

A?

Aalto University
School of Arts, Design
and Architecture

The Geometry at Fine Arts and Design Faculties

*Marja Nurminen. Lecturer in Drawing and Painting,
Doctoral Candidate
Centre for General Studies*

My dissertation work: Thinking or Technique: Exploring the Teaching of Drawing in Higher Arts Education

The focus of the doctoral research project is in exploring the teaching of drawing in two art universities, one in Finland and the other in Sweden. These universities are the major institutions for educating professional artists, designers and architects in these two countries. The main research question is: What kind of meanings, experiences and understandings are involved in the teaching of drawing from the perspective of the teachers, artists and designers who teach and/or work professionally with drawing?



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School of Arts, Design
and Architecture

How we teach geometry and perspective at Aalto

*Marja Nurminen, Lecturer in Drawing and Painting
Centre for General Studies*



Aalto-yliopisto
Taiteiden ja suunnittelun
korkeakoulu

The Art Modules

Art Now! (7p)
Perception (7p)
Idea (6p)

Aalto University School of Arts, Design and Architecture
Centre for General Studies

BA Study Programs at Aalto

Architecture

Documentary Film

Film and Television Script

Film and Television Set Design

Film and Television Production

Film Cut

Film Direction

Filming

Film Audio Design

Art Education

Landscape Architecture

Fashion Design

Set Design for Theatre

Costume Design

Interior Architecture

Visual Communication Design

Perception/

Harald Arnkil

Direct perception in art

Psychology of perception

Interaction of the senses

The influence of theories of perception on art

Art Module II: Theory and practice of perception

- Art as *perception* (relation to visible reality) and as *experience* (relation to multimodal sensing).
- An introduction to the function of vision, also in relation to the other senses.
- Different ways of depicting the surrounding world and our relation to it.
- Drawing, painting, various types of modelling, **various projections and perspectives**, 3D modelling. Lectures on perception and introduction to psychology of perception.
- The aesthetic aspects of perception and the relation of the senses to the traditional classification of the arts.
 - Two lectures by visiting artists and/or researchers
 - At least one excursion to an exhibition, museum or other place of current interest



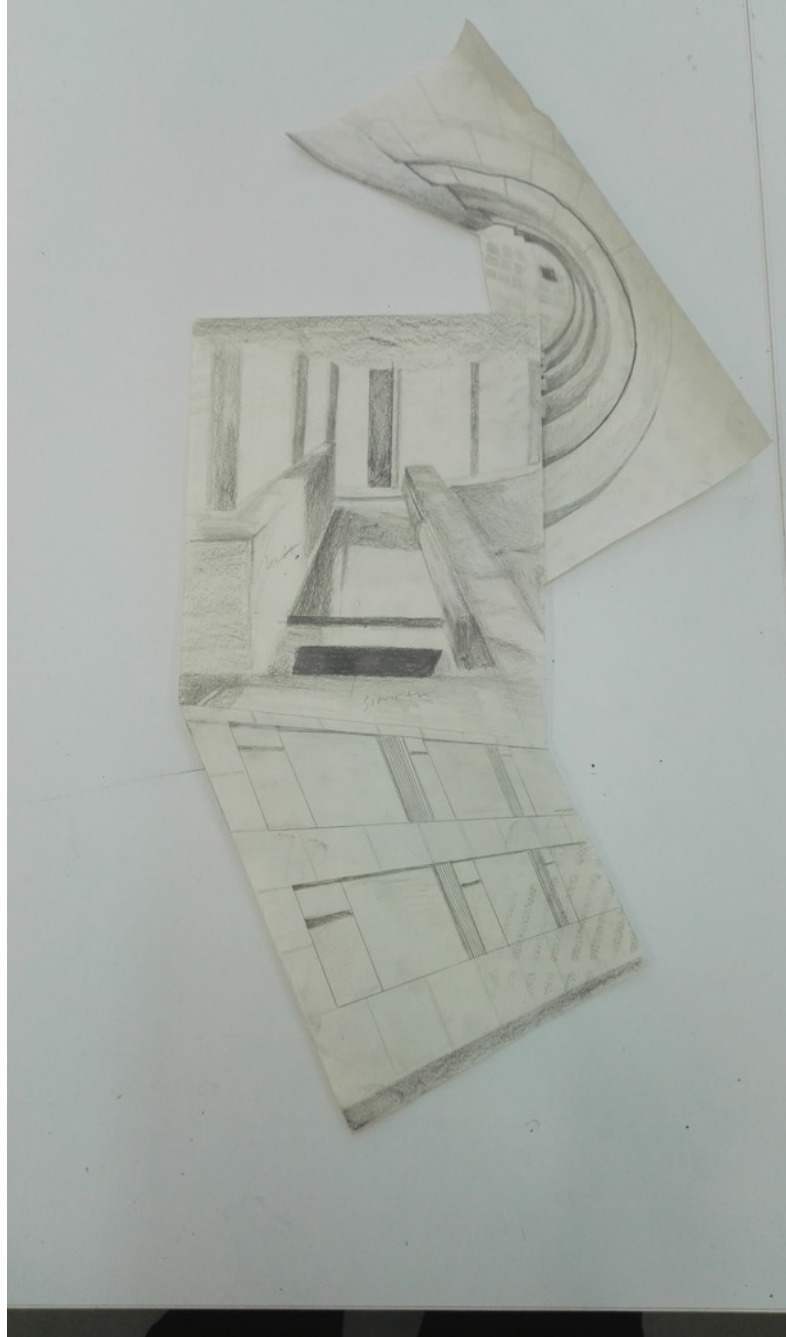
Croquis-sketching from a moving model in Otakaari 1X. Bhuto dancer: Ken Mai

