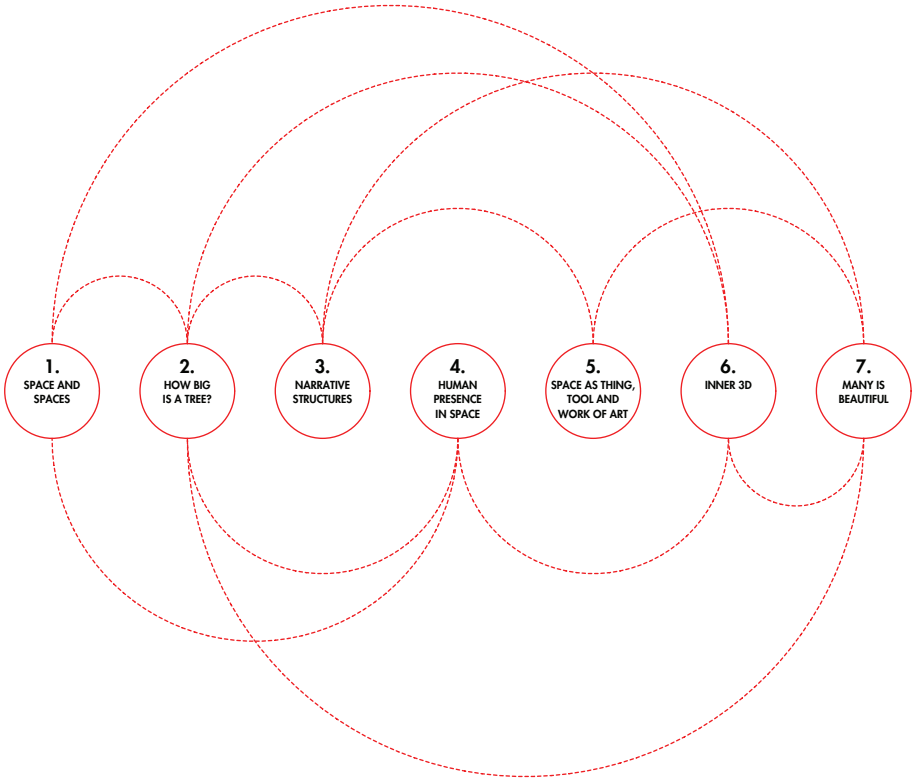
PRE ARCHITECTURA

LEARNING THROUGH SPACE



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Budapest, 2015

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SPATIAL LEARNING - TÉRTAN

- a university subject as a masterwork -

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Spatial Learning (TérTan in Hungarian) is a subject that is studied by university students of architecture. The aim of the course is to develop the students' knowledge of space and their sensitivity towards their spatial environment. The method is based on activities: experiencing architecture through both discovering and forming their environment and a brief introduction to architecture education for children, providing the students with a toolbox for their own spatial knowledge development and for enabling them to facilitate spatial learning for children.

Architecture education curricula aim to provide university students with a general understanding of the built environment and a special, focused, and factual knowledge in typically one segment of the building sciences. However, the Hungarian policy has retained the intention to balance between the artistic design processes, the practical applications, and the scientific research, teaching building construction, civil engineering, building services engineering, urban design, and construction management as well as architecture history and graphic design on a high level as a part of architectural design. Due to the explosion of information in the past decades, each of these segments has become an absolute, independent field and the educational system needs to adapt to the changing circumstances. Schools and courses are choosing a particular path to follow from visualization to urban design, from building materials to parametric architecture.

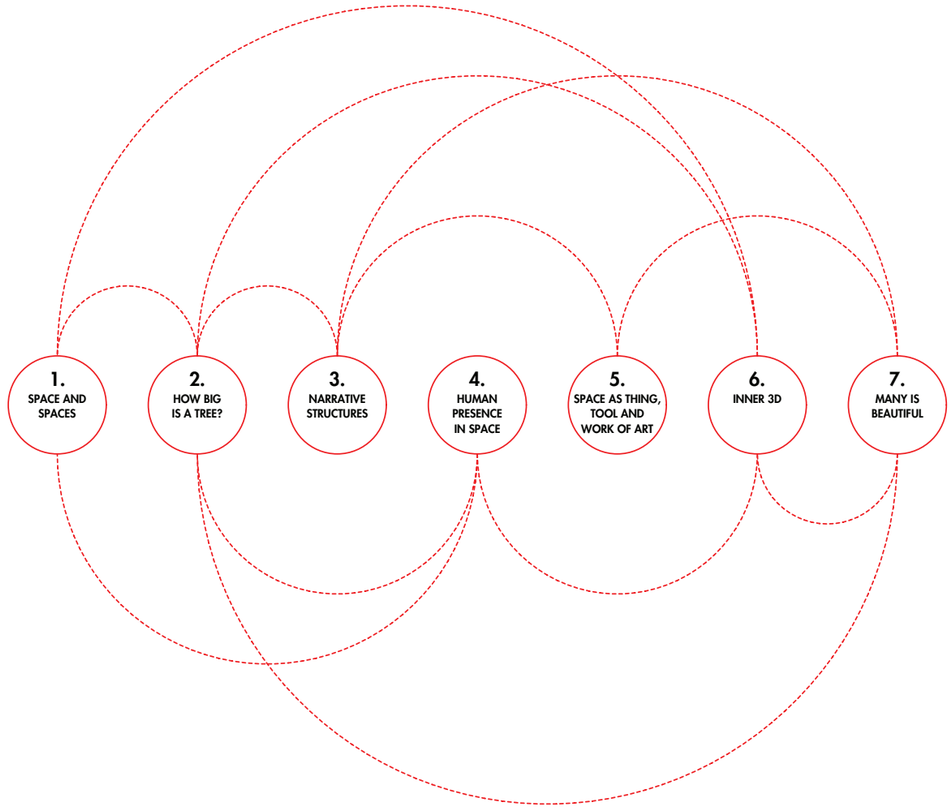
At the Department of Architectural Design at Széchenyi István University, Győr, during a five-year course we educate architectural designers, who are capable of facing a design task and leading it through the whole design process. A part of design methods and practice, understanding building structures and social connections are equally relevant in their assignments, yet the provision and absorption of deep understanding in all of these areas is impossible due to the amount of data and knowledge required and the lack of time. When defining the required outputs of the architectural design course, the training of architects who can analyse and understand a given set of possibilities and problems and deal with this environment of new challenges was defined as the main goal. The course provides the students with a detailed knowledge of architectural design and the essential elementary skills of parallel sciences, but the focus stays on empowering them to organise and analyse the previously unknown problems and requirements of every new task. The previously attended national school provides insufficient ground for creative problem solving, so the development of subjects that teach finding solutions without given formulae is essential. As architectural designers, their main work includes working with space and spaces, the focus activity

of the Pre Architectura research, which investigates the similar organising nature of spatial learning and creative structuring and problem solving.

