company was organised around the production of mechanical items, and cast iron and copper stoves. Before World War I, the company employed 450 people and maintained a production of 57 tons a month. Up to the 1930s, the company had been expanding steadily.






Figure 1: from top to bottom, workers in the foundry with sand moulds in 1922, and an Arthur Martin cooking stove made of cast iron from the 1920s. (c) Région Champagne-Ardenne - Inventaire général



Figure 2: from top to bottom, the Arthur Martin factory along the River Meuse, in 1934 and today. (c) Région Champagne-Ardenne - Inventaire général





But in 1985, when it was absorbed by the Ardam Electrolux group, the company put an end to its production of cast iron, yet continued making household electrical appliances. Despite still being involved in the field of cooking and heating devices, the company nowadays uses the factory buildings to host small assembly lines and most of all, storage facilities. The ancestral technical know-how has been pushed further away, to smaller businesses now devoted to occasional restoration work and a few specialised and limited markets. The heritage that once was an activity giving structure to the region and its inhabitants, had become something of the past, deprived of representational and symbolic value.

This 'de-industrialised' conjuncture was a common situation of the 20th Century in Northern countries. On a local scale, it has a major social, cultural and emotional impact. Unemployment and rural depopulation became commonplace, and the collective local identity, its historical construction and the spirit of collective venture – in a broader sense than only market and capitalism-related, were also damaged.

In his 1989 book *The Three Ecologies*, Félix Guattari presents an in-depth analysis of the various impacts of the avid capitalism of our era. As a psychoanalyst, he was very aware of how the never-ending quest for profit was affecting not only natural and built environments, but also our collective social life and individual mental health. The meaning of things such as work and desire, or the role of social interactions and creativity were about to disappear. His proposal for environmental, social and mental ecologies – “the three ecologies”, was thus based on the experimentation of other value systems, able to reconnect individuals with an enriched and complex emotional life.

“it is less and less legitimate that only a profit-based market should regulate financial and prestige-based rewards for human social activities, for there is a range of other value systems that ought to be considered, including social and aesthetic 'profitability' and the values of desire. [...] the question becomes one of how to encourage the

organization of individual and collective ventures, and how to direct them towards an ecology of re-singularization.”

1.2 A practice-based education and research programme: the IDIS Chair

Inspired by Guattari’s proposal to recreate social connections and individual (meaning non-standardised) creativity, the team of the IDIS Chair defined the following goals:

- to bring back together local actors disconnected due to a damaged production system.
- to appreciate each company and the know-how behind specific features and set them at the core of every design project;
- to help product designers set up a specific network of agents based on the quality of human, creative and professional relationships;
- to explore how the activity of designing an object can be a medium for social innovation and empowerment, in the field of work and production.

To implement this program, the IDIS Chair was led by a teacher who is also a product designer. Alongside her, a team was formed of humanities researchers, junior designers in residence and Master 's students. The activity of the IDIS Chair was divided into two levels:

- the research level, which defines frameworks, oversees projects, and draws conclusions;
- the project level, which brings agents together to produce an object, following alternative models.

These two levels are intertwined according to a heuristic approach, where successive evaluations of working hypothesis allow for adjustments according to situations and frameworks (Lécho Hirt 2010).





Figure 3: Pictures taken by Yoann in the foundry and laser cut companies of the Ardennes Region.

Project after project, the Chair collects information on experiences and outcomes, which help understand how design can mediate social innovation and alternative value systems. The two projects introduced in this paper show how this has been developed differently, depending on each project and its agents.

2. Making in Relationship with the Land and its Know-hows.

***Heart of Fusion* – a project by Yoann Moyeuve, student in Product Design**

Yoann is a Master's student in Product Design. As part of the first project lead by the Chair, he was invited, along with other students to visit a group of twelve small companies and craftspeople established in the Ardennes Region. The companies range from carpentry to masonry, plastics processing, cutting, and, of course, metalworking and cast iron. These companies have recently joined forces in order to share skills and methods, and thereby diversify the types of items produced. When the Chair team met the group, each company was still producing in their own field, and changes in production hadn't yet been implemented.