The Perception module in short

- **2D:** Drawing and painting in acrylics, charcoal, ink and pencil; the human figure in space; **various projections: Byzantine, Renaissance, Oriental, Cubist, axonometric, etc. Combination of three viewing angles: frog's eye, human eye level, bird's eye;** croquis-sketching of nude with various techniques.
- **3D:** The human figure –modelling, using clay, wire, wood, paper and cardboard; proportions, masses and volumes within and outside the figure; the effect of light and shadow on perceiving form; the perceived effect of one form on another; surface structure and the surface's spatial network; movement, viewing angles and the figure's relation to space.
- **Colour and Perception:** Colour concepts and categories; contrast effects; **representation of space through colour;** colour and light: lightness and brightness, the constancy mechanism; illumination and colour: light and shadow, interpreting plastic form through colour.
- **History of Art:** perception, mimesis, representation; the influence of knowledge, rules and ideals on perception and communication of perceptions; Discussion about the dominance of visuality in art and about art from the view point of the other senses.
- **Aesthetics:** The causal explanation of art and the philosophical description of the perceptual experience; the phenomenology of (visual) perception, perception as action; concept pairs to define perception: the whole and its parts, unity and multiplicity, presence and absence; the object and the subject of perception; viewpoint and view.

Assignment / Mika Karhu and Irmeli Hulkko

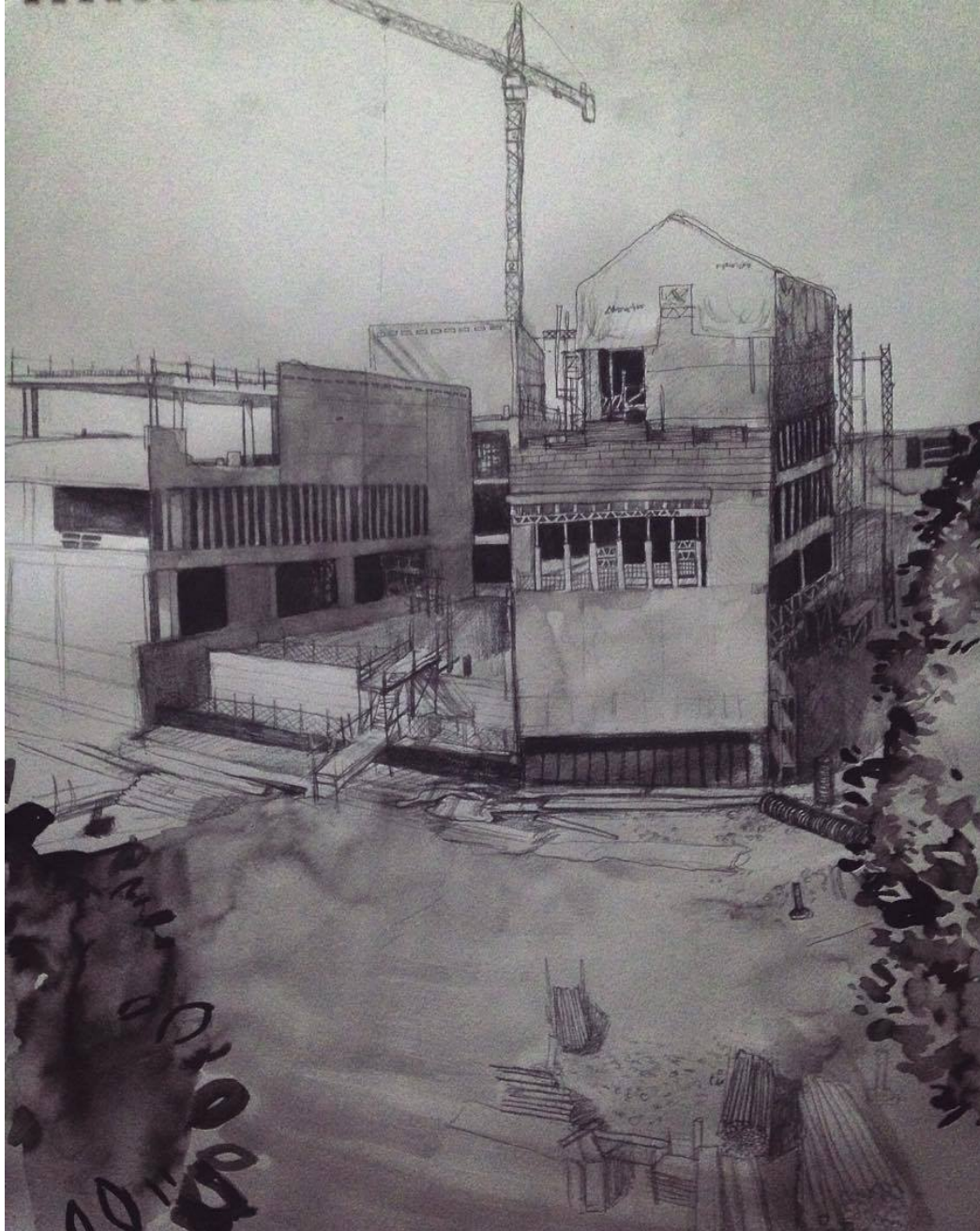
- 1. Day 1.** 9.15 -17.00 Perspective and interpretation of room to the 2-dimensional image. Lecture with images about perspective and projections.
2. Draw three perspectives (frog's eye, human eye level, bird's eye) the built environment and human being(s). Sketches by perception (pencil, charcoal, water colours size A4 – A6). Sketches will then be combined to one painting in acrylic. (size 70 x 100).
- 3. Day 2.** 9.15 – 17.00 Perspective assignment continues. Dark/light Cold/ Warm, air perspective. Perception of light and colors.



