

# GEMS OF TIMBER ARCHITECTURE - PAVILIONS OF EXPOS

## Hungarian pavilion in Sevilla and Swiss pavilion in Hannover

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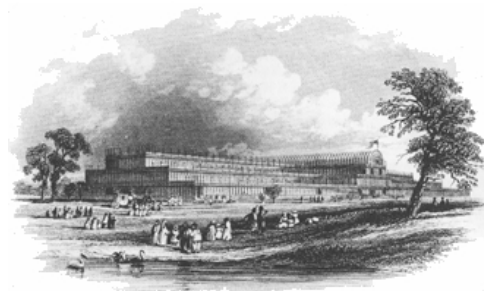
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### Abstract

Expos were significant events of the international architecture from the beginning as well. The memory of them is cherished by a large number of world-famous buildings. Some of them became architectural pilgrim places, the fate of others is the slow death and there were types which were designed directly for a short life by their creator and grandness of them are kept for the next generations only by architectural books. Taking the example of two international well-known pavilions built from the same material, from timber, the article introduces two different architectural attitudes and adverse ways of life of the two buildings.

## 1 Short history of Expos

I think we can safely point out that Expos are architectural exhibitions at the same time. Their memory is usually kept by the outstanding architectural productions built on these occasions. Who remembers at all for example the topic of the first Expo called "The Great Exhibition" in London in 1851? Nevertheless the world records until now the Crystal Palace of Joseph Paxton as an architectural standard work which was one of the first buildings of that age constructed of large-sized glass-cast iron prefabricated elements with its length of 500 m. But the Eiffel Tower, which was the symbol of the Expo of Paris in 1889 or the German Pavilion dreamt up by Mies van der Rohe in Barcelona in 1929 and the Pavillon de l'Esprit Nouveau of Le Corbusier - becoming



independent of the topic of Expo - are individual assets even today and they are valued as milestones of the universal history of architecture. Some of the first Expos introduced the different nations within the walls of the same building but in Paris in 1867 the organizers realized the first time the fact that the Expo cannot go in one building because of the increased demands on area. At this point they changed to the pavilion method applied even today within the frame of which the participating countries can introduce themselves in their own buildings.

Meanwhile the character of Expos changed as well. Giving up the original technicist-mercantilist character they slowly became a sight, some kind of adventure parks attracting millions of visitors where the various nations endeavour to show their tourist luring attractions in brilliant architectural works designed by their star architects, competing with each other. The 66 Expos organized until now designed their messages mainly around a motto, in 1992 this motto was "Age of Discoveries" in Sevilla and it was "Man - Nature - Technology" in Hannover in 2000.

## 2 Hungarian pavilion in Sevilla



Birth of the work of Imre Makovecz was accompanied by uncounted conflicts even in the planning phase. The winner of the architectural tender announced on the Hungarian pavilion was the so called "butterfly-house" of István Janáky but after the conclusion of the contract the ministry questioned the basic concept of the building then gave up the order. As the Hungarian Association of Architects fought for Janáky, the ministry wanted to give the job to a foreign architect first and at last Makovecz was entrusted. At first he rejected the invitation but he couldn't say no on the second one. However it was his condition to have a totally free hand and to determine the program of the building. During a talk he told to István Nemeskürty that one of the establishments determining the designing concept was

the location of the Hungarian land. He felt it as the symbol of our real situation that in Sevilla our Eastern neighbour was Vatican and the Austrian pavilion bordered to the area of the Hungarian one in the West. This dual relation - the connecting point at the border of the East and the West - can be seen in the conception of the building which is cut with the central double-walled corridor so divided into an Eastern and a Western hemisphere. While the other pavilions of the Expo originated in the magic circle of the current high tech achievements, the Hungarian "house" brings to life the deeply rooting symbol system of the hard way of our thousand year old history. The 7 towers standing in a diagonal direction along the crest of the building which grow from the corpus symbolizing a hill picture the victory of Christianity over Islam. On the Western frontage a long glass wall was made representing the country which is opened to the West. Entering the building you can walk only along a fixed path: going on the rising corridor, under the towers you can get into the Western half of the pavilion where walking on a glass floor you can feel the slightly dubitative steps of Hungary on the way on connecting to the Western world. There is a denuded tree there, standing in the glass floor the root of which gets in a negative bell under the glass floor. This nude tree represents our past and future. You can get from here through the 5 – 6 m high simultaneously opening gates into the Eastern hall where the path within the building ends with a motion-picture showing the history of our country. Stepping out through the gate you will face the pavilion of Vatican which adds a dynamic closing enhancement to the experience of the visitors.