So how does one introduce students to a collective working process, which happens to be experimental for both students and craftspeople?

And how does one lead all actors of this experiment to a new understanding of their role, their actual power and the object's value?


2.1 Production phase

The framework defined by the Chair for this experiment presented two preliminary stages. Students were first asked to document by video each company's skill-set, techniques, know-how, materials, workshops, and actually record interviews with workers and supervisors, which they had then to transcribe. Through these preliminary stages, students were immersed, not only into the specific skill of every craft, but also were confronted with each person's understanding of their own activity.

They were then asked to associate two or three areas of know-how from different companies. Students, as a result, accelerated the linking process between the companies by designing objects, merging together several locally available materials and skills. Because the cluster of companies is led by a furniture company developing custom-made furniture and interior design, students were asked to design interior objects.

Yoann got very interested in the smelters' know-how through the interview he conducted with the workers of the Rollinger foundry, and decided to include this technique in his project. We would like to underline here the fact that the documentation exercise led students to deepen their understanding of the various processes and everything related to them: gesture, accuracy of empirical knowledge, historical





and man-to-man transmission [Fig.3]. This was an opportunity to raise students' esteem for and understand the cultural value of the technical knowledge they were going to use. These interviews were also an opportunity for workers to get in touch with students and initiate a mutual interest. The visit of the laser cut company was also of interest to Yoann, as the quantity of pictures he took there testify. Despite the technique being contemporary, this type of activity remains connected to the historical metalworking competence of the Ardennes Region. Laser cutting is practised there, together with sheet metal production and welding. This company mainly works for agricultural machinery, construction industry machinery and rail transport. So when designers started to ask for invisible welds on their furniture and objects, this was a totally new working approach for the workers, who were used to making big visible welds on tractors as a visual proof of sturdiness.

Inspired by the regional heritage of metalworking and its imagery of fusion, Yoann started to design what was first thought to be a candle holder. The object would combine a cast iron base - to keep the heat of the light and offer weight and stability - to an aluminium tube whose function was to hold the candle. Over time the tube became the object of various types of cuts, until the cut would not only be an aesthetic effect but would also become a functional part of the object, as a handle. This handle needed to be high enough on the tube to keep the hand sufficiently distant from the heat of the candle. The candle holder was at this point becoming a lantern that can be carried around.

2.2 Creating meaning


The name of this object, *Heart of Fusion*, is a direct homage to the foundry work and skill of the region. By combining it with the new laser cut technology on an aluminium tube, this simple object diversifies the usual range of products manufactured by the cluster. Considering the traditional window-catches, ventilation grates and manhole covers the Rollinger foundry produces, *Heart of Fusion* makes the company step



Figure 4: from left to right: *Heart of Fusion* by Yoann, in comparison with an early 20th Century advertising of a cast iron heating stove. (c) Région Champagne-Ardenne - Inventaire général

into a new field and aesthetics. Although the formal register of the lantern is reminiscent of early 20th Century heating stoves, allowing for the fire to be visible through a grid, the novel shapes and features of *Heart of Fusion* might initiate a new emblematic production of the Ardennes Region, between local heritage and innovation [Fig.4]. But this object not only stands for technical and formal innovation; the context within which it was developed gives it an additional value. The co-production is not centred on the user - as is usually the case in design - but on the field of industrial and craft production. In the field of production and entrepreneurship, social innovation aims “to answer social issues and needs that neither the market nor the administration sphere manage to currently satisfy” and to develop cooperation and participation processes, “insisting on the relationships and interactions between agents” (Massotte 2013). The framework inaugurated by the Chair for students and companies was a way to create a strong





involvement of each stakeholder around the reinvention of traditional skills, aesthetics and uses, so that the Ardennes Region production field does not remain a thing of the past, but rather gives dignity back to the people involved. A main feature of this social innovation experiment is the intergenerational encounter which leads to multiple transmissions between workers, companies and students: historical and technical information from workers to students, but also aesthetics and innovation discussions initiated by students with the companies and workers. [Fig.5]