Prior to Spatial Learning (TérTan), two subjects have been developed in the past decade at the Department of Architectural Design in Győr. Space Composition (Térkompozíció), the invention of Tamás Czigány, the head of the department, is an introduction to the basics of architectural vocabulary, space, materials, and modelling. Students discover space and spaces, solids, forms, rhythm, contrast, abstraction, and literacy through building cubes of 10x10 centimetres out of different materials and according to different themes (e. g. 'my space', 'light and shadow', music, labyrinth). I have been participating in teaching and refining this course with Tamás Czigány for years, and I consider it a well-developed introductory subject to architecture for students who have just finished high school and who consider learning to be something that happens only in their brains and mainly by words and texts.

Complex Design 1. (Komplex épülettervezés 1.) was developed by Tamás Czigány and myself for the seventh semester of the curricula. This is an experimental workshop for the students to experience real-scale construction and the act of building itself. After the first weeks of research in the given field, participants design solutions and develop prototypes in 1:1 scale, usually as part of a real project (e. g.: összTŰZ, Ilosaarirock Cabin).

The rest of the architectural design subjects are based on the classical approaches of architectural education: designing a building on paper and in mock-ups to fulfil a given programme. Even though the summer building camps of the department (villageBUILDING (faluÉPÍTÉS), Architecture Workshop at Mediawave Festival) provide real-scale spatial learning exercises and building experiences for some of the students, a more consciously developed and integrated programme is still needed in the curricula.



Spatial Learning (TérTan) is the field of experimentation in real scale, placing the students inside both the existing environment they are used to and the new spaces created by them, raising their awareness of spatial qualities and their connections to the surroundings. The experience of the inner 3D with the use of peripheral perception provides them with intensive learning experiences as well as additional approach to the spatial properties of the environment.

Spatial Learning (TérTan) is a one-semester complementary subject in the Architectural Designer course, available for students from 3rd semester throughout the whole curricula. The subject starts in the autumn semester of 2015. The methodology of the course is based on the theoretical research and practical exercises of Pre Architectura, as well as previous introductory courses of architecture such as the Vorkurs by Johannes Itten and László Moholy-Nagy at Bauhaus or the first semesters of the experimental architecture education of Juhani Pallasmaa at Alvar Aalto University. The schedule of the subject follows a 14-week academic semester with a 4-hour creative

session every second week. Presentations from the teachers' are absent from the subject. The theoretical foundation of the exercises is provided by other means such as written texts, films, videos, architectural design and computer applications completed prior to the session and during the evaluation and explanatory discussions following the tasks. The classical division of class and homework is reversed. Students prepare themselves by acquiring the theoretical basis for the tasks at home at their own pace. Afterwards in class, they work actively in a creative process, either individually or in teams, allowing them to interact with the tutor and each other in an already active and productive environment. The feedback of the gained knowledge is the creative act itself and its critical review, both on the premises and afterwards. Students take turns developing a web-based portfolio about the course in pairs after every task. The selected pair is also responsible for documenting the on-going activities in the class.

The course is open for 14 students, which, after subtracting the two for documentation, provides a diverse way of creating groups (1/12, 2/6, 3/4, 4/3, 6/2, 12/1 students/groups).

The course repeatedly reflects on the tasks of the PLAYCE Architectural Toolkit [1], the most used publication in architectural education for children.[2] The Hungarian Edition was created as part of the Pre Architectura research.

The introduced workshops not marked otherwise have been created by the author during the Pre Architectura programme.

PLAYCE Építészeti Eszköztár - Hungarian version by András Cseh, Judit Tótpál, Széchenyi István Egyetem Építész Műteremház, 2014, ISBN 978-615-5391-31-6 [1]

The open source PDF of the toolkit is downloadable in eight languages from the PLAYCE website: http://www.playce.org/index.php?page=testi-2 [2]

1. Space and Spaces: Movement as a Spatial Activity in Time
   - Preparatory task: Come to the class by walking at least one kilometre.
   - Class task: Create spaces with your own body. Create spaces with your own body and a tool. Create spaces with your bodies as a group. Create spaces with your bodies and tools as a group. Walk a hundred metres with your eyes closed. Visualise the sections/outlines of a chosen space in multiple directions. Turn the void of a chosen space into volume in multiple directions.
   - After class: Web-based documentation.

2. How Big is a Tree?
   - Preparatory task: Get to know a tree.
   - Class task: Take a tree, make its projection drawings, take it apart, arrange its elements, and measure them according to their attributes; build a tower as high as the tree was out of it.
   - After class: Web-based documentation.

3. Narrative Structures

   Based on Italo Calvino: Invisible Cities
   - Preparatory task: Examine and write the spatial story of an average day of yours from 0:00 to 24:00.
   - Class task: Create a model of a city out of paperboard. Half of the class complete this based on a given invisible city by Italo Calvino.
   - After class: Web-based documentation.

4. Human Presence in Space
   - Preparatory task: Watch Marina Abramović - The Artist Is Present.[3]
   - Class task: Take a chair on a journey at the university and in the city. Set it up in different situations both individually and in the group. Define and redefine spaces with your activities.
   - After class: Web-based documentation.

