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3. ESPERIENZE CONTEMPORANEE





Research by practice in the alpine environment: discovering the activity of *MonViso Institute* in Ostana. Dialogue with Tobias Luthe

Edited by Eleonora Gabbarini

New ideas often come from external influences, different paths that are essential for developing an economic model that's not based on repeating the past but on three pillars: cultural traditions, natural environment, and new ways of thinking. This happens at *MonViso Institute*, in the Western Italian Alps, where a group of researchers, designers and entrepreneurs has been involved in place-based research into transitions towards sustainability, regenerative design and architecture, and building a deep relationship with the social, cultural and natural environment. The Institute's activities involve education in new technologies, climate change, permaculture, the circularity of materials, design with bio-composites, regional economics, which is embedded in outdoor projects in cooperation with European universities and other environment-oriented institutes. Together with the cultural and social realities that have been locally developing during the last decades, *MonViso Institute* takes part in the regeneration process of the alpine village of Ostana (CN), by representing a significant, concrete programme that can be out-scaled to describe re-inhabitation strategies that may interest several mountain territories.

Tobias Luthe

Trained as a forest scientist, Luthe currently works as professor of Sustainability Science and Regenerative Design, affiliated with *The Oslo School of Architecture and Design*, Norway, and *ETH Zurich*. He is co-founding director of the *MonViso Institute* in the Italian Alps, and co-founded *Grown*, a design-as-nature lab, that has won industry awards for bio composites. He is also a mountaineering guide and photographer.

Keywords

Environment, systemic design, sustainability, research by practice, climate change.

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MonViso Institute is a real-world mountain laboratory for sustainability transitions and regenerative design based in Ostana (CN), in the Western Italian Alps.

It was co-founded by Tobias Luthe, an academic transdisciplinary hybrid who, with his polyhedric education, has been practising for years in environmental economics, wood technologies, mountain systems and design. At MonViso Institute, he and his colleagues have been carrying on placebased research for seven years, working on environment, permaculture, design, and architecture. These activities have concrete outputs, where we can mention the first hemp bio-composite skis and the designing and building of the passive net-positive "regenerator-house" Il Doppio, where this interview was kindly hosted.

All photos credited to Tobias Luthe, MonViso Institute.

Opening picture

The nearly finished net-positive passive house "regenerator" Il Doppio with Monte Viso in the background.

Fig. 1

MVI design associate and PhD fellow Haley Fitzpatrick (AHO Oslo, PoliTo) is insulating the gap between the threepane passive window frames made with chestnut wood from regional supply chains, and filled with cork insulation, and the wooden walls of II Doppio net-positive passive house, with hemp fibre fleece. We are in Ostana, in the Western Alps, which is known to be a place where regeneration and re-habitation have been meaningful words through the past decade. Why did you choose this place to locate the institute and how was such a research and innovative reality perceived by the local community?

I grew up learning to build because of my family: my father built our house four times, so from my childhood on I was involved in it, and I learned everything to be able to build a house on my own. Then twenty years ago I met Eric Berlow, who had just bought a piece of land in the high desert of California, near Bishop and Yosemite National Park, where he wanted to build a work-andplay retreat: at that time, it was difficult to bring these ideas to America. I got really fascinated by Eric's project, so I went over there for a year with a scholarship, and with this experience I came back to Europe, also wanting to build something similar with the same purpose. My first connection with this region was in 2006 during the Winter Olympic Games when I came here for working as coordinator of the environmental youth camp; then I guided a ski mountaineering group in Valle Maira and I got very fascinated by this area; not just because of its nature and culture, but also because there were lots of opportunities to innovate: the region was in a reorganization phase of resilience where systems are more open to change, and this is suitable for innovating. And we could find the same situation here, in Ostana, where everything was abandoned and for sale, but the potential was visible, and the people were also friendly and open because they actually needed change.

We were trying to find a place with a small group of houses, accessible enough to come from Switzerland, South facing for solar energy, secluded enough to be free to work without bothering any neighbours, and with the possibility to make outdoor activities, i.e. skiing, without driving.

During a two-week long trip through different valleys, we came here, and we found strong connection points: some activities were opening, we could talk to people, and the now former mayor Giacomo Lombardo was very open and supportive because he knew that Ostana needed new people and new ideas.

Finally, this particular *borgata* fit perfectly, because it was a laboratory space, where you can bring groups of students, and it was also contained enough to innovate from within.

Is MonViso Institute in any way connected with the universities you work with, or is it more of an independent reality? How do you deal with economics, and which is the target public that you want to involve?

I bought this property privately seven years ago and then we founded a cultural and non-profit association in Turin, to manage and develop the campus, involving different people and founding members. At first, it was all private money. We wanted to do regional research connecting regional development and universities because these realities already exist somewhere else. Unfortunately, and most of all because of disciplinary boundaries, it was much more difficult than I expected. So, we started to bring in money by hosting masterclasses, and PhD summer schools, offering this as a real-world case study to work on materials, energy issues, and permaculture and showing the value of the opportunity to

work here. I also hoped for public funding, but this was also difficult.