Figure 5: paper scale models for *Heart of Fusion*

But how can the meaning and the quality of the relationship created through this kind of encounter be measured? How can “the positive shifts produced on a defined territory” be made tangible? This is a research issue we did not manage to answer properly through this first experiment. The implemented framework worked successfully to effect real aesthetic evolutions, leading to a renewal of local production, but

the originality of the encounter and the cultural and social transformations involved in the organisation of the production method meant this remained invisible in the objects themselves.

3. Making Together Towards a Social Value.

3.1 *Vegetal Folly* – a project by Jules Levasseur, designer-research engineer at the Chair

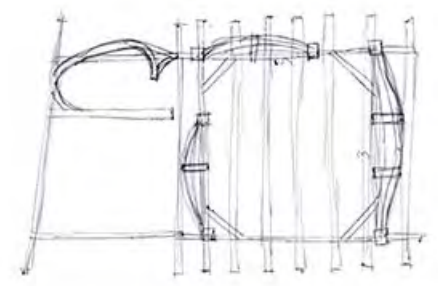
Jules had just graduated when he joined the Chair team in 2015, where he was employed as a designer-research engineer to develop his own project, which was a continuation of his graduation work. For this work, he had been in touch with a furniture maker from the Companions of Duty (an old guild of craftspeople, carriers of traditional know-how). He thoroughly appreciated the professional exchanges they had. So for this new project, he was looking to collaborate further with this particular group of people.

This is how he offered the carpenter from the Companions of Duty to design in conjunction with him 'micro-architecture' devoted to contemplation and sheltering in public space. He organised several drawing sessions with the apprentices in order to give shape to the wooden structure. After discussions and collective evaluations of the solutions proposed, Jules compiled details of several drawings to design a structure which met his needs – for instance he wanted curves – and was the result of singular thoughts of a what a shelter could be. From the model Jules made from the drawing, the Companion-trainer was able to define pedagogical steps to fit into their regular education program, but with a few deviations such as glue [Fig.6: A-D].





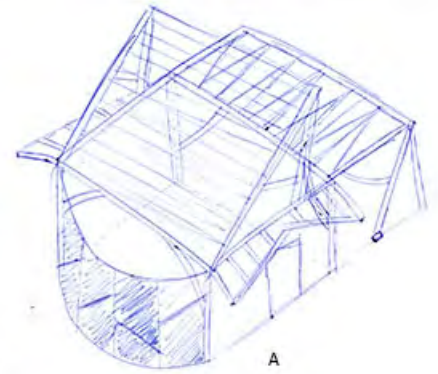
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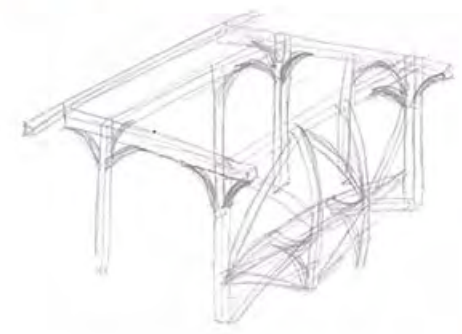
A



F



D



D



G

Figure 6: A. Various sketches by the Companions of Duty / B. Jules and the carpenters Companions of Duty in their workshop / C. The Companion-trainer and apprentices making a laminated wooden part of the architecture / D. The wooden micro-architecture made together by Jules and the apprentices Companions / E. Cast aluminium mould for the tiles and a piece of hemp & linen felt / F. Mr Dupré, director of the construction fablab, at work with Jules to thermocompress the tiles / G. Tiles made of different mix of hemp & linen.





