



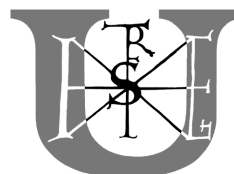
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ABSTRACT BOOK

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The roof, as the fifth facade
(The structure, which can be used on the facade as well on the roof)

Eszter Hóbor - Györgyi Püspöki

fifth year architect students

Budapest University of Technology and Economics, Faculty of Architecture

Tutor: Sándor Horváth architect, associate professor

Our research is about a new way of building a house. The research of the details of a facade which goes up to the roof. The topic is comparatively new, that is the reason why we wanted to enrich the uncompleted technical language, create the new rules which can help to spread this structure in the common architecture.

The dissertation was started with the arrange of the different type of these structures, than after the general analysis we specified our topic as the research of the discontinuous covering. According to the traditional structure of the facade there are two main types: the light (made of plastic sheet) and the heavy covering (made of natural or prefabricated stone). These materials can be used on the facade as well on the roof. The different groups were analysed from the same point of view (just like in the traditional rules of built).

We wanted to show that these structures need more bearing quality and new, stricter rules than the traditional ones. Our conclusion was showed on small, generally true models, which are totally independent of the concrete structures.

The buildings, on which were used the same type of material on the facade as well on the roof create something new, this far unusual. Most of the architects avoid this just because of the strict rules, but we sincerely hope that our research will help to spread this special structure in the future.

Reused and recycled building materials

The refuse paper recycling in building industry

Miklós Oroszlány

graduate architect student

Budapest University of Technology and Economics, Faculty of Architecture

Tutors:

Dr. Erzsébet Lányi, associate professor

Dr. Zsuzsanna Józsa, associate professor

My intention in my essay is to get to know the attribute and potential use of reused and recycled materials and concepts of waste management. I have also researched the refuse paper in building industry.

I am interested about this theme because we produce a lot of rubbish, and recycling is an important and popular issue in our days. I have also interested in the aesthetic use of trash. The theme is actual because the different ways of waste management are getting popular.

Recycled waste materials reduce the use of natural recourses and needs of energy for transport, exploitation and produce. Producing less rubbish makes fewer dumps and needs smaller space. Recycling should make less pollution. In different cases more detailed researches could explain or confuse these advantages.

As an architect student I was more interested about waste materials in building industry. In the first part of the essay I was studied issues of the garbage situation and searched examples the use of reused or recycled materials. Within I focused on recycled paper. I have chosen three technology witches are making different building structures from refuse paper.

I have collected about the „paper concrete” and Thermofloc information. „Paper concrete” is not well known in Hungary so mainly I have collected and translated information. The Thermofloc is a familiar and used insulation material. So I have compared it to other insulations to see its advantages. The third material was the „paper-brick”, which I have produced by myself. I have researched some of its attribute.

Concurrence of culture, nature and technology at the waterfront of Győr

Eszter Papp - József Élő - Roland Lipusz - Péter Schmidt
fifth-sixth year architect students
Széchenyi István University, Faculty of Engineering Sciences
Tutor: László Pethő, architect

... the creation of “surviving lands of culture” with re-explanation and galvanization of the connection between the river and the city, with using principles of sustainable architecture

We, young people who live in Győr, are walking in the historical streets day by day, sorting in cultural programs of the city and enjoying the nature that is untouched in some places. To feel these facilities of Győr we ask why a closer relationship hasn't developed between the mesh of the city and the nature, moreover between citizens and rivers. Or could this kind of connection grow up at all?

Győr is called „the city of encounters” because it has very specific natural facilities – the rivers and also a pretty good geographical post. But is it effectively that? Indeed some rivers fuse here and people who live in the city meet each other at the traditional cultural programs but do they really meet or just passing each other?

After analysing this situation we were led to the conclusion, the mesh of the city – which becomes a pulsating vascular system because of the people who live there – is totally different from the waterfront which runs across that. They interlace but still are separated because of the minimal contact between each other.

During our work we would like to analyse and develop or – if it is necessary – to make this relationship between culture, people and the nature. Our aim is to capitalise geographical and natural facilities of the city with using cultural traditions and opportunities of technology in our day. Let's notice our rates, peculiar our environment in a good sense. Let's love it and work for it because we get a much in exchange for our approach. The river and the city are conversely conferring to each other.

From the results of our research we strained off some theoretical conclusions which were transplanted by us to practice in building- and environment plans, including several contemporary art lofts. In this way the House of Material, the House of Movement, the House of Sound and the House of Light are trying to make contact between river and city, art and citizen, sustainable technologies and nature.

Analyzing sewer systems by dynamic runoff modelling

Katalin Kiss - Tamás Asztalos

fourth year civil engineer students

Szent István University, Ybl Miklós Faculty of Architecture and Civil Engineering

Tutor: Miklós Patziger PhD, associate professor

The hydraulic analysis of storm water systems, which are often more than 100 years old, becomes nowadays more and more importance. In urban areas the surface runoff increases due to the following two causes:

- the runoff coefficient increases by increasing built in, furthermore
- the climate change which results in unusual intensive rain events.

In the study the effect of different rain events is investigated on an existing sewer system. The catchments of the investigated sewer system, is characteristic for Hungarian towns (Dulovicsné, 1987).