Now we have been investing here a lot of resources, and the vast majority goes into regional processes, like developing regional supply chains and staying as local as we can for the construction of the buildings. There's now a German bank, which helps for a little part of financing, but everything else is coming directly from private resources, and from friends. In the future, I hope to extend our economic potential: for now, we are making an income by hosting groups for different activities linked to systemic design, architecture, bioengineering, or permaculture, but we also do consulting work, for example with Camping Ca'Savio in Venice. We are building up something that's future-oriented, where architecture is a key element, but it involves the local economy, up to the question of how we can innovate mountain economies. We had to develop a financial model from the beginning, but for now, it's pioneering.

Since you are based in a location with a lot of heritage in terms of vernacular architecture, is your building activity somehow oriented to preserve this heritage?

We talk a lot about passive houses, but still today it's rare to build one and develop it further because it is not at all systemic and it doesn't investigate questions such as cross-scale design and circularity of materials. We must find ways to work in

both directions: maybe the standards shouldn't be so rigid from the energy perspective, but also the heritage needs to be more open. Traditions are, by definition, dynamic, and whenever we try to preserve something as a status in time, it becomes a museum, and it will not survive.

We see that of course a lot in different regions, but especially here where we grab so hard on what has been. There was something before these houses, so the one moment in time does not exist: it is one moment of many moments. If we preserve a building, it then needs to live further. Here, on this campus, we are keeping one of the houses in a very traditional way, to show how vernacular houses were built in the past and to show a trajectory.

This is interesting for both students from different disciplines – because they all play a role: economics, social sciences, architecture, engineering, ecology, and psychology – but also for visitors, and here the importance of having a good communication system is very high

The most important success factor is to have this flexibility, this diversity of seeing potential synergies and designing with them. I like to call it organic emergence: it's about understanding that systems are emergent, that they're complex and we cannot at all plan for them. What we can do is accept this and have organic and flexible ways to navigate through them; without this orientation, there is no chance to go further.

The war in Europe takes us into consideration: all rich Western countries maybe finally got aware that we've been sleeping for way too long and that we should manage our forests and overall regional resources better, and build houses differently, use less nuclear power from France or oil from Russia. The sun is still an almost unused source of energy, still now in 2022.

MonViso Institute engages a lot in the construction field, which we know to be particularly critical for pollution and its relationship with the environment: as we said, passive technologies, circular materials, and control of water and energy supplies, for example. You have here Il Doppio, an experimental building where you put a lot of care into these aspects. Together with your focus on sustainability, systemic design and interdisciplinarity, in which ways is the activity of the Institute related to the nature which surrounds it?

First, a real-world laboratory it's both a place and a mindset, where one can design, iterate, and prototype within complexity, despite incomplete knowledge. It's a systemic way of working and a state of mind, from where we take learnings and make it accessible to broader networks. Part of this project is embodying a system from within and having this inside-out perspective: this is what a real-world lab allows.

From a psychological point of view, embodied learning means being part of a system by understanding the perspective of local people (even we should first discuss what "local" could mean).

Above connecting to the social and cultural environment, here we experience the natural environment, and its micro-seasons: we must re-learn to see nature as made of living elements, with which we relate and are part of, and that's the close connection to the environment that we have in here. Nobody can own nature.

There is a deep connection to the place, independent from our social complexities, and even much stronger. When you come in deep relation with ecology, plants, mountains, and animals, you finally turn out to be part of this, obviously, in addition to all the many open people we know here. Most of the people that come here are friendly, very supportive and open-minded so we can build very good relations.

This place connection goes further because we think about contemporary ways to use some of the traditional materials, also pursuing new types of knowledge. In general, we search for more flexibility. We try to search for the connections between what comes from outside and what is already here, without being rigid in one direction.

As we said, lots of the activities of the Institute have a strong bond with both nature and the socio-cultural environment: experiments with natural materials and in building technologies, or landscape interventions with hemp fibers or Paulownia wood: between these projects, which one do you consider more relevant in describing this connection?

There are a lot of good examples here where we think about what we need now in this specific place, but also about what was here in the past. We learn about local techniques and materials, and we reframe them, to fit here again for a different future. We also bring in new ideas, like growing the Paulownia wood, which, in addition to hemp and considering climate change, is potentially a very smart use of the landscape. We developed hemp experience days here, with practitioners and students, to learn about engineering with local hemp and to see the whole hemp system. We also experiment with local chestnut wood and recycled plastic. This goes together with outdoor activities, through which students can learn about future tourism and climate change.

Fig. 2 Ski and splitboard building course with regenerative materials offered by Grown Design on the MonViso Institute campus. The course was prototyped in this local setting, developing infrastructure and processes, using locally grown hemp fibers and wood types.