Indeed, the Companions carpenters are famous for making roof structures exclusively with timber, without nails or glue. Although devoted to their ancestral know-how, the Companions also know they have to adapt to new demands and technologies. The collaboration with a designer is an opportunity for them to make their knowledge and skills evolve, and be able both to remediate historical monuments and to be agents for new types of architecture. This is how the collaboration was made possible, though navigating the twists and bypasses it involves.

Jules' project presents another development. This micro-architecture was conceived to support the demonstration of a new type of tile. These were first thought to be made of terracotta, such as the Ardennes Region's one industrial tile factory and its several small-scale manufacturers - usually for historical monuments. But the financial investment the development of new tiles represented for these companies was judged too high and Jules had to look for another solution. Since the 2010s, the Champagne-Ardenne Region, where the Chair is based, has invested in bio-sourced material research and development. Jules met a company producing and transforming hemp and linen, and as a young company working with an emerging material, they were lacking real applications for these materials. Through his project, Jules put forward the idea to transform the hemp and linen felt they produced into a component of roof covering. He then designed the shape of the tiles, and a mould to thermo-compress a mix of vegetal felt and resin. The mould was made of cast aluminium by the aluminium Rollinger foundry of the Ardennes Region, who were willing to take part to this new 'making' adventure. The tiles were eventually handmachined at a regional building and construction 'fablab', where Jules received very enthusiastic help from Mr. Dupré, running the 'fablab' [Fig.6: E-G]. His curiosity for this innovative project and the sense of belonging it brought about were important rewards for the young designer.

3.2 Towards a social cartography?

Vegetal Folly is the result of multi-modal collaborations. The shape of this micro-architecture itself, from its structure to the tiles, is a hybrid product, the outcome of a mixture of singularities, or from an "ecology of re-singularization" in Guattari's words. Creating this work offered the opportunity to feel the inclusiveness of such an experience, for all agents involved. Although Jules, as a designer, is mainly involved in the R&D processes, his project, on this scale, is a constructive example of how designing and making can activate an unprecedented productive ecosystem, that relies on collective intelligence and mutual esteem.

This time, for this project, the Chair team tried to develop a type of cartography, which would help visualise the various stakeholders involved. Indeed, as part of its fundamental activity, the Chair develops a productive ecosystem based on regional skills, know-how, resources in a variety of sectors (production, engineer and humanities research, education, project management, communities...). This ecosystem is embodied in an online interactive map, which any local actor is invited to use and to register into if she/he wants to pool together their resources with other actors. Each project implemented by the Chair uses this ecosystem and produces its own cartography of actors. But this type of cartography belongs, once more, to the production sector, and fails to unveil the nature of the relationships developed between the various agents of a project. Instead of being territorialised, as it is the case with the online cartography, we shifted the focus to time, and organised information along a timescale [Fig.7]. This type of representation helps understand the interweaving of phases, the variety of actors and the specific time when they could intervene. But if it helps to better communicate the development of the project and the nature of the exchanges between stakeholders, yet the whereabouts of social innovation in this, remained unfound.