Not only the message but also the material of the building differs from the majority of the pavilions of the Expo. The skeleton of the Makovecz work made of almost exclusively natural materials consists of arched stuck wooden supporters among which two uniform ones cannot be found. Therefore during the construction work the inaccurate work of the Spanish company making the under-structure caused serious problems owing to which the receiving structures of the supporters with a difference of 20 cm at several points. The arched supporters were supplied by Agrokomplex of Agárd, one of the most experienced manufacturers of the stuck wooden structures made in Hungary and the structures were assembled at site by Transylvanian Hungarian carpenters. Their workmanship was characterized by the fact that they could work with no mechanized tool in the same quality and at the same speed as their well-

equipped Western European colleagues. The coverage was made of natural slates which were delivered after an extended sortation from a mine found at the Southern part of Basque. The roof of more than 3000 m<sup>2</sup> was completed in barely one and a half month by the effecters. In summary the working speed was so high that although the builders could start to implement later than the other countries, the Hungarian pavilion was completed ahead of schedule.

Several times conflicts arose from this situation: when the Spanish workers of other buildings - the workers of the mentioned nation worked for totally 5 pavilions - went on strike, the Hungarian ones wanted to work. However the Spanish trade-union acted against them so menacingly that they were afraid that the pavilion made of extremely flammable materials would be burnt down in an unguarded moment.

At last in despite of countless difficulties, human malevolence, financial shortage the pavilion which was built in barely one year became the sensation of the Expo propagating the Hungarian creative power to millions of people. So much the sadder its present life is. Theoretically it should have been demolished at the end of the



Expo but in the meantime very many plans arose for saving it. At last the Hungarian Government sold it at a symbolic price, but since the utilization of the whole expo area ended in failure this building stands at its place unexploited up to now. It was tried several time to move the building home but so far these trials were unsuccessful. It was planned to set up again in Vác first but the town couldn't take the high costs. Later a corporation was established for saving the pavilion but they could inform me on my inquiry only that the building was in a quite good condition but they couldn't collect enough money for moving it home and setting up again.

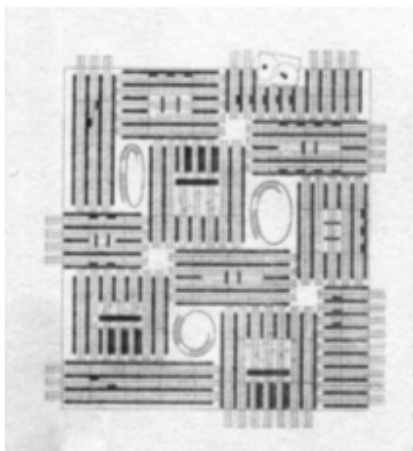
According to experiences the life of Expo pavilions is questionable in any way. (Presently no accurate information can be found about the Hungarian pavilion in Hannover as well.) If the future utilization of the Expo area does not happen and these places don't become places of pilgrimage as for example the German pavilion in Barcelona then demolition or slow death lies ahead them.

This problem was excellently solved by the following sparkling work.

### 3 Swiss pavilion in Hannover

When the Swiss Parliament voted for the participation in the Hannover Expo of 2000 with a great majority, it decided at the same time to announce an open architectural tender on planning of the Swiss pavilion. One of the main objects was to carry wood as a building material on effect. This tender was won by Peter Zumthor of Graubünden with his work called "Swiss Soundbox" and so he got the order.

Originally this architect was a cabinet-maker, during his career until this time a large number of perfectly tailored buildings proved his good relation to this material. Although the product planned by him uses similar dramaturgical elements - light, sound, smell, word - as Makovecz but he represents not a national life imbued with tragedies with forceful system of symbols but he wants only to cause pleasant feeling, a good impression in the visitors and he aspires to let them leave the Swiss Pavilion with positive memories. He does it in an extremely original and saving way. Also the site selected within the territory of the Expo - a corner site in the company of England, Norway, France and Sweden - well suited the character of the building. The fundamental idea of the building is a direct hit. Maybe it suited the best the human-nature-supportable architecture-environmental care slogans drawn up as the leading idea of the Expo.