By numeric runoff simulation of different rain scenarios are kind of weak points of the existing sewer system detected, furthermore as a result of the investigation some optimization possibilities are pointed in the study.

Aim of the research is to show the state of the art method of the hydraulic analysis and the improvement of existing sewer systems. SWMM based numeric flow simulations allow the exact analysis of catchment areas with existing sewer systems and the systematic analysis of different optimization strategies as an enhanced infiltration of precipitation into the soil by applying permeable overlays and an enhanced storage capacity within the sewer system. The investigations coupled with a cost benefit analysis serve as a decision support for operating companies of sewer systems for optimizing of their storm water management.

References:

Dulovics Dezsőné (1987): Közműépítés III. – Csatornázás Tervezési Segédlet és Útmutató.
112. old. Nemzeti Tankönyvkiadó, Budapest
EPA 2008 STORM WATER MANAGEMENT MODEL USER'S MANUAL

Interactive architecture

Ágota Vili

second year architect student

University of Pécs, Pollack Mihály Faculty of Engineering

Tutors:

Tamás Molnár, DLA student

ifj. István Kistelegdi DLA, associate professor

WHAT is interactivity? What does it mean for us, for architect designers and contractors? WHY is this direction of development worth studying? HOW can we rationally innovate? In which way will this knowledge become adaptable in Hungary?

My essay is aimed to answer these questions, through the investigation of those innovations, that have or susceptible to have impact on the new aspect of architecture. This study process these room elements and objects from their design to the realization, as they become being used. The paper shows the direction of development. It follows the innovations from the older ones to the newer, from the microsurrundings to the macroenvironment and from general applications to extremities.

The examples, that demonstrate the way of development, are collected from foreign and national bibliography. Owing to the lack of data available in print, relevant sources from the internet were mainly utilized.

The aim of this project was to construct a climate-design that is self-preservative, ergonomic, ecologic and able to interact with its environment. The result of it will enable us to create spaces that offer comfortable, spectacular and delightful solution for the modern demands of the modern age. With my research I would like to arouse the interest in the field of speedily varying, yet unutilized new planning methods.

„The best way to predict the future is to invent it.” /Alan Kay/

The present, past and future of folk architecture in Drávaszög

Vera Mikuli - Dóra Bácsalmásy

fourth year architect students

University of Pécs, Pollack Mihály Faculty of Engineering,

Department of Planning and Architecture

mvera16@gmail.com / dorika.b.86@googlemail.com

Tutor: Dr. Tamás Kondor, associate professor

Keywords: folk architecture, ethnography, research, scientific student circle

„There has always been an apparent contradiction in the life of the people living in the Drávaszög: whenever an observer considered their situation the worst and deemed the chances of their survival minimal, they were always able to make it and, like a shell pearl, to create real value.”¹

Today, when we talk about the Hungarian population outside the borders of Hungary, or about the territories detached by the Treaty of Trianon, we tend to look east and think only of Transylvania. However, tens of thousands of Hungarians also found themselves living the life of the ethnic minorities in the Uplands (Slovakia), in Sub-Carpathia (the Ukraine), in Voivodina (Serbia), in the „Muraköz” (the area between Rivers Drava and Mura, Slovenia), in Burgenland (Austria) and in the „Drávaszög” (the area between Rivers Drava and Danube, Croatia). Being a member of an ethnic minority is a form of life that we, living in the home country, may understand but could never feel the significance of. The Hungarians living in the Drávaszög are decreasing year after year: the members of the group consisting of approximately 20000 people at the end of the 1990s include about 16000 souls today. Therefore it is an urgent task to record their folk architecture. In order to do that the Alliance of Hungarian Associations in Pélmonostor organizes a camp for the architecture students of the Faculty of Engineering and for the ethnography students of the Faculty of Humanities to survey the legacy of the region in Croatia the second time.

The aim of surveying folk architecture is preservation. The buildings of folk architecture that have survived but begun to decay are protected neither by the Office for the Protection of Historic Monuments nor the respect of the people. Thus, it is an especially important task to preserve the residential buildings, the barns, the granaries and the garneries at least on paper. At the same time, the survey will help the architecture student learn the various stages of a process, that they themselves are part of and that they would like to develop further. The ethnographic surveys conducted so far have been more comprehensive than those dealing with the values of folk architecture, although Drávaszög has not been mapped completely. Besides the architecture students seven ethnography students also took part in the work of the camp. Owing to their work the surveyors learn much more about the culture of Drávaszög. We can not understand the everyday life, the architectural traditions and the customs of a given group of people unless we try to grasp their history, distant and recent.

¹ Lábadi Károly: Drávaszög ábécé
HunCro Sajtó- és Nyomdaipari Kft., Drávaszög Alalapítvány
Eszék-Budapest 1996 5.old.

An exhibition, a publication and a recent study have been created using the drawings, gatherings and experiences of the surveying camps in the last two years. The study was sent to the Conference of Scientific Student Circles in 2009. The aim and the task of the study is to summarize the most important features, the past, the present and the future of the folk architecture of Drávaszög and to make it accessible for everyone. Writing the study we also learned the constructions and materials used earlier, the changes in folk architecture and the culture of Drávaszög. We hope that our work helps the Alliance of Hungarian Association to win financial support to reconstruct the buildings surveyed and to preserve folk architecture in Drávaszög.