Fig. 3
Handcrafted steps
for the wooden spiral
staircase in the II
Doppio, made from
ash, maple, cherry,
larch, and laburnum
wood grown locally
at 1500m a.s.l.
The staircase is
designed based on
such locally available
materials, centered
around a trunk as its









During the inauguration of Il Doppio, we showed that even if outside it was -10 °C and we had no heating systems, inside we had +17 °C, and because of all the crowd it was too warm and finally we even had to open the windows: in this way, people understood what we do, our way to design as nature. The social experience of being here together, and showing how this building works, creates a huge learning impact. We also used regional stones (gravel of limestone) for the sound insulation through thermal mass in the upper floors, and below it we put recycled cardboard, to prevent dust coming through the ceiling, which normally is made of types of plastic foil; all the flooring will be made by local chestnut, as well as the windows and the doors.

Architecture is now becoming part of a multi-system of design principles, where we must recognize a clear hierarchy: the first challenge is now climate change, so these houses here, in the future, will all need to help produce electricity, save energy and at the same time to preserve biodiversity and the environment which surrounds them.

Since you often connect with the local community and open *MonViso Institute* to people, what kind of public value do you see in the activities that you have been carrying on?

From the beginning, we have been hosting public hearings and learning activities, like workshops and PhD courses, even a Master course from Lugano in International Tourism and Economics, but we also help in practical work like maintaining trails or doing visual mapping, involving other local actors. We have been working on this connection with the people for seven years now.

We give a lot in terms of economic potential, revenue ideas and prototyping, but also science and education. Ostana is now moving into a new form of tourism, where groups come for longer times to co-design, to learn, with a social commitment, and other realities like ours are working with similar purpose, for example, the cultural cooperative *Viso a Viso.*

We are getting deeply involved in this relational way of engaging. Therefore, I'm really satisfied to have been able to have a general connection with the place.

We have also accepted our satellite perspective: the main reason why we came here is to elaborate on how to do things differently, which sometimes may disappoint someone but is part of innovating in a system.

I imagine that an important part of your research is to share knowledge and experience not



Fig. 5
Installation of the three-pane passive windows, with frames made of chestnut wood from regional supply chains, insulated with cork from Southern Italy.



Fig. 6
The communicative center of the MVI campus is the arena, with space for up to 100 people and the center stage that is built from a larch wood deck on top of chestnut trunks, positioned on local stones. No cement or iron was used, other than screws for the deck.



only within a University context but also with other innovative realities similar to yours.

We are connecting with different types of innovation spaces, and it is also part of my work to investigate them, both as physical realities and as independent ways to do research.

We are taking our prototypes to Mallorca, Norway, California, and Switzerland. I also work with the University in Oslo, we are connecting with the bio-regional learning centre in England and cooperate with other similar realities based in the Alps. All these experiences build capacities, and therefore it is so important to exchange.

I think the most important thing is to inspire each other and get the energy to do this kind of activity. There are so many things we can take with us from these exchanges, starting from mindset and motivation.

Cultural and research realities may be very strong means to help the regeneration process of mountain territories, mainly showing a different path for development. In which ways do you believe that science-based realities, often coming from abroad or in any case with a strong bond with cities, could help suggest new perspectives?

These processes are often based on relationality: the alpine-urban relationship is getting more and more important. Mountain communities should welcome a strong connection with urban economies, of course in terms of receiving from them new ways of thinking and new ideas. We should try to overstep the pervasive value-thinking, based on competition, which is still so widespread in mountain areas, and look towards systems-thinking.

Traditional land use, i.e. cow farming, and the culture around them are so deeply intertwined in the mountain culture, that it's almost impossible to make a critical reflection on them, even if we are aware of their problems: methane, overproduction of dairy products, trampling effects on the soil, nitrogen going into the watersheds and spreading everywhere, just to mention some of them.

To be more regenerative and resilient we must rethink land use and how to manage the forests, both providing a working economy here and learning to appreciate local resources. Zooming out from our perspective and recognizing the potential in these innovative realities. This is happening here, where we created connections between different types of thinking.

The former mayor Giacomo Lombardo had a very strong vision for regenerating this place, based on three pillars: the Occitan local culture and its richness, including its food, language, dancing, and architecture; the attractiveness of the place, surrounded by natural wonders; and, finally, the potential of bringing here new thinking, coming from outside.

And therefore, this was successful, because he set the vision and he had very open and supportive people around him. This combination allowed this to happen, and this goes way beyond this single case here.

Which goals do you foresee for the future of this Institute? Which are the future projects and what do you want to realize in the years that are coming?

We have been here now for almost seven years, from when we started to buy the property, and a period of seven years often means some sort of phase in life.

So, we are also rethinking what will come. Bringing in people into courses and trying and experimenting with very basic needs and enthusiasm, worked very well until now; but today we would like to focus more on campus development, and on getting new partnerships.

We would also like to explore different models of shareholding, to co-invest in the group buildings; in this way we could reach sort of a sub-community and create further connections.

The next years will be focused on developing further infrastructure, opening also for-profit branches, where we can engage in consulting work; also developing a master's program with ETH, strengthening collaboration with other universities, bringing professional groups and students here and engaging in regional projects.

We want to be open to natural energies and practice reconnecting to the environment: just to be in a place and listen. It's not so much about planning, but more about confidently saying that we are listening, and asking ourselves questions, but we are also in the full process of acting.