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ANNA WOJTAS HARAŃ*

ON THE ROOF OF EUROPE – THE FROLICS OF ARCHITECTS

NA DACHU EUROPY – IGRASZKI ARCHITEKTÓW

A b s t r a c t

The natural landscape provokes artists to revive one. Architects overcome technical, physiographic, and custom limitations and they picturesquely blend their works in with the richness of nature. Many benefits may accrue for the region and tourists from this bravura, but at the expense of losing some of the innate values. In this article, the problem is presented intentionally in an exaggerated manner, recalling extreme locations.

Keywords: mountain landscape, tourist infrastructure

S t r e s z c z e n i e

Krajobraz naturalny prowokuje artystów, aby go ożywić architekturą. Architekci pokonują ograniczenia techniczne, fizjograficzne, zwyczajowe mniej lub więcej malowniczo wkomponowując swoje dzieła w bogactwo form przyrody. Wiele korzyści wynika z tej brawury dla regionu, turystów, kosztem jednak utraty pewnych wartości pierwotnych. W artykule zaprezentowano ten problem w sposób celowo przejaskrawiony przywołując ekstremalne lokalizacje.

Słowa kluczowe: krajobraz górski, infrastruktura turystyczna

* Ph.D. Arch. Anna Wojtas-Harań, Department of Housing and Industrial Architecture, Interior, Rural Planning, Landscape, Visual Arts and Structural Systems, Faculty of Architecture, Technical University of Wrocław.

1. Introduction

In the past only seasoned climbers could experience the charm of the high mountains. A simpl way to reach the places that were reserved for the few for a long time. An important turning point was to discover the means of transport such as the rack railway, cable car, and then lifts. Soon, the desire for entertainment in extreme locations was revealed. As a result the need for essential building infrastructure emerged. A pristine landscape is a perfect field of activity for architects, like downhill skiing on powder snow – only for the elect. On the one hand, there are enormous environmental difficulties, but on the other artistic freedom and precedence. They bravely began to conquer the peaks by playing with nature, however.

2. Dilemmas

We experience changes in ambient conditions when we reach the peaks. The climate becomes more severe and unpredictable at high elevations. There is long-term snow zone at the highest points. Permanent ice covers area at the level (e.g. in the Alps) between 2500 and 3200 metres above sea level, depending on the exposure of the slope. The rules of wind, sun and snow govern at these altitudes. The remote location complicates the building design process, as well as their implementation and exploitation, because of atmospheric precipitation above the norm, the multiplied force of the wind, extreme temperature fluctuations (with a predominance of very low), and the thin air, low pressure, and frequent fogs. Transportation of construction materials, which often becomes a logistical challenge, difficult working conditions in areas where just a little effort can speed up the heart rate, the abnormal behaviour of building materials, lack of access to the media – these are some of the problems that need to be analysed. So, does anyone build in such a hostile environment? Does anyone respect the primacy of nature, or demonstrate the ubiquity of man? Here are some examples of showing bold architectural solutions which challenged the elements.

Refuge du Goûter

This new shelter, designed by Swiss architect Hervé Dessimoz from Groupe H, stood on the site of the previous building. The old one, dating back to the sixties, was torn down in 2013. Refuge du Goûter [6] was built at 3835 m.a.s.l. in the Massif du Mont Blanc in France, on the popular route for climbers going to Mont Blanc. The old hut was wasteful in terms of energy and too small for the growing number of visitors (about 30,000 climbers every year attempt to conquer Mont Blanc). It was considered that the spherical shape of the building links aesthetics and the technical constraints of the environment. According to the authors, the four-storey building is environmentally friendly and compatible with the principles of sustainable architecture. It is self-sufficient for energy and water. The hostel is only dependent on gas supplies to prepare meals. The building is made of prefabricated elements, with parameters adapted to the capacity of the helicopter. The support structure is made of laminated wood elements with a minimized thickness. The trees were examined by ultrasound before harvest to choose the most regular specimens. The biodegradable adhesives are free of formaldehyde. The façade made of grey, brushed stainless steel is

resistant to winds up to 240 km/h and temperature changes. The triple-glazed windows transmit the force of wind up to 300 km/h. The glass was subject to low pressure pre-aging before installation. The wood fibres of the insulation are biodegradable and guarantee low energy demand. The construction work was carried out in particularly difficult conditions due to the lack of oxygen. The investment is seen as an expensive prank. However, a closer look gives the sense of this spectacular shelter on the way to Mont Blanc, commonly known as the Roof of Europe.