Ada Ala-Härkönen



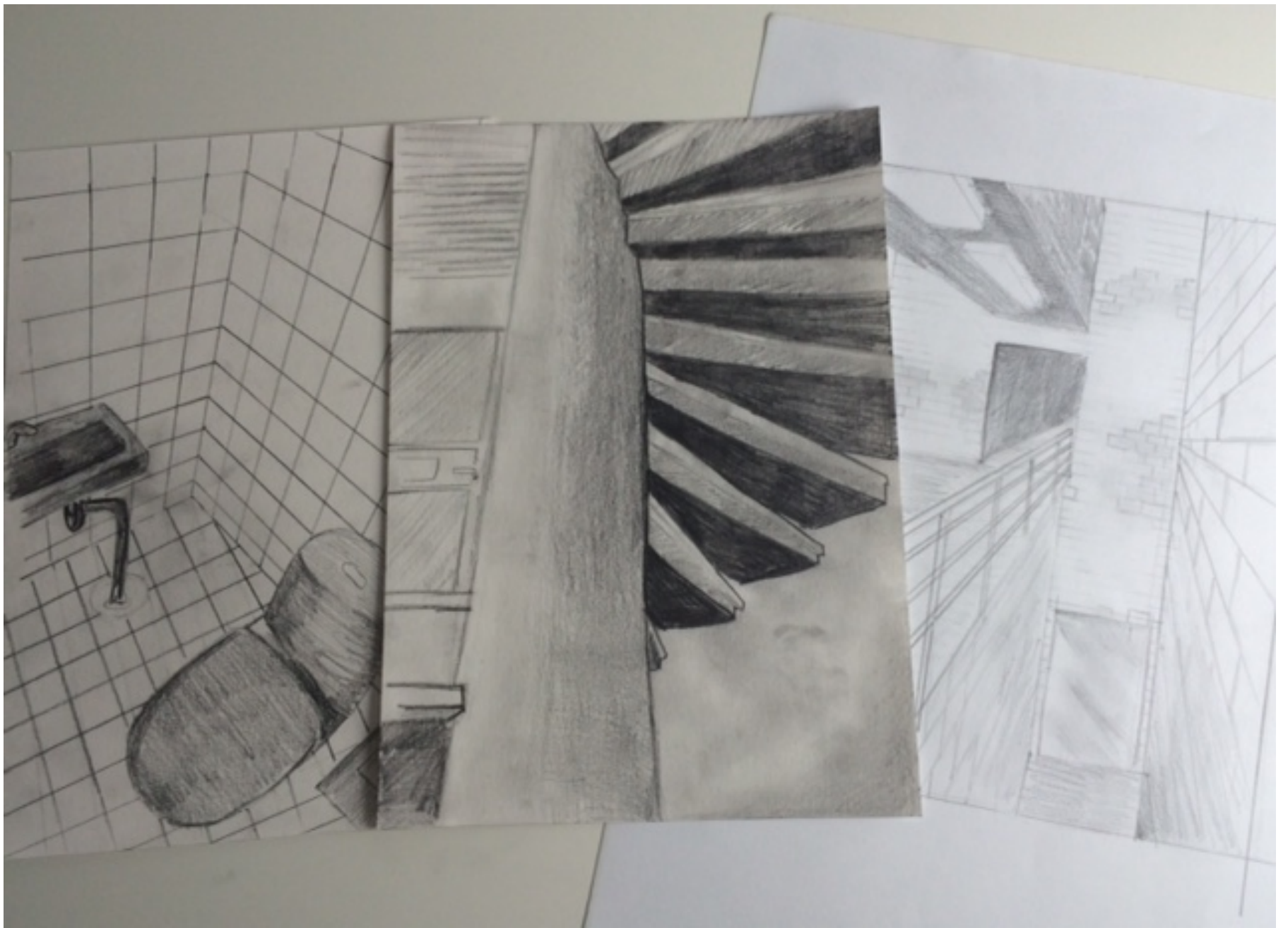
Ada
Ala-
Härkönen



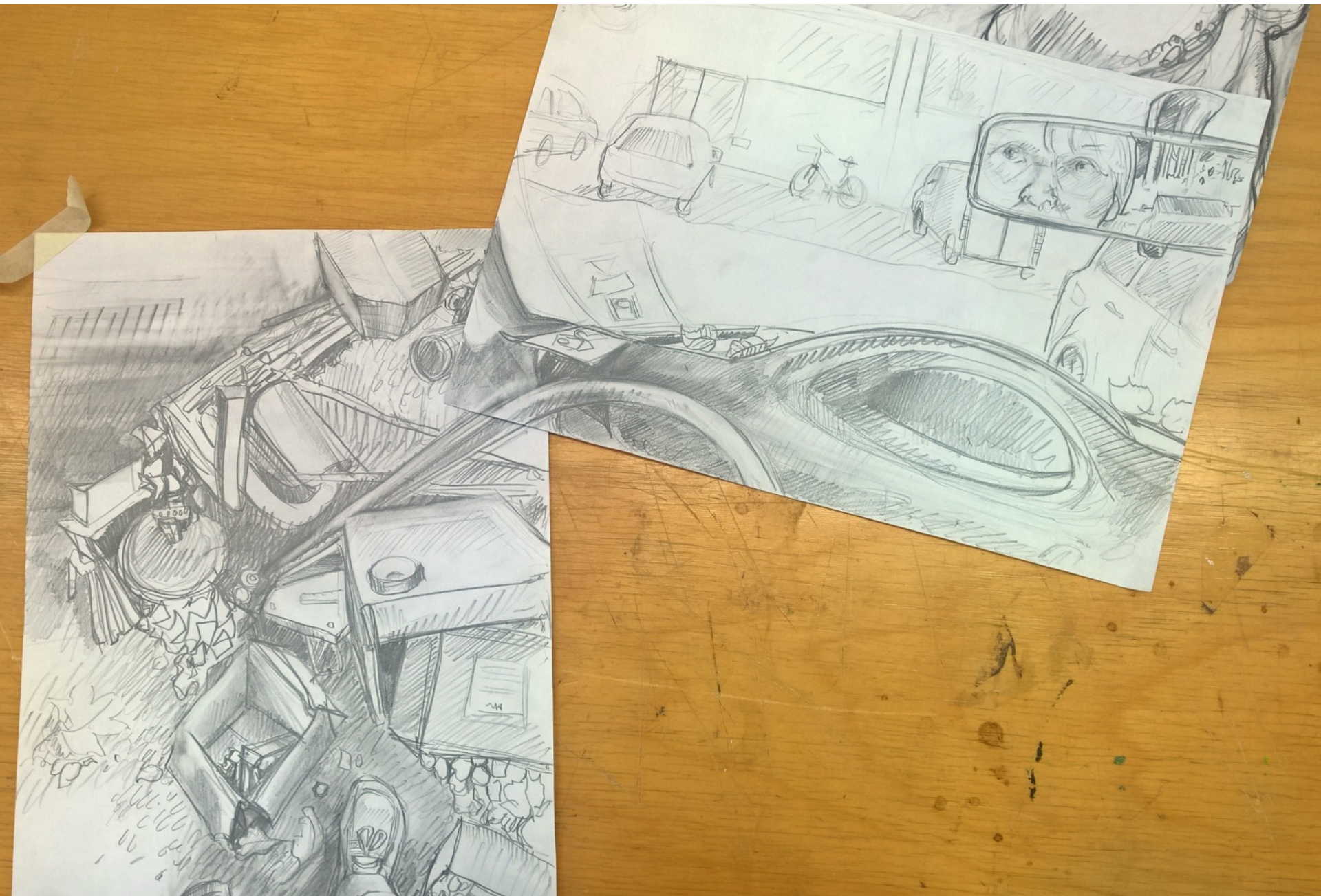
Heljä Nieminen



Heljä Nieminen



Miisa Ulmanen



Tuija Ihanta



Anna