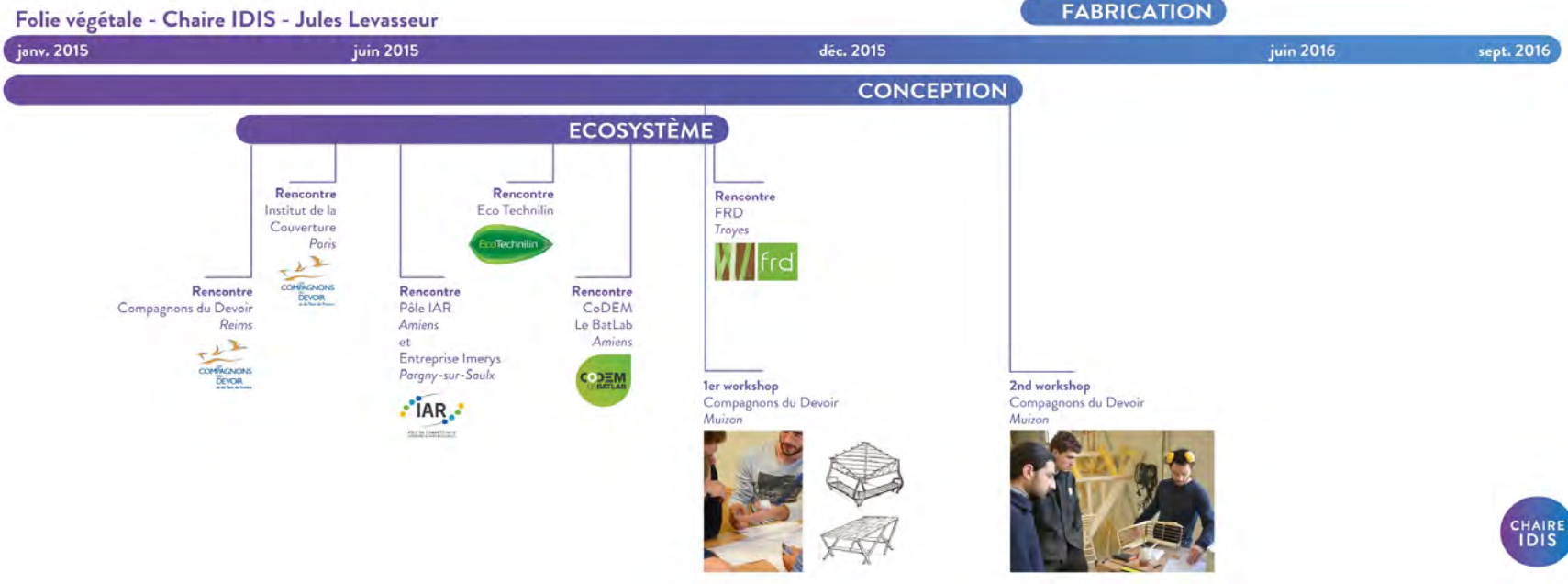
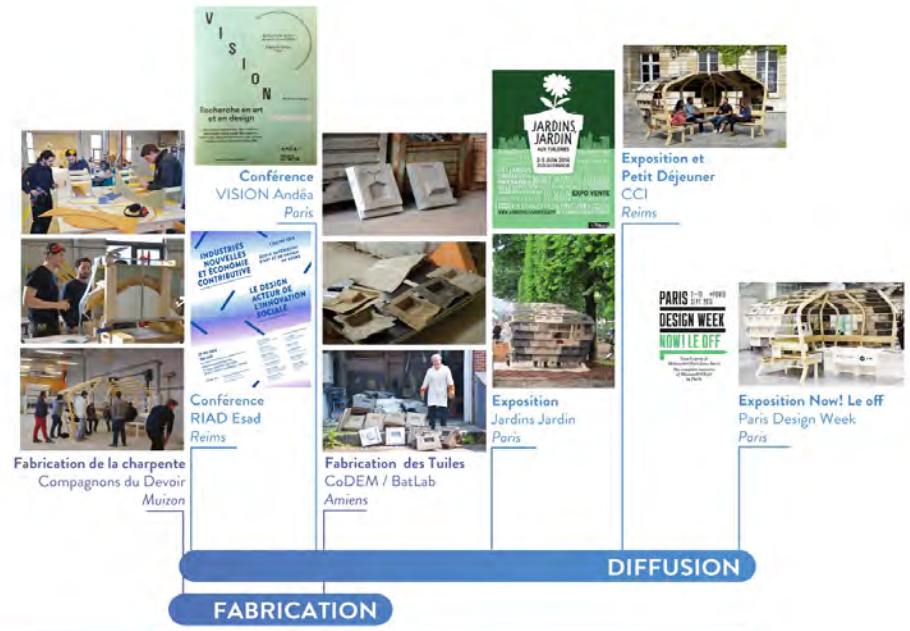


Figure 2: Timeline of the project *Vegetal Folly*, a cartography of production and actors.