5. Space as Thing, Tool, and Work of Art

   Based on Martin Heidegger: The Origin of the Work of Art
   - Preparatory task: Read the given extracts from Martin Heidegger: The Origin of the Work of Art and bring a cardboard box.
   - Class task: Consider the cardboard box as a thing, apply it as a tool, and create a work of

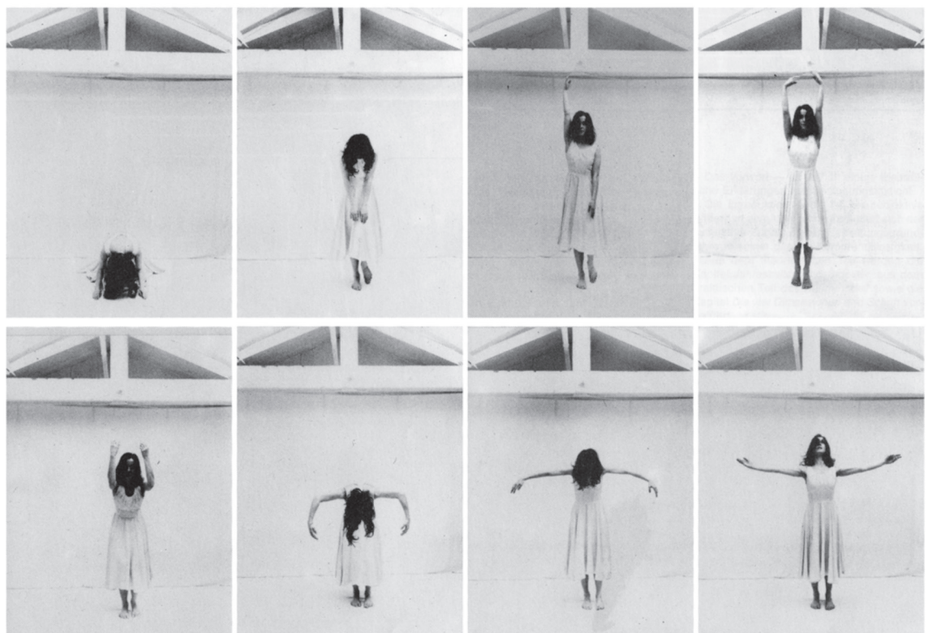
Matthew Akers, 2012 [3]

art out of it. Build your own personal space in the cardboard box. Make a structure of all the cardboard boxes containing personal spaces. Discuss the result and the role of models according to the thing-tool-work of art division.

- After class: Web-based documentation.

6. Inner 3D
   - Preparatory task: Design a pavilion as the ultimate meeting space for two persons based on the philosophical and ethical work of Emmanuel Lévinas.
   - Class task: Choose the most adequate design and build the pavilion for two out of wooden battens.
   - After class: Web-based documentation.

7. Many is Beautiful
   - Preparatory task: Bring a collection of anything.
   - Class task: Build identical structures out of white Lego and arrange them a. strictly and b. randomly. Build random structures out of white Lego and arrange them a. strictly and b. randomly.
   - After class: Web-based documentation.



Franz Rudolf Knubel: Jahreszeiten, in Eine Systematik der Grundlagen der Gestaltung - Ist die Bauhaus-Pädagogik aktuell? 1985, p. 158-161 [A]

1. Space and Spaces: Movement as a Spatial Activity in Time

Preparatory task:

A. Come to the class by walking at least one kilometre while observing your route.

Class task:

A. Create the basic geometrical forms (point, line, face, solid) with your own body. Create spaces with your own body. Create spaces with your own body and a tool. Create spaces with your bodies as a group. Create spaces with your bodies and tools as a group.
B. Walk from one wall of the room to the opposite one with your eyes closed. Walk ten and afterwards a hundred metres with your eyes closed.
C. Visualise the sections/outlines of a chosen space in multiple directions. Turn the void of a chosen space into volume in multiple directions.

After class task:

Web-based documentation.

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Antecedents and examples:

Spatial perception through movement has always played a significant part in experimental architectural courses.

In the Bauhaus, several educators chose to discover the awareness of the self and the potential of surroundings through movements. Johannes Itten developed classes, which began with exercises in concentration, breathing, and rhythm, the momentum of which was to flow into the students' creative work. The dances created by Oskar Schlemmer, Paul Klee, and Wassily Kandinsky consisted of simple gestures like walking, turning, sitting, or jumping, exploring the connections with the newly formed cubical spatial environment and the human element.

Jahreszeiten [A] (Seasons), the introductory course - partially based on the Bauhaus tradition- of Franz Rudolf Knubel, approached visuality and creativity through four phases: experience (spring), intuition (summer), consciousness (autumn), and execution (winter). The motto of the course is a German children's song:

Die Jahreszeiten	The Seasons
Es war eine Mutter	There was a mother,
die hatte vier Kinder:	she had four children:
den Frühling,	Spring,
den Sommer,	Summer,
den Herbst,	Autumn,
und den Winter	and Winter.
Der Frühling	Spring
bringt Blumen,	brings flowers,
der Sommer	Summer
den Klee,	the clover,
der Herbst	Autumn
bringt die Trauben,	brings grapes,
der Winter den Schnee.	and Winter the snow.

The main objective of the course was to introduce the four-dimensional nature of space through personal experiences rather than entirely theoretical approaches. (see picture A)

Based on the personal reports of Pihla Meskanen [4], who was a university student in Juhani Pallasmaa's experimental architecture education course at Alvar Aalto University in Helsinki, movement played a key role at the beginning of university studies at that time. As an introduction to spaces, students moved and danced around in different spaces by themselves and with rods to feel the proportions and distances of spaces.

Aims and expected outputs:

In general, students are provided with intensive stimuli about the experience of being in and occupying a space, raising their awareness of the unseen possibilities that they are used to taking into account when dealing with spatial problems.

The subtasks stimulate areas of the brain that were developed during the first period - the egocentric stage - in the development of spatial knowledge. The awareness of the self becomes stronger than the awareness of the surroundings allowing rarely and subconsciously used neurological paths to activate with higher intensity, providing a deeply based mental environment for later stages of the subject.

Architecture Education for Children - An interview with Pihla Meskanen (in Hungarian): [4]
Építészetoktatás gyermekek számára - interjú Pihla Meskanennel, András Cseh, 20 April 2011,
published: http://php52.epiteszforum.hu/node/19728

Preparatory task A. turns an everyday process into a conscious activity opening up the senses and perceptive skills of the students and forecasting the intensity of the learning experience when applying consciousness to spatial perception.

Class task A. turns the experience of attention and learning from its usual place - the mind towards the body - reminding the participant of a more holistic approach of learning and living than just the intellectual one of university studies.

Class task B. provides a perceptible sensation of the connection between space and time as well as the anthropomorphic measurements of both.

Class Task C. helps students to discover the dual nature of space and spaces, infinity and boundaries, and the connection between solids and voids in architecture. The use of tools (thread, textiles, pencils, etc.) moves the attention from the self towards the surroundings helping to release the tension of self-awareness at the end of the class.

Conditions and tools:

- an empty space
- chairs, tables
- marker tape, masking tape
- thread, thin rope
- measuring tape
- laser distance measurer
- watch

How Big is a Tree? - the flagship of Pre Architectura workshops [B]

István Berszán: Terepkönyv, Koinónia, 2007 [5]

2. How Big is a Tree? [B]

Preparatory task:

Make friends with a tree.