Wildspitzbahn Stations

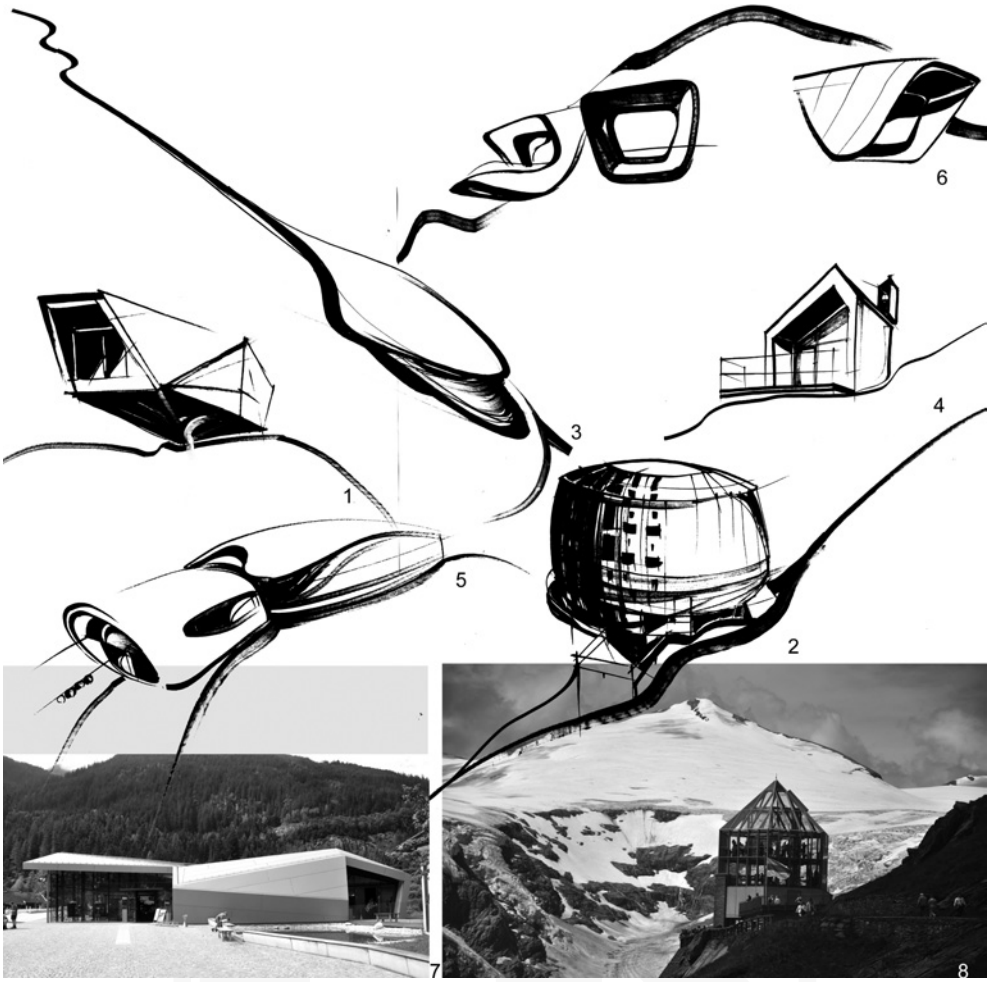
The project for two funicular stations, designed by Carlo Baumsehlager and Oliver Baldauf, is given as an example of democratization of the Alps. It broke the barrier to reach the uppermost glacier – Pitzal Glacier in Austria – (and at the same time a ski area) for tourists, even having difficulty in movement. The valley station is located in a valley at about 2800 m.a.s.l. The mountain station with visitor centre and café were designed at a height of 3440 m.a.s.l., on the top of Hinterer Brunnenkogel. The upper station is mounted on a rocky ridge. The organic shapes of the cold-formed sheet metal façade and low volume evoke associations with fragments of ice cover or shellfish. The functional layout and the type of building materials have been adapted to admire the views of the mountains. Many elements are glazed and made of special quality glass that carry extreme wind loads. The construction is based on precise prefabricated steel components assembled on site. It is a daring feat of engineering taking into account the natural conditions where it arose. But it is a powerful marketing tool as well [7] in the fight for customers and distinction among other Tyrolean resorts.

Museum at the Timmelsjoch [4]

This is the museum designed by architect Werner Tscholl, at an altitude of 2509 m.a.s.l., on the Timmelsjoch, near the tourist route connecting Passeiertal and Oetztal, on the border between Austria and Italy, in the North Tyrol. The property is part of a cross-border program designed to allow people to learn about nature, history, culture, society, and the economy of the region. The project includes four other buildings (information roadside stations). Pavilions in the form of faceted stones and boulders refer to the colours and shapes observed in the landscape. The joke by the architect, who is copying countless originals in the Alps, is intended to boost the region economically.

