Holzbau. Timber as a tool for interpreting the architectural production in Vorarlberg over the last 25 years

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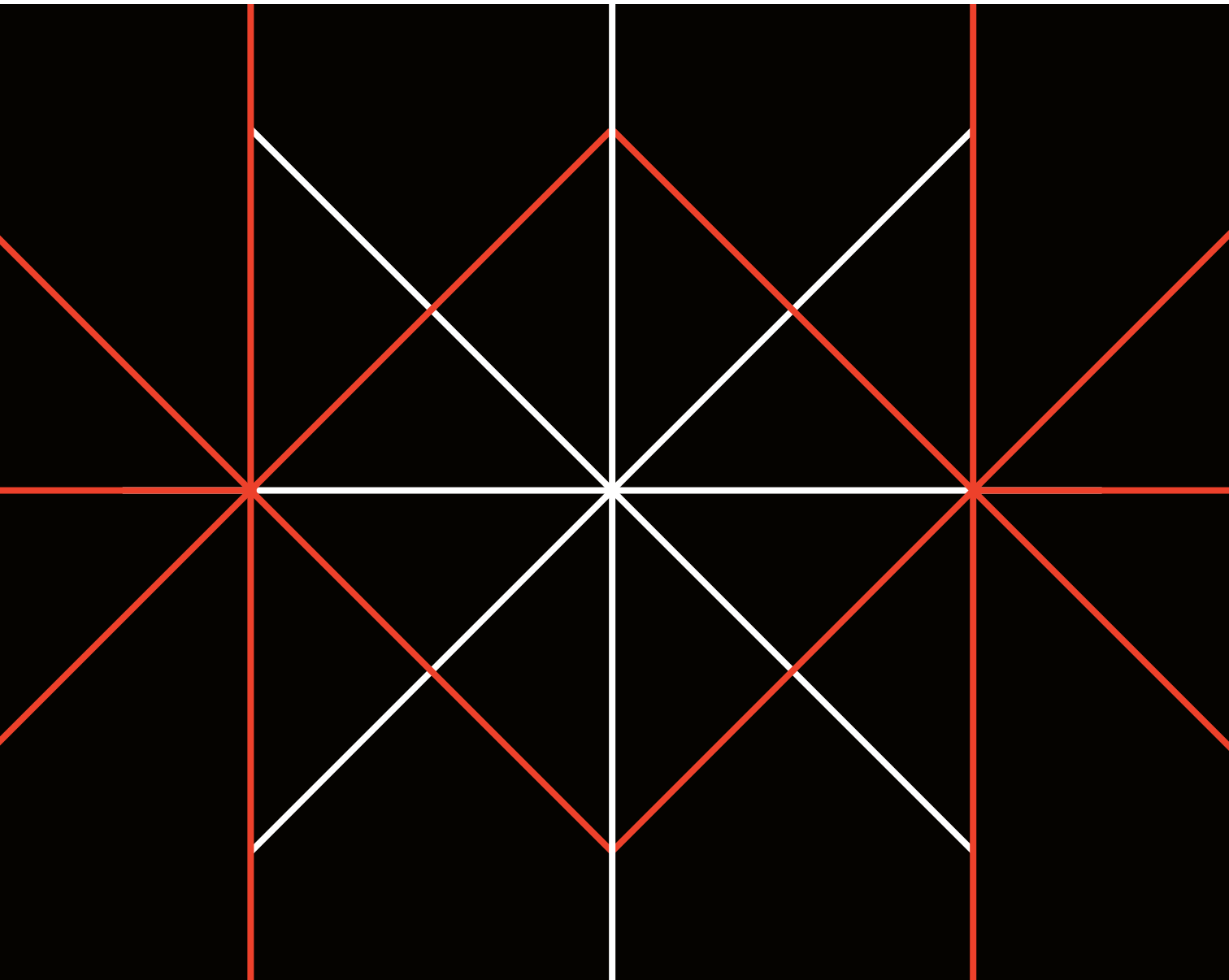

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PhD in Architecture.
History and Project

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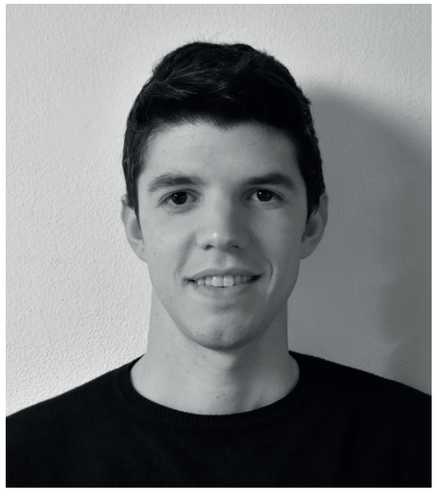
HOLZBAU. TIMBER AS A TOOL FOR INTERPRETING THE ARCHITECTURAL PRODUCTION IN VORARLBERG OVER THE LAST 25 YEARS



Cristian Dallere

Cycle
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Research Group
IAM – Institute of Mountain Architecture

During the last century, starting from the 1930s, wood, understood here as a building material, was almost totally replaced by materials such as concrete and, to a lesser extent, by steel. This phenomenon can be described by dealing with many aspects. The complex legislation and modernist influences have been decisive in eclipsing wood culture in a marginal position in the construction world.