Class task:

Take a tree, make its projection drawings, take it apart, arrange its elements, and measure them according to their attributes; build a tower as high as the tree was out of it.

After class task:

Web-based documentation.

-

Antecedents and examples:

István Berszán developed attention exercises [5] as an alternative approach to literature and, especially, reading. In these events the opening up of a new world happens through intensive perception, mostly in haptic ways. Befriending a tree is an introductory element of his workshops where participants are asked to pick a tree from the environment and spend at least 15 minutes paying exclusive attention to it, trying to get to know it and develop a personal or even emotional relationship with it.

The How Big is a Tree? workshop was developed by me as the lead task of a Pre Architectura / MOKKA summer camp for children in 2012. (Admittedly, the lack of appropriate financial support helped a great deal with developing an inexpensive, yet meaningful and thorough activity.) The main idea was to initiate children into the world and vocabulary of architectural structures and their representations, models, and drawings. Nevertheless, the row of simple tasks opened up unexpected areas of spatial and architectural learning such as the context of the natural and built environment or the issue of sustainability from material usage through transportation to effective construction.

In the past years, the task was slightly altered to create an introductory workshop in architecture/ spatial education for architects, drawing and art teachers, and visual culture educators because it connects to them easily and gives spatial creation experiences without the overwhelming verbal or visual use of architectural jargon. The whole process takes approximately 7 hours; however, as it consists of sections focusing on different issues of spatial education and the learning process,

it covers a significant area of spatial learning. These parts can be taken out and done separately provided the whole story is told to the participants, preferably with images of the other phases presented.

Aims and expected outputs:

The next step in the development of spatial knowledge is the allocentric stage - the learning period of coordination and correspondence. The connection towards the very close elements of our environment is formed. By providing the tree as a neutral, yet - after the preparatory exercise - personal thing to deal with, this immediate and intensive connection replays the neurological processes from early childhood continuing brain development along the path of learning on both a subconscious and conscious level.

In the preparatory task the students are reintroduced to the basic architectural vocabulary in an unusual way so that they can realise the underlying possibilities of spatial and visual representation as well as the unnecessary overuse of architectural jargon already present in their professional training. Meanwhile, they go through the same process of perception, evaluation, design, and creation as the children do rediscovering supposedly known issues in creating architecture.

In different parts of the task they learn about...

a. ...themselves, while having a close encounter with a tree/bush in their minds.

By sitting down in a circle in the classroom - learning that everything is forming space.

By thinking about a tree/bush - learning about the richness of our imagination.

By discussing a tree/bush - learning about our differences and the complementary qualities towards each other.

b. ...natural structures, while having a close encounter with a tree/bush - in reality.

By going to the woods - learning about the connection between natural and built environments.

By looking around for the appropriate tree/bush - learning about collecting data.

By choosing one tree/bush - learning about weighing our options and making decisions as a group.[c]

c. ...anthropomorphic measurements, while comparing themselves with the tree/bush.

By measuring it by themselves - learning about scale, size, and anthropometric measurement units.

c

D

E

F

G

By digging it out - learning about a tree's natural structure (and the use of a spade).

By taking it home - learning about logistics and the weight of things.[D]

d. ...projection, while taking the tree/bush inside their built environment.

By fitting the tree/bush in a room - learning about our senses tricking us in size and scale and about what is considered trash where.

By casting strong light beams upon it from different points - learning about projection.

By putting it in a corner - learning about the idea behind the Monge Projection and the representation of architectural forms on paper.[E]

e. ...drawings, while mapping and recording the tree/bush.

By drawing the outlines of its shadows - learning about plans and elevations.

By removing and re-imagining it according to the drawings - learning about the possibilities of our minds and the working methods they could follow as architects.

f. ...elements, while taking the tree/bush apart.

By cutting, sawing, tearing it into bits - learning about how to use different tools.

By taking off one kind of an element at a time - learning about the role of each element in a structure and the connections between them that form a system.

By piling up yields, leaves, branches, trunks - learning about the complexity of an otherwise usual and simple thing from their environment.[F]

g. ...geometry, while arranging the different elements according to their qualities.

By laying the branches one after the other - learning about lines.

By laying the leaves next to each other - learning about planes.

By piling up yields - learning about volumes.[G]

h. ...artificial measurements, while measuring the tree elements exactly.

By measuring the parts according to their geometrical properties - learning about length, area, and volume.

By measuring everything using our official measurements - learning about comparability.

By making a list of its properties - learning about different qualities.

i. ...built structures, while designing and building a new structure.

By building up the structure - learning about load bearing, rigidity, and architectonics.

By binding the elements together - learning about joints.

H

By helping each other during construction - learning about teamwork.

By using all the elements of the tree - learning about waste and sustainability.

By trying to create an interior space for one - learning about scale, our size, and spatial needs.

By trying to reach the tree's/bush's former size - learning about the physical laws and wisdom of nature.

By reaching its former size (at least in one direction) - learning about the empowerment of man.[H]

A significant additional gain of the workshop presented itself in the general discussions that followed. Participants, regardless of age, usually question the ethics of such a task - if it is a morally correct act to destroy a tree just for our learning experiences. However, after the comparison to almost any other learning process they are involved in, the group usually arrives at the perplexing conclusion that most learning processes use more natural sources and energy, e. g. just by their need for paper and pencils, than the 'How Big is a Tree?' task. The dramatic confrontation with our unconscious exploitation of materials became one of the key results of this learning experience.

Conditions and tools:

- a significant amount of space

(The branches of an average bush add up to more than one kilometre (!) if laid one after the other.)

- a tree / bush
- spade
- saw
- thin rope

Italo Calvino: Invisible Cities, translation by William Weaver, Hartcourt, 1974 [6]

Narrative Structures workshop in Bucharest [1]

Jessica Hemmings: Finding the right language for things, in Cratfs, 2013: 28 [7]

Jessica Hemmings: The Textile Reader, MOME Doctoral School 02/06/2013 [8]

and Jessica Hemmings: Text(iles) - critical writing about textile practice, MOME Transfer Lab 02/06/2013

3. Narrative Structures[1]

Preparatory task:

Examine and write the spatial story of an average day of yours from 0:00 to 24:00.