Suominen



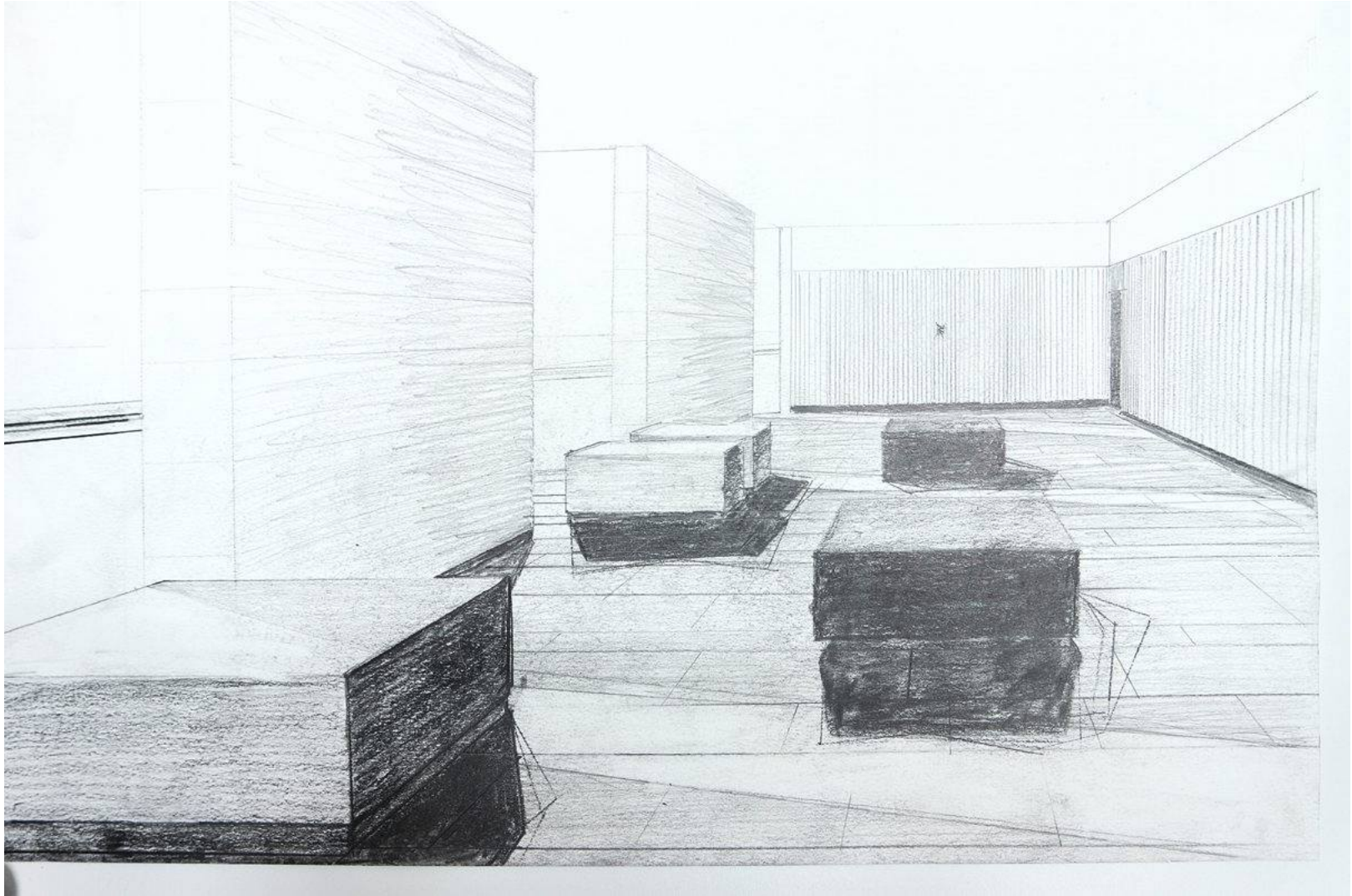
Emilia Lonka



Anniina Kontoniemi



Jori Uusitalo



Kaisa Kiuttu

Anamorphs/ Kaisaleena Halinen

Assignment is done in pairs. Material is tape.