We are in a historical period in which timber construction is experiencing a critical paradigm shift; the beginning of the 21st century has paved the way for more significant technological innovation with the evolution of engineered wood, for example, Cross Laminated Timber and numerical control machines. In addition to the essential innovations in the field of technical standards, wood has returned forcefully to establish itself and develop as a building material.

Wood, by definition, is a material of natural origin; it is renewable, therefore, privileged for enhancing local production and the circular economy. Precisely because of its natural character, it is an anisotropic material; this aspect is the reason that justifies the need for in-depth knowledge of the material aimed at its use in construction. The application of wood in construction, at this time, shows, on the one hand, a growing interest from professionals and clients. On the other, it requires a conscious and responsible approach capable of filling the knowledge gap that has persisted for a long time. Entering the subject, one immediately realizes how necessary spatialized knowledge is in all wood-related areas, from the material's chemistry to silviculture and forest management practices up to more specific processes. To further justify the tangibility of this area is also the now evident lack of training in the field of wooden construction. Today there is a need to rebuild a new culture of wood to address the significant need for regulatory references, specific legislation, training courses and workers. Addressing these aspects is central to building solid foundations so that wood can establish itself as a building material, forming part of a complete supply chain and where knowledge becomes the cornerstone of the process.

The introductory part of the research aims to outline a geographical and cultural perimeter of the research, a territory that can solicit reasoning around the use of wood is the Alpine territory, an environment rich in raw materials and where technological innovation always remains firmly rooted in the culture and craftsmanship of processes; think, for example, of the historical and visionary carpentry of Austrian Vorarlberg. It is easily understood that wooden construction is strongly linked to a specific region's environmental, cultural, political and economic issues. Therefore, the geographical definition of the Alps represents a challenge since the borders are variable, for reasons of an economic, cultural and social nature, but also of a geological and climatic nature. Werner Bätzing states that this variety of factors implies no static and immutable definition of the Alps (Bätzing, 1987). Therefore, every study, whether of an architectural, social or economic nature, must start from analyses and interpretations based on regions to relate the object of research with a space, a society and an economic and cultural system. Speaking of wooden buildings, going beyond the national border within a changing geographical perimeter is essential. For this reason, the thesis takes its first steps within an emblematic region and subject of considerable interest on the part of architectural criticism: Vorarlberg. In recent decades, this region has continuously developed new methods of processing and exploiting wood, creating a whole chain of value creation that ranges from forest management and wood processing to contemporary building culture (Hofmeister, 2019).

After an introduction to contextualise the research work from a geographical and cultural point of view, the thesis develops into six chapters. The first chapter will define the imaginaries and meanings of timber construction in the case study region. Next, the topic of the timber production system will be addressed. In this sense, the research will have a solid applied character. Understanding the dynamics and directions of technological innovation within the region and in the most important research centres in the Alpine environment will also be essential. Not a secondary topic will be that of wood as an engine for local development; the Vorarlberg region has one of the most efficient systems at the European level for the valorization and promotion of the local wood industry. In the fifth chapter, a selection and reading of architectures within the region will be made, and recurring forms, building systems, and relationships between the material and the space design will be analysed. Finally, comparisons will be made with other Alpine regions that, for different reasons, stimulate specific considerations.

Therefore, the research question can move towards understanding how the engineering, industrialization and innovation of wood are reverberating on architectural production, the economy, society and the cultural dimension. The exemplary case of Vorarlberg is configured as a good practice capable of constituting a cultural basis for comparing with other Alpine regions, bringing out central issues for understanding the phenomenon linked to the design of timber buildings.

Bätzing, W. (1987). *L'ambiente alpino. Trasformazione – distruzione –conservazione.* Milano: Melograno
Dangel, U. (2017). *Turning point in timber construction.* Basel: Birkhäuser
Gauzin-Muller, D. (2009). *L'architecture écologique du Vorarlberg. Un modèle social, économique et cultural.* Paris: Le Moniteur
Hofmeister, S. (Eds.). (2019). *Holzbauten in Vorarlberg.* München: Detail
Kapfinger, O. (1999). *Architecture in Vorarlberg Since 1980.* Stuttgart: Verlag Gerd Hatje

Abbundhalle, Reuthe, Vorarlberg, Hermann Kaufmann, 1990
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Pfarrhaus, Krumbach, Vorarlberg, Bernardo Bader, 2014
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COLOPHON

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“The PhD Program in Architecture. History and Project (DASP) was born out of two long lasting traditions of doctoral level studies and research in the area of Architecture at Politecnico di Torino. The PhD Program programmatically investigates the complexity of architectural cultures starting from the multi-disciplinary and trans-disciplinary interweaving between the history and the design of buildings, cities, territories.

On the one hand, in fact, urban and architectural composition and technology of architecture favor an interpretation of the project as a tool for measuring the stratifications of theoretical elaborations, technical innovations and modifications of built environment.
On the other hand, the historical disciplines for architecture and the city, far from a local vision and thanks to the cooperation with other histories (the economic, social, anthropological and aesthetic ones), trace paths that can be traveled by architects and urban planners, but also by other humanities scholars, such as philosophers and linguists”

Marco Trisciuoglio

(from the document Proposal for the accreditation of doctorates - a.y. 2023/2024, presented to the Italian Ministry of University and Research on June 5th, 2023)

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