Class task:

A. Create a model of a city out of paperboard. (one third of the students)

B. Create a model of an invisible city out of paperboard. (one third of the students)

C. Based on the given short story by Italo Calvino, create a model of an invisible city out of paperboard. (one third of the students)[6]

D. Compare the outcomes of the three groups. Discuss the role of language in the creating process. Collect the advantages and disadvantages of the calls for completely free interpretations and the assignments with detailed guidance.

After class:

Web-based documentation.

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Antecedents and examples:

Jessica Hemmings thoroughly investigates the role of spoken language and written texts in connection with creative processes and their results while particularly focusing on making textiles.[7] In her lectures at Moholy-Nagy University of Arts and Design[8] Hemmings discusses the efforts of developing creative craft writing with its own language and ethos. The use of language and its timing in a creative process played a key role in her research and provoked further experiments during the Pre Architectura workshops. Her statement during her lecture at the Doctoral School of MOME about written texts today, “Words have no structure anymore,” revealed interesting parallels in architecture with the connections between the virtual and built environment, and also reinforced the methodology used with the children of designing while creating and creating while designing instead of this being a sequential process.

The stories behind the children’s creations play a significant part in the integration of the act itself into their learning experiences and their personal lives. Instead of linear and tectonic orders, children use multiple spatial and temporal frames, which are simultaneously present. This environment allows an experience where the deeper understanding of structures and connections appear

Bucharest, 11/16/2014 [9]

with absolute freedom of mind - a fertile possibility for learning and self-understanding. In later stages, education suggests linear and tectonic orders leading the individuals by general rules. In architectural creative processes both approaches are required, so investigating totally open exploration and the connection and balance between creativity and verbality is a beneficial strategy.

I tested the 'Narrative Structures' task as an experimental workshop as part of De-a Architectura TALKS 1.[9], the first national and international conference of architecture education for children in Romania. The participants worked in three groups with the very same task as the ones intended for the students. The results were thought-provoking: The most open-minded and creative solutions seemingly came from Team C, who started working surprisingly easily; nevertheless, all of its participants admitted that they were merely following the "instructions" of the text. Moreover, even though the task was clearly to investigate an urban structure, instead of trying to fulfil this requirement they produced sculptural solutions. Team A constructed almost only clichés of urbanism, yet during the discussion it clearly showed that each team member created their own story amongst the built frames. Team B had the slowest start, yet their results represented a balance between pre-existing knowledge and innovative initiatives to perceiving and transforming the urban tissue. The passionate discussion that followed was about the facilitator's responsibility for knowing the aimed result and choosing the appropriate tools for achieving it. It was an intense example of how the use of verbality changes the outputs of the seemingly same task – at times with contradiction between appearances and contents.

Aims and expected outputs:

The third stage of spatial knowledge development, in correspondence with the socio-cultural forces paradigm of environmental cognition, is the geocentric stage, where the whole entity and connection system of the surrounding world is taken into account in our behaviour. This task continues the short and introductory evolution-modelling of the plasticity of the brain, providing further synthesising possibilities for the gained knowledge and skills.

Students are motivated to think about the use of language in both the creative process and the presentation of its outcome. The existential question of the world, thought and language has played a significant role in human cogitation, though mainly in theoretical approaches. "Is the structure of a simple propositional statement (the combination of subject and predicate) the mirror image of the structure of the thing (of the union of substance with accidents)? Or could it

Martin Heidegger: The Origin of the Work of Art in Martin Heidegger: Basic Writings, edited by David Farrell Krell, Harper Perennial Modern Thought, 2008, p. 149-150 [10]

be that even the structure of the thing as thus envisaged is a projection of the framework of the sentence?" [10] In the Narrative Structures task, this question is put onto a perceivable level and the theoretical argumentation is merged together with practice-based personal experiences.

The parallel in the nature of this categorization and the levels of architecture is apparent: the physical reality of a building and its spaces, the drawings it is based on, the designing ideas behind the drawings, the use of language throughout, and the balance of all of these processes are continuous issues in architectural debates. Yet, in most architecture education curricula a general sequence of task (verbality) - design (thinking and verbality) - presentation (visuality and verbality) - building (physicality) - perception (visuality) - evaluation (verbality) is presented to the students. In a real creative process everything is questioned even the task and the processes themselves. In this task, students are expected to consider the role of the inputs, both visual and verbal, and their own questioning abilities.

Conditions and tools:

- cardboard
- box cutter
- cutting surface
- glue
- felt-tip pens and pencils

4. Human Presence in Space

Preparatory task:

Watch Marina Abramović - The Artist Is Present (Matthew Akers, 2012).

Class task:

Take a chair on a journey at the university and in the city. Set it up in different situations, both individually and in the group. Define and redefine spaces with your activities. (self-directed learning)

After class:

Web-based documentation.

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Antecedents and examples:

Marina Abramović, one of the most influential performance artists, created a retrospective exhibition called 'The Artist Is Present' in 2010 at MoMA about her most influential works spanning over four decades. The performances were re-performed by contemporary young artists while Abramović occupied the main space with her presence and attention towards visitors in a reductive and simple way: two chairs were placed in the space facing each other (in the beginning an additional table in between them as well, but this barrier was removed later on) with the artist sitting on one of them inviting visitors to sit down on the other chair. This provided the experience of presence and interpersonal connections. The frame of the meeting had to be as natural and neutral as possible - only two chairs.

Chairs connect with people instantly and subconsciously. Possibly because they are anthropomorphic objects. The way that they stand on legs and have a type of a body on legs with an upper portion somehow reminds us of ourselves. Due to the ergonomic way they are shaped, they bear the most visible and human-scale gestures of all the objects around.

One and Three Chairs by Joseph Kosuth[1] (MoMA, 1965) is an early conceptual art piece that consists of a chair, a picture of the chair, and an enlarged dictionary definition of the word 'chair'. The exhibitor only received the poster of the definition and an instruction note to choose a chair, take a picture of it, and exhibit the two with the poster. The process presents the power of an artwork to embody an idea that remains constant despite the changes to its elements. Kosuth could have picked any object to represent the concept - alike to Renée Magritte's La trahison

Joseph Kosuth: One and Three Chairs, picture from Tony Godfrey, Conceptual Art, London: 1998 [1]

Eesti Arhitektuurikeskuse ARHITEKTUURI HUVIKOOL:
Town square hacking workshop by Kadri Klementi,
photo by Andres Putting [K]

Creative Week / Alkotóhét:
Step on the grass! Fűre lépni szabad!
experiment and photo by Team Fejérdy [L]

des images (Ceci n'est pas une pipe), 1928-29 - but chooses a chair, which is so inviting to the spectator that it is difficult to experience it without the perception of a human presence.