Choose two-dimensional pattern or form. Construct the form or pattern so that it touches at least three different surfaces in different angles or different levels. The form or pattern should be seen in one specific point as two-dimensional.

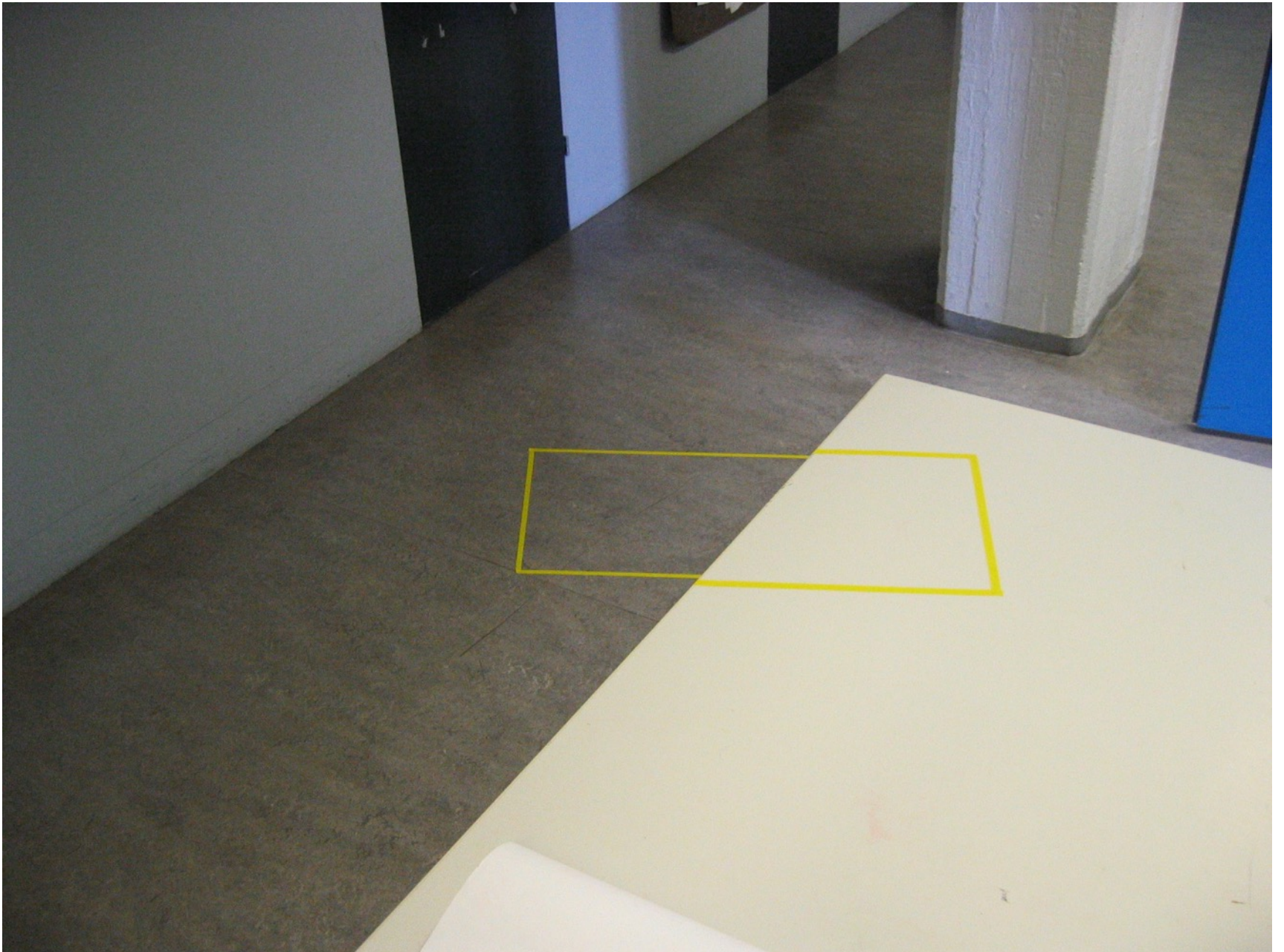
Photograph from that point you see it "right" and "wrong".