Messner Mountain Museum [8]

Zaha Hadid designed the museum that was realized between the crown of the Zillertal Alps and the Dolomites, at an altitude of 2275 m.a.s.l. and immersed in the peak of Kronplatz. It presents the theme of mountains. The exhibition begins in the underground hollow in the rock and ends with a view of the surroundings from the terrace of the aboveground part of the building – resembling a piece of the glacier. This is the sixth and final investment of climber Reinholds Messner in a series of museums situated high in the mountains in South



Ill. 1. Museum at the Timmelsjoch
Ill. 2. Refuge du Goûter
Ill. 3. Reisseck Bergbahn station
Ill. 4. Chapel in the area of the Stubai Glacier
Ill. 5. Wildspitzbahn station
Ill. 6. Messner Mountain Museum
Ill. 7. Visiting centre near the waterfall Krimml
Ill. 8. At the foot of Grossglockner
(drawings and photos by author)

Tyrol. The project fascinates with its extravagance and the investor with his impetus. For this Messner "…irritates with megalomania when asked about the plan to build five museums in the Italian Alps, he blurts out without hesitation: "I`m building it not for South Tyrol, but for myself" [3].

Reisseck Bergbahn station [5]

The restaurant with a large panoramic terrace and the station of the mountain railway Reisseck Bergbahn is planned at a height of 2250 m.a.s.l in Carinthia in Austria. The Viennese architects Zechner & Zechner proposed a natural form that duplicates the contours observed in the field. The roof recalls an overhanging snowcap. The ground floor is reminiscent of a cave. The shapely solid diversifies the alpine landscape, disturbing its impeccability.

Not always, however, do we stick with the individual, spectacular work of architecture in these exceptional locations. The building complexes are formed. They are compact or dispersed, as a result of the continuous replenishment of the optimal composition.

For example, one could not reach the highest glacier in the Eastern Alps – Pasterze near the highest peak of Austria – Grossglockner (3789 m.a.s.l.) being tempted to stop by some kind of architectural sights, scattered along the alpine route. Already reaching the highest point of the road, it is easy to overlook the biggest sensation – walk the rocky path to the glacier, being lured by range of shops, information centres, restaurants, cinemas, and observatories. Similarly, the movement of tourists is discharged in area of the Europe's largest and the fifth biggest waterfall in the world at Krimml in Austria. We just appreciate the most impressive views which are at the beginning of the trail, at the foot of the waterfall, when we are tired after 8 km long, very steep, winding route, deluded by restaurants, viewing platforms, visiting centres, shops. Year-round winter sports centres are expanded in the area of glaciers – as in the area of Kitzsteinhorn (3203 m.a.s.l.), which attracts a large variety of gaudy architecture: a cinema, a viewing platform, an information desk, a restaurant, a train station and an ice arena: slides on the summer snow, snow beaches, an ice bar, and many others attractions. When the repertoire of cubic proposals is exhausted, other viewing platforms with shocking shapes could be installed. There is a platform that was hung on the rock in the area of the Stubai Glacier in Austria at an altitude of 3210 m.a.s.l. This was designed by LAAC Architekten from Innsbruck. The structure of twisted girders, made of steel corten, disappears under the snow for six months during the winter. In turn in summer, it offers a view of the glacier full-size and 109 three-thousanders. A modest chapel by AO Architekten attracts attention here [1]. Raw concrete, steel details, minimalist form and the panorama of the mountains perfectly fit into the mood of contemplation and silence, which sometimes breaks through the lively entertainments gathered on the glacier. They provide extreme impressions, such as: a walk through the hanging bridges between the peaks of Glacier 3000 and Secx Rouge or along the cliff of Mount Titlis in Switzerland, or a stay in a glass room located on the Aiguille du Midi at an altitude of 3842 m.a.s.l.in France (known as the highest attractions in Europe, and otherwise Step into the Void).

3. Conclusions

There are more and more areas made available for all in the Alps – the most urbanized mountains of the world. Impressive building structures rise there, increasing the tourism and leisure base, already so rich. The sheer audacity of the idea entitles architects to freedom of creation. Freedom and opportunity to compete with the unique location are an unmistakable happiness for an artist, and sometimes an irresistible beauty to the viewer. The constructions related to tourism in the high parts of the mountains are also a source of income and benefits

(and sometimes an expression of self-satisfaction, or competition). However, it changes the original landscape. Note that the value of all these architectural examples is the precious background – the work of nature. Interference in the environment is to a certain extent playing with physiographic and viewing conditions. "The planner`s thing is to decide to what extent the landscape can absorb buildings so that there is no impression of an urban landscape" [2, p. 214].

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