Kadri Klementi developed a hacking workshop in Tallin to provoke the inhabitants and the decision-makers of the city to realise the unexploited potentials of the main square turning it into a place to be with a few colourful chairs and stimulating the passers-by to participate in the life of the common space.[K]

During Creative Week 2014 at Széchenyi István University in Győr, architecture students were asked to develop the unseen and uninhabited areas of the university. One group came up with the notion to place chairs in these areas and film how people reacted to them. Unlike the more common unsuccessful attempts to involve outsiders in tricky interactive installations, this simple act provided a fruitful ground for starting a conversation and creating the grounds for a further communal design process. Even in the picture of chairs without anyone sitting on them, human presence is intensely felt.[L]

Aims and expected outputs:

The task allows students to raise their self-awareness and human presence in the spaces they are accustomed to. The experiences of Task 1, 'Space and Spaces - Movement as a Spatial Activity in Time,' were focused on the conscious perception of the individual self - this attention turns towards the possible impacts of individuals on spaces and people who use them.

The preparatory task provides a connection between the first and this task by widening self-awareness towards others. The students recognise that they provide intensive personal experiences to the people around them, their clients, with the skills and tools they receive during their architectural education and training. Raising this idea to a conscious level is crucial in making students realise their responsibility for using material and spaces in a careful and attentive way.

The chairs are not enough. The previous exercises showed that in some cases people started using them instantaneously, while in other cases they avoided them. The focused attention of a 'trial and error' learning process provides students with a methodology they are supposed to be accustomed to, yet most of them aren't.

The representation of architecture for non-architects also appears in this task. Students realise alternative methods of presentation instead of abstract drawings and pictures to connect with

people and the possibility of interaction instead of a one-way information flow. Outside participants, who enter the realm of the spaces and situations created by the chairs, experience an intensive moment of realisation as to how easily our environment can be altered and improved.

Conditions and tools:

- one chair per student
- sketchbook and pencils
- camera

5. Space as Thing, Tool, and Work of Art

Preparatory task:

Read Martin Heidegger: The Origin of the Work of Art.

Bring a cardboard shoebox.

Class task:

A. Consider the cardboard shoebox as a thing, apply it as a tool, and create a work of art out of it.

B. Build your own personal space in the cardboard shoebox.

C. Make a structure of all the cardboard shoeboxes containing personal spaces.

D. Discuss the result and the role of models according to the thing-tool-work of art division.

After class task:

Web-based documentation.

-

My Home - Our Home, photo by Tamás Czigány [M]

Antecedents and examples:

Martin Heidegger categorised the world surrounding human beings into things, equipments, and works of art, which is a sensible division also of the surroundings in the spatial learning process. Moreover, the level of consciousness in the process of perception has an interesting category-changing nature: the environment is mostly taken for granted as the medium of our lives and it is perceived subconsciously only (thing); the conscious use of the surrounding spaces as tools (e. g. when playing sports) is a more aware presence (equipment); and visiting and enquiring about spectacular architecture with intensive attention and an appropriate timeframe focuses on the connection of the spectator and the building (work of art).

The analysis of the level of consciousness has a connection with the use of language as well though here not quite in the creative act as in Task 3, 'Narrative Structures', but rather in the evaluation and curatorial process afterwards.

The 'My Home' [M] task is a modelling workshop in Pre Architectura. Every child takes a shoebox and turns it into their ideal space and home, while placing themselves as a scale figure inside the created room. The results bear the individual's preferences to an extreme, sometimes magical extent. The room as the place for the child and a herd of horses or a room with a large bed for

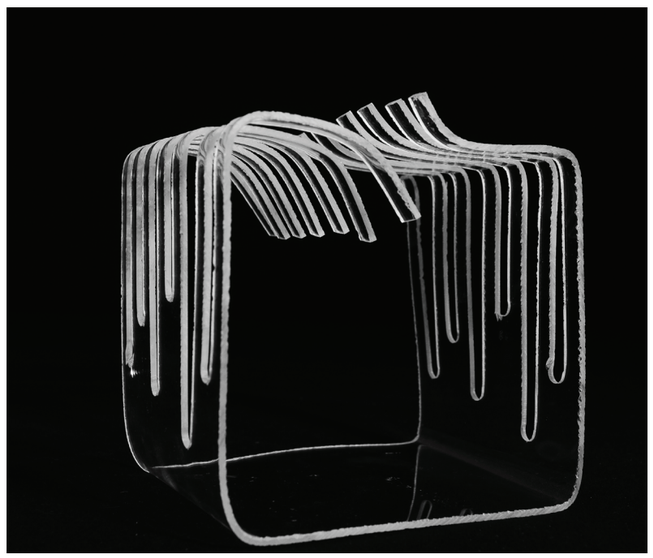

photo by Ágnes Herdics [N]

jumping on and a tiny table for a compressed amount of homework are very informative in a narrative way. After the completion of the personal spaces, the children as a group build a larger living structure out of their creations according to their living environments - either as family houses or as a block of flats. The personal stories are present in the new structure, yet not as strongly as previously and the connections, especially with the neighbouring modules, come to the forefront.

'My Space' is one of the tasks in the 'Space Composition' (Térkompozíció) subject in the Department of Architectural Design. First year students are required to use the abstract tools of architecture to create the model of a space they would feel the most personal for themselves. In addition to the self-reflective requirements, which is not a typical learning approach, the development of the basic language of architecture (space, scale, rhythm, contrast, form, etc.) is in the centre of the exercise - the use of apparent narratives and models of objects is strictly prohibited.[N]

Aims and expected outputs:

The preparatory task provides the theoretical background for the students as well as providing at least some philosophical stimuli in the process of learning about spaces and architecture - a component that our current curricula does not contain in a sufficient way. A separate art or architecture philosophy course might be too deliberate, yet the integration of human sciences and thinking into the majority of the subjects is key to training open-minded professionals.

In Class task A. students continue to raise their self-awareness, consciously experiencing their human presence in the spaces they are accustomed to, but also broadening their approach to the connecting network of objects in the space. They investigate the relations of objects to other objects, the enclosing space, and the human interaction with both. The shoebox is not as abstract and anthropomorphic as the chair was, so effectively this is the first stage of the course, where objects with their narrative nature might enter as a new layer when dealing with the environment briefly connecting to the field of design and applied arts.