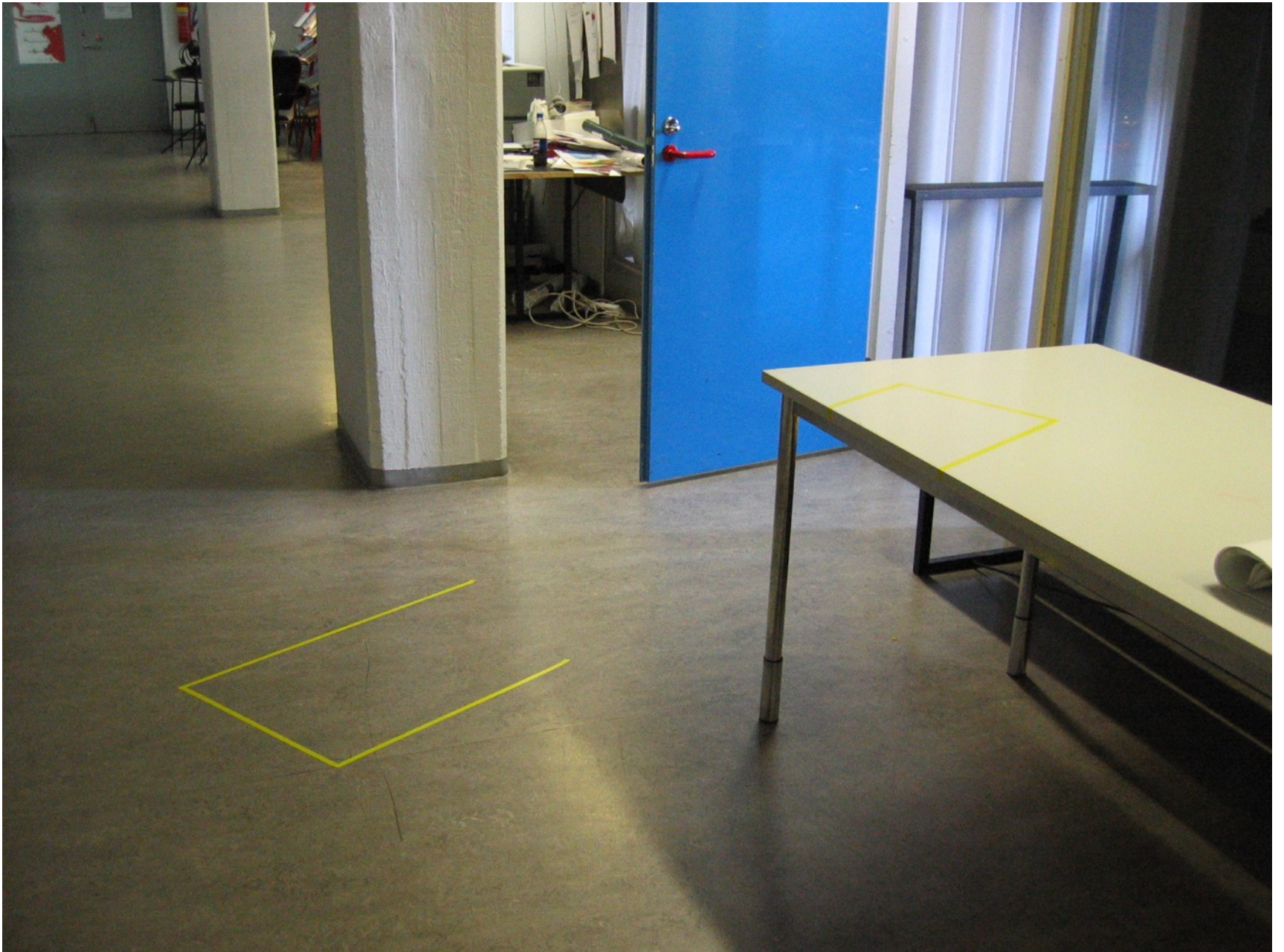












I have organized 6 international drawing workshops.

2009 in Stockholm,

2011 and 2013 in Helsinki

2014 in Oslo, Norway,

2015 in Dals Långed in Sweden

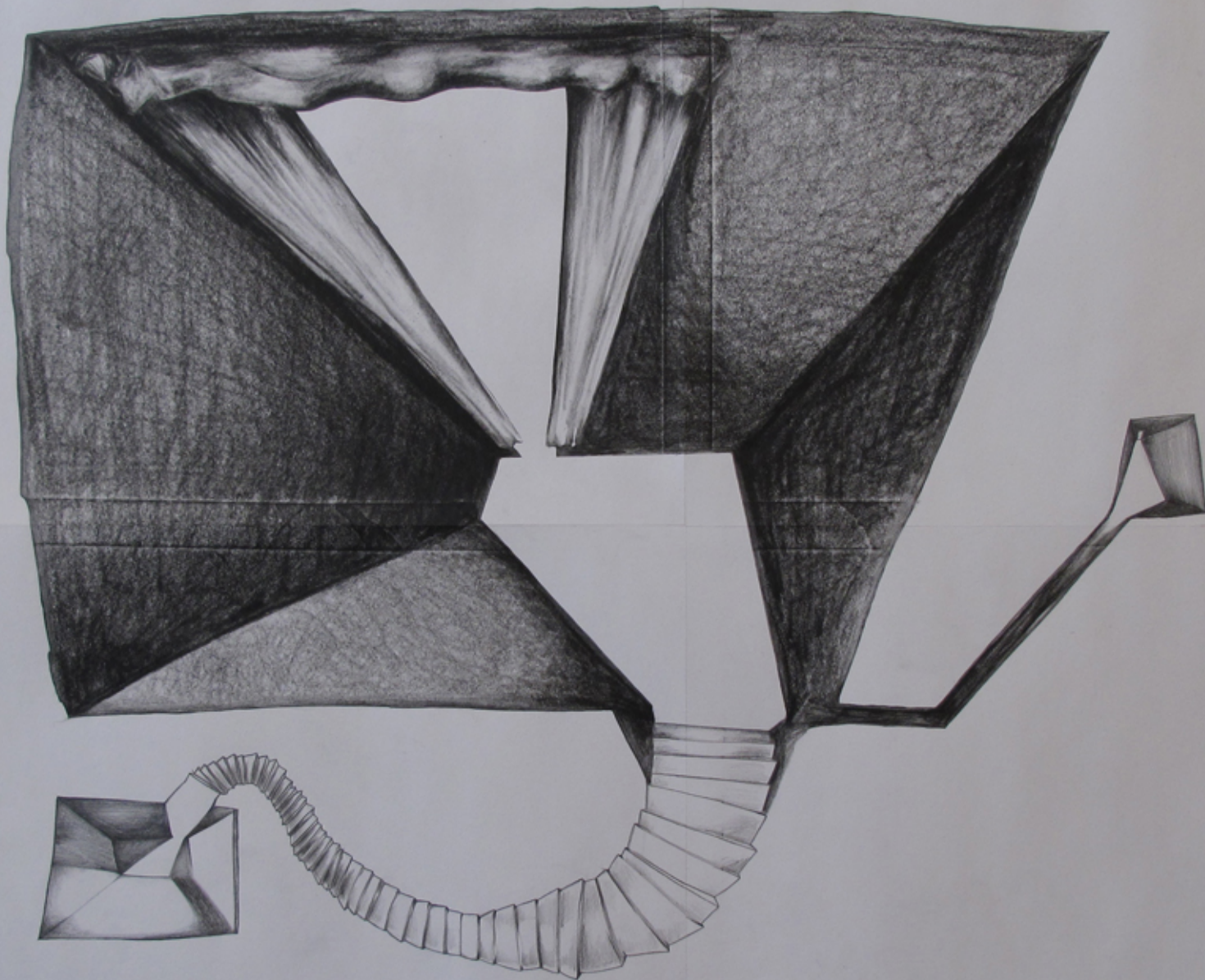
2016 in Espoo in Finland.