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4. Visualising and Enhancing Social Innovation

The experience of these two projects developed in 2015 and 2016 led us to identify new needs and questions relating to social innovation, that we had not previously considered. We realised that even if the objects produced within the framework of the Chair reveal innovative features from the point of view of professional designers, their additional social value remains invisible to the general public. How then to make social innovation visible and graspable? And which tools can be developed to help object designers communicate this extra value of their projects? We assert that these can be peculiar issues for the field of research through the discipline of design, requiring the modelling and meditative skills of the designer - in this way carrying out epistemological investigations.

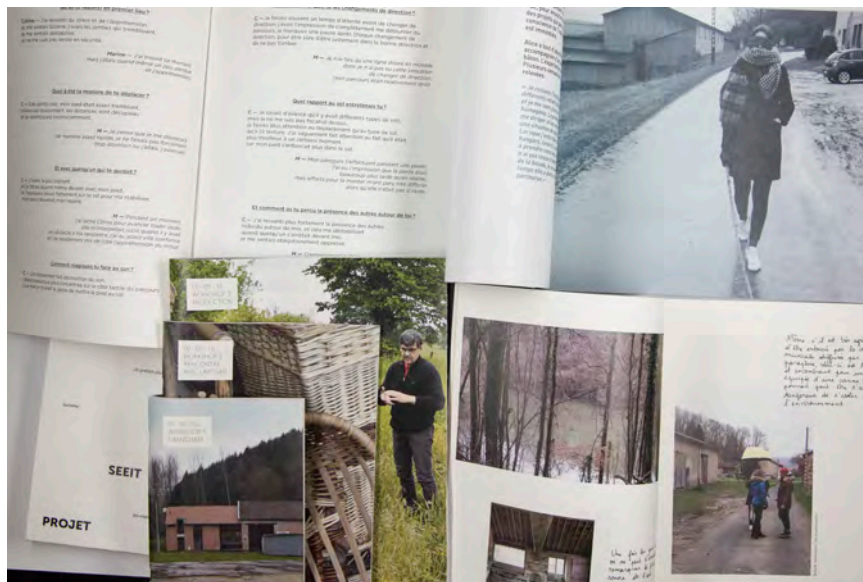


Figure 8: several 'experiential books' developed by Master students in the framework of the Chair.

For a new group of students invited to collaborate with the Chair, this took the shape of what we called 'experiential books' [Fig.8]. This work was created together with an anthropologist, who supervised each making of a book. The idea was to document the evolution of each project, by reflecting errors and potential solutions, but also discussions and all types of exchanges with the various individuals encountered to make the project possible. Every student had to develop their project, and systematically document every new element of conception. The anthropologist helped them to become particularly aware of the importance of recording conversations and interactions with inhabitants and the users involved, and to give shape to various systems of documentation [Fig.9-10].