Task B. brings an interesting balancing attempt of the students between child-like play and acquired architectural design behaviour: instead of defining the space with objects, they develop the spatial relations inside the given box and they only start using narrative elements as they get more into their own story. It is important to encourage this approach as the current curricula operate with the overload of abstraction to counterweigh the supposed narrative knowledge

gained by the students prior to university. However, this is the behaviour - the exclusionary use of a special professional language - that separates architects and non-architects and causes problems in understanding between architects and clients. Therefore, providing an education with closer attachments to everyday life would be beneficial for creating and presenting architecture with closer connection to human life and experiences.

Task C. is an experimental phase of the class - it goes either to spectacular architectural structures resembling the utopias of Yona Friedman or Le Corbusier, or the personal stories start merging together into a communal one, in which case the further use of objects in the model (corridors, roads, fences, vegetation, etc.) is expected alongside a distinctive storyline.

Task D. connects back to the connection between design, the creative act, and the use of language. The down-to-earth nature of the shoeboxes and the imaginary stories they acquire throughout the process provide an appropriate setting to discuss the philosophical approach of the thing-tool-work of art qualities in the surrounding world.

Conditions and tools:

- extracts from Martin Heidegger: The Origin of the Work of Art (see Attachments)
- shoeboxes
- cardboard
- box cutter
- cutting surface
- glue
- camera

fireNEST at 'Step Closer' Hello Wood 2013 - team leaders: András Cseh, Bálint Veres [N]

6. Inner 3D

Preparatory task:

A. Design a pavilion as the ultimate meeting space for two persons based on the philosophical and ethical work of Emmanuel Lévinas. (Emmanuel Lévinas: Totality and Infinity - An Essay on Exteriority, translated by Alphonso Lingis, Duquesne University Press, 1969 p. 143-151: I and Dependance, 194-219: Ethics and the Face)

B. Visit your tree-friend from Task 2.

Class task:

Choose the most adequate design and build the pavilion for two out of wooden battens.

After class task:

Web-based documentation.

-

Antecedents and examples:

Emmanuel Lévinas talks about [11] the decent nudity and essential poverty of the face, which presents the Other to us in the most intensive and provocative way. The deepest attention in our human experiences is paid in the moments when we really meet another human being - when just watching each other's faces is a discourse, response, and responsibility. "It is difficult to be silent in someone's presence: this difficulty has its ultimate foundation in this signification proper to the saying, whatever is the said. It is necessary to speak of something, of the rain and fine weather, no matter what, but to speak, to respond to him and already to answer for him." [12]

István Berszán's awareness and attention exercises [13] offer intensive, yet momentary experiences, focusing on the intensive presence in the present. However, continuing or redoing the tasks over a long period of time places this presence onto a level integrated in our lives more intensely, reducing the exotic quality in the experience.

The fireNEST structure [N, 14] was based on a spatial representation of Lévinas's thoughts about the face of the other. The design and building process of the installation ran parallel with previously mentioned attention exercises developed by István Berszán and lead by Bálint Veres. The merging of architectural and philosophical approaches led to the concept of the installation around a small bonfire, implementing three design objectives: 1. Meeting with my own existential responsibilities in

Emmanuel Lévinas, Philippe Nemo: Ethics and Infinity, translation by Richard A. Cohen, Duquesne University Press, 1985 [11]

Emmanuel Lévinas, Philippe Nemo: Ethics and Infinity, translation by Richard A. Cohen, Duquesne University Press, 1985 [12]

István Berszán: Terepkönyv, Koinónia, 2007 [13]

designed and built at Hello Wood 2013, leading the team together with Bálint Veres [14]

the face of the other: The face of everyone around the fire should be lit, offering it to others to see. 2. Democratisation of the fire while keeping with the fire's intimacy and the proximity of the people around it: Everyone around the fire should be able to see its light and feel its warmth, even if sitting in outer circles. Bonfires are either small and for a few people, or large and for many people. If more people try to sit around a small bonfire, the furthest ones are outside of the light, while large bonfires force a large diameter for the circle of people resulting in impersonal distances to those who see each other frontally. The search for a solution lead to an amphitheatre-like structure. 3. Answering the call of Hello Wood 2013, which was 'Step Closer': The modular structure focuses on connections and co-dependence. One module is an unstable bench, unusable by itself. However, when attached to another one, the two stabilise each other, providing suitable seating places for the users. The structure is most stable if forming a whole circle, each element depending on the other.

Aims and expected outputs:

The preparatory tasks target raising our conscious presence in our connections towards both objects and persons.

The outtakes from the essay of Lévinas provoke students to look at someone else through their face in an exclusive, almost perpetrating way.

Visiting the tree again deepens the connections, and also makes students realise the power given to them to provide attention to and create connections with their material and social surroundings.

The design of the pavilion is the first typical task for the students along the course. The experiment is whether the familiar environment of architectural design places them back into their customary level of attention or whether the presence of other subtasks and the previously developed inquisitive environment of the course allows them to explore architectural design on a more open and curious level.

Building the pavilion provides the ultimate experience of the inner 3D, in which the attention of the self not only uses peripheral perception to experience the situation, but also uses the continuous changing of the surroundings through the act of construction whereby the awareness of the student's power to form their environment provides them with palpable encounters rooted in their real, everyday life.

Using the pavilion after its creation reflects on the personal learning processes and results of the course, while integrating it into human contact - the environment we seldom provide in

architectural education. The timeframe requires a high level of concentration a quick responses resulting in probably the most intensive experience of the semester, working as a summary of all perception-based and self-reflectional tasks throughout the semester.

Conditions and tools:

- wooden battens
- circular saw
- pull saws
- screws
- screw guns
- ropes
- textiles
- camera

firePLACE, Hegyeshalom, 2011

a communal installation designed and built by university students together with local children [0]

Türk Péter: Hosszúság, szélesség, magasság és mélység, Kiscelli Múzeum, Budapest, 2006 [15]

in The Unilever Series, Tate Modern, London, 2010 [16]

7. Many is Beautiful

Preparatory task:

Listen to Nine Inch Nails: Ghosts I-IV.

Bring a collection of anything.

Class task:

A. Build identical structures out of white Lego and arrange them a. strictly and b. randomly.

B. Build random structures out of white Lego and arrange them a. strictly and b. randomly.

C. Continuously reflect on the stories within each stage of the task.

After class task:

Web-based documentation.

-

Antecedents and examples:

The Péter Türk: Length, width, height and depth [15] installation presents the regularity and uniqueness of reality. The giant structural sculpture demonstrates that a large amount of close to identical objects awakens the memories of human perception of the natural environment. And at the end, architecture is about creating surroundings where people feel rooted and relaxed, just as in nature.