Assignment / Marja Nurminen

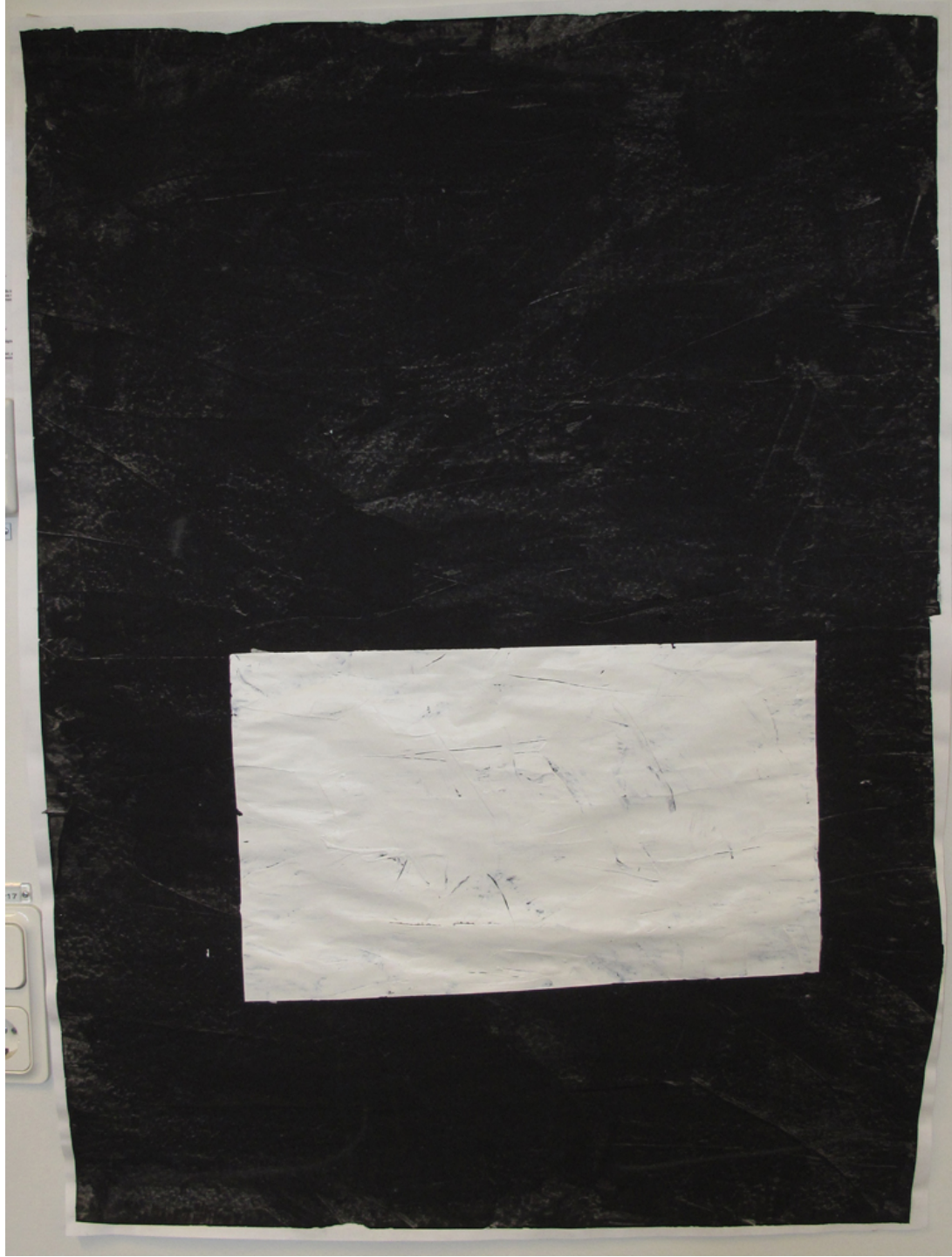
- Draw an important place by memory. Try to show the place to people who haven't been there
- You may use different projections not just central perspective.

Questions for the day

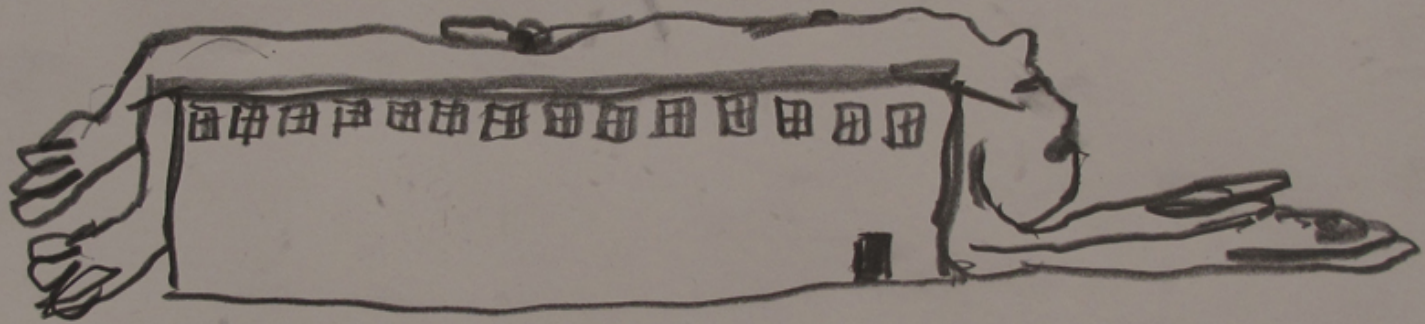
- Can you have drawing as a method in your artistic process?
- Can you travel in your memory by help of drawing?
- Can you think by drawing or do you have to think before drawing or afterwards when you have finished your drawing?