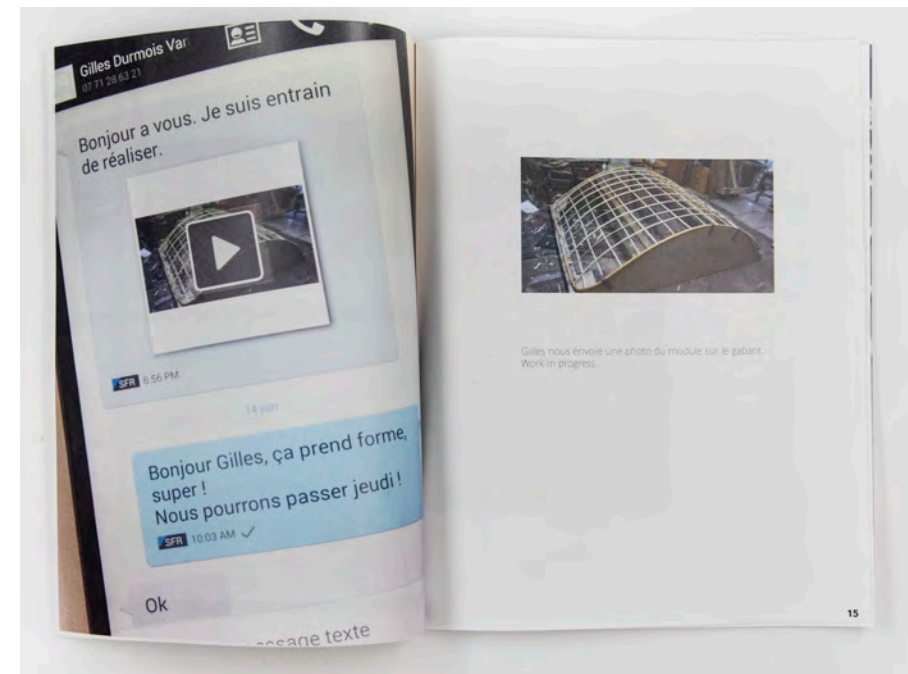


Figure 9: text message exchange between a basket maker and students. "Hello. I am making [the structure]." – "Hi Gilles, it's taking shape, great! We will come on Tuesday!"



Figure 10: two different ways of documenting interviews with local inhabitants and users: colour shift at the top, spacing in the page and name of the speaker at the bottom page below.

The experiential book is thought to be a live memory of the collective adventure, highlighting human cooperation. As such, it has an important role to play alongside the object being created, as it was to be given by the designer to the actors of the project. Secondly, it was also to be spread by its author as a communication tool of his/her work. Although slightly different, this object recalls the action of research as defined by Christopher Frayling (1993), “where a research diary tells, in a step-by-step way, of a practical experiment in the studios, and the resulting report aims to contextualise it. Both the diary and the report are there to communicate the results”.

The difference here is that the experiential book’s range goes beyond the studio, to reach the exterior and field survey. It acts as a support to reveal the reality of social interaction, and how this latter intervenes and shapes the objects. The experiential book exists then as a shift in the practice of object design, which used to concentrate mostly on the creation of shapes, materials and techniques. Here, it is also about stepping into the complexity of human interaction, and researching ways to make production habits and culture evolve towards real co-construction processes, which benefit all involved.

Another tool to mediate the social innovation element of projects is under construction at the moment. It is thought to be a second type of cartography, the first one dealing with production to be completed. Once object designers have realised their projects, they are intended to collaborate with graphic designers, and conceive together graphic objects and ways of mapping to be able to explain the specificities of the social network developed for and around the project.





Conclusion

“Perhaps emancipation from [...] the practices of negative sociality (self-interest as the basis of society) will make it possible for a new aesthetics to provide a source from which new patterns can develop and fresh models emerge that we can pursue in the quest for positive culture.”
(Berleant 2012)

Since the 1980s, philosopher Arnold Berleant has been an advocate for an aesthetics of perception, going beyond the field of Art to reach and engage with society and politics, which he named the “aesthetics of engagement”. Designing objects and research situations enabling participation, enabling to reconnect with individual creativity and emotional awareness is not an easy task, for it remains mostly invisible and intangible. But through the experimental work of the Chair *Industry, Design and Social Innovation*, we look for ways and tools to help new generations of designers engage with social, cultural and economic issues so that other value systems emerge. The projects presented here bare witness to the possibilities of working differently, and creating “new patterns” and “fresh models” that have real meaning, in a specific place and historical context, for the individuals who have contributed to them. We eventually hope to help understand wealth, less as a financial fact, but more as the multiplicity of shapes, features and aesthetics that collaboration can reveal, articulated by the social cohesion of a region.

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