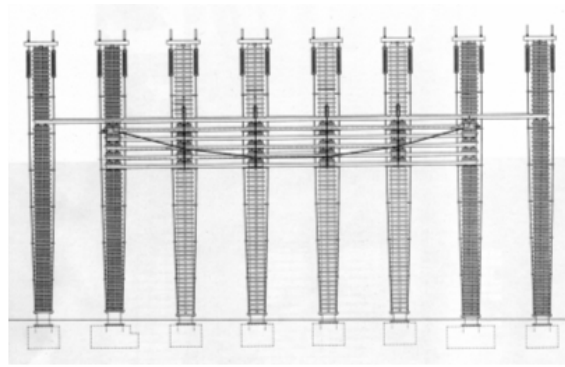


wood-stacks of different direction is also different. Those ones in North-South direction are made of especially hard Douglas pine, those placed at right angles to them are made of larch of excellent weather resistance.



In fact it is artistically arranged - recalling the atmosphere of the plot in the Pál Street - big wood-stack. The fifty meters long and 7 meters high wood-stacks - the basic materials of which are fir and larch - are kept together exclusively by steel trusses. The wood material of 3000 m<sup>3</sup> is piled up similarly as the drying beams at timber-yards. No bolts, no dowels, no holes. After the Expo they can easily dismantled and recycled. The wood materials were built in totally untreated, without any chemical treatment so that they would be easily used for any purpose. Hence the fire protection had to be provided with a sprinkler system connected to huge water tanks located on the top of the building. It was an interesting point how the wood ageing under the influence of the sunlight would change to the end of the Expo and if this change wouldn't make the sale more difficult. Within the ground-plan system of the building, among 12 wood-stacks which are set up of beams of 10/20 cm and rotated to each other as a labyrinth, 3 pieces of 3-storeyed, spiral blocks can be found. The kitchen, stores, service premises, offices and state branch office of Switzerland were accommodated in them. The material of the

These stacks are banded in a height of 6.25 m with transversal beams constituting the ceiling and providing for bracing of the building at the same time. The stressing together force between the elements is given by the above mentioned steel trusses which are fastened at the bottom to a receiving apparatus built in the asphalt constituting the basement of the expo. On top these steel trusses are connected to strong steel plates through a spring which eliminates the decrease of the tensioning strength caused by the drying shrinkage of the wood. At the points where the great spans (11.25 m; 6.75 m) had to be bridged over some supporters - which were placed above each other and connected with springs - are also equipped with lower trusses which consist of steel bars of 22 mm diameter. Their tension were regularly checked and readjusted during the construction work. The high level of the Swiss timber architecture is proven by the finish of the elliptical servicing units made in the yards between the wood-stacks. Their walls are made of 77 mm thick standing boards which were cut to different sizes piecemeal with a computer controlled saw - since each point of the ellipse has another curvature - so that they give the desired form with no special converting.



Today we can know the after-life of this pavilion. With a half year after closing the Expo the Swiss Wood Industrial Association sold the wood material of the building almost up to the last m<sup>3</sup>. The wood material the total length of which was about 135 km was purchased by five countries (England, The Netherlands, Germany, Austria and Switzerland). About the half of this amount was used for the structure of pre-fabricated wooden houses, almost 30% was used for interior design purposes (parquet floor, tables) subsequently and garden furniture, flower-stands and creative children's games were made of it as well. The remaining hundred-odd cubic metres were not sold for presenting them to non-profit companies topping off at the end of an Expo which was a great success.

Although the Swiss pavilion lives only in the pages of journals and books and it isn't the pilgrim place for architects any longer, it can be before us as the parable of a rational nation responsibly thinking of our future from whom we should only learn about the commitment towards the maintainable future.

## 4 Short summary

Many people query the justification of the expos in our world laced with the media where the amount and speed of the information flow accelerated so much that an expo cannot show any novelty as that of the middle of the last century, moreover the subsequent utilization of the territory of the expos often remains unsolved. In fact the function of the expos changes rather towards an entertaining adventure park during the last decades. Although the latest expo of Hannover closed with a deficit of about a billion, the fringe and remaining investments (infrastructure, regional developments) and the future profits from the business relations which cannot be directly measured however substantiate the economical advantages of the expos.

However each expo is a definite success story for the architecture because an intellectual capital is moved worldwide and concentrated to one point which cannot be done by any other event and induces the birth of uncountable superb architectural compositions which - entering the history of architecture - will increase the reputation of our profession also several generations later.

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