In a similar gesture, Ai Weiwei: The Sunflower Seeds [16], goes deeper in reflecting on the individual and the mass that contains it. The thick layer of hand-crafted ceramic sunflower seeds invite interpretations on different levels of human existence, yet the social aspects of art and creation are overwhelming once the background story of the artist providing work for a whole village of ceramists while creating the work of art is revealed.

The firePLACE [0] project was completed in cooperation between Pre Architectura and the Complex Building Design 1. subject, based on the previous experiences of összTŰZ, an art project using bricks and firewood, where the same group of students participated with their proposal. The firePLACE was designed for the community of Hegyeshalom as a meeting point in wintertime, and it was built by university students and local children working together. Over 8.000 pieces of brick were used requiring a repetitive process throughout the day of construction,

Dezeen, Amy Frearson's Interview with Bjarke Ingels, http://www.dezeen.com/2014/08/20/lego-golden-ration-of-architecture-big-lego-house-denmark-bjarke-ingels-interview/, last viewed 02/02/2015 [17]

Rethink-Rebuild [P]

yet the excitement of the act and the genuine attention towards each other provided an intense spatial learning process for all participants.

Bjarke Ingels claims that "lego proportions are really the golden ratio of architecture, I think for testing ideas quickly it can be quite powerful... It's about acquiring the tools and the skills to create worlds that are more exciting and more expressive than the status quo and to allow people to inhabit them." [17]

During the Rethink-Rebuild workshop, children receive models of architecture students, get to know them, and redesign and alter them freely. The results are similar in size though vary in complexity, sometimes even in their original scale, yet when they are placed next to each other to create the built network of a city, a general relaxing feeling pleases the spectator, which is not unlike the calming effect of a forest where the mass of trees and leaves envelope us into a grand scheme, instead of requiring our focus on them individually.[P]

Aims and expected outputs:

The first preparatory text introduces the Ghosts I-IV. album by Nine Inch Nails as an introduction to the infinite possibilities of repetition and variations. The album is admittedly based on a series of spaces, connecting spatial and musical perception, which results in a combination of a complementary experience of the four perceptible dimensions of space and time.

The second preparatory task investigates the human motives behind collecting and arranging similar or identical things, an activity which comes from our historical heritage and survival strategies as Homo sapiens and our connection with the natural environment, where this complexity of a collection of similar identities is the nature of things. Forming the built environment somehow always tries to follow this quality of nature, embracing the idea of creating an artificial home based on the knowledge of human needs and behaviour in the natural surroundings.
Students are invited to discover the similarities and differences between the basic instinct of collection and the elemental nature of their built environment.

The use of Lego opens up memories from childhood and even though the task itself is a 'classical', 'serious' experiment of architecture, the tools allow it to lean towards playfulness at the same time.

The continuous discussion raises awareness of the creative process itself, discovering new areas, such as the issue of standardised production and creativity, and also reminding participants of the connection between language and building along the semester (e. g. Narrative Structures).

The task serves as a collective environment of the previous modelling tasks throughout the semester, where students were working on something from the outside in the ‘classical’ role of an architect.

Conditions and tools:

- white Lego
- large empty surface
- camera

The background knowledge for the development of the tasks of Spatial Learning emerges from both theoretical and practical fields of arts and sciences, architecture and education; therefore, the following list includes various types of sources.

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Space Composition (Térkompozíció) - design subject for 1st year students
tutor

Architectural Design Basics 2. (Épülettervezés Alapjai 2.) - design subject for 1st year students
head of subject, tutor

Housing Design 2. (Lakóépületek tervezése 2.) - design subject for 2nd year students
tutor

Public Building Design 1. (Közösségi épületek tervezése 1.) - design theory for 2nd year students
head of subject (together with Attila Bodrossy), lecturer

Public Building Design 2. (Közösségi épületek tervezése 2.) - design subject for 3rd year students
head of subject (together with Attila Bodrossy), tutor

Public Building Design 3. (Közösségi épületek tervezése 3.) - design subject for 3rd year students
head of subject (together with Attila Bodrossy), tutor

Complex Design 1. (Komplex épülettervezés 1.) - design subject for 4th year students
head of subject (together with Tamás Czigány), tutor

Diploma Project Design (Diplomatervezés) - final design subject for 5th year students
mentor

Pre Architectura major events:

Contemporary Architecture in Pannonhalma (Kortárs építészet Pannonhalmán) - Pannonhalma, 2011, museum pedagogy curricula development for the temporary exhibition, architectural excursions for children at the Benedictine Archabbey of Pannonhalma

What's up, Atelier? (Mit terem a Műterem?) - Győr, 2011
summer camp for children at the Architects' Atelier

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summer camps for children at the Architects' Atelier

Pre Architectura Intro - Budapest, 2013
lecture for spatial learning facilitators at the Building Games (Építő Játékok) Conference at FUGA Contemporary Architecture Centre of Budapest

How big is a tree? (Mekkora egy bokor?) - Budapest, 2013
workshop for spatial learning facilitators at the Building Games (Építő Játékok) Conference at FUGA Contemporary Architecture Centre of Budapest

LightCatcher - Győr, 2013
Researchers' Night workshop for children at the Architects' Atelier

Architecture Education Themes in School Curricula - Helsinki, Finland, 2014
lecture for spatial learning facilitators at the Creating the Future 2.0 - International Conference on Architecture Education for Children and Youth

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Workshops:

Thicket (Rengeteg) - Hello Wood, Csórompuszta, 2011
team leader with Endre Ványolós

Innovative Use of Wood in Construction 1. - Joensuu, Finland, 2012
team leader

DragonDryer (SárkányTeregető) - Hello Wood, Dédestapolcsány-Bódvalenke, 2013
team leader with Péter Borbás and Endre Ványolós

Innovative Use of Wood in Construction 2. - Győr, Hungary, 2013
workshop organizer

fireNEST (tűzFÉSZEK) - Hello Wood, Csórompuszta, 2013
team leader with Bálint Veres

győri GRUND - Győr, 2014
design team leader

#REEDy - Vartiosaari, Helsinki, Finland, 2014
team leader with Áron Vass-Eysen (Hello Wood)

Innovative Use of Wood in Construction 3. - Kuchl, Austria, 2013
team leader

SPACEship - Hello Wood, Csórompuszta, 2014
team leader with Jelena Pejkovic