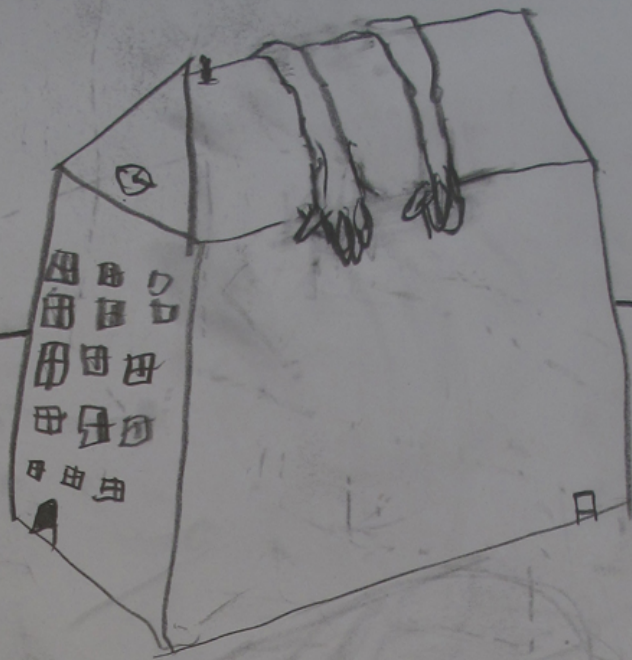
Anna-Lisa Johannessen



Jari
Kouvonen



Andreas R Andersson



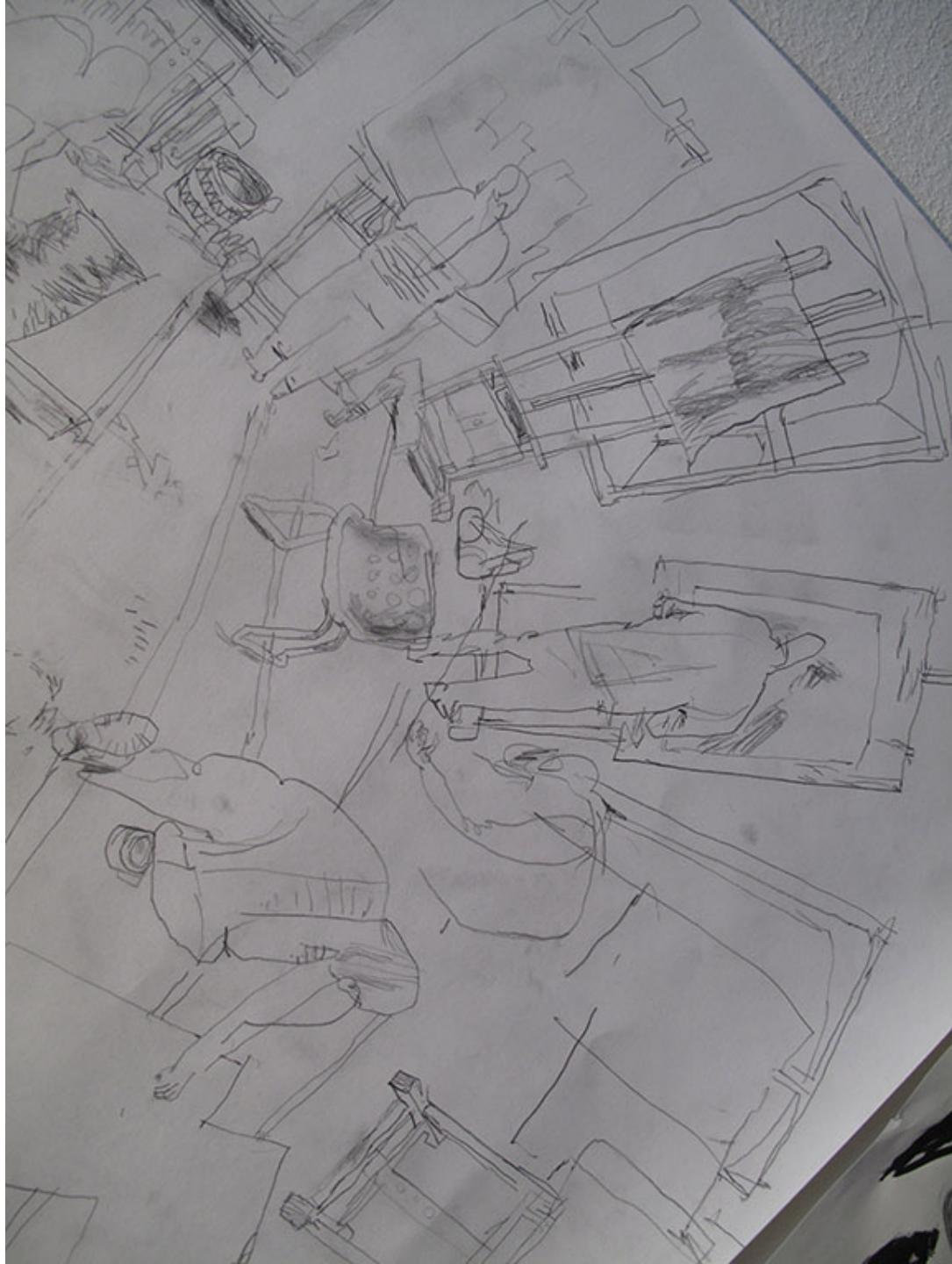


Jonatan Knut













Anni
Kuula





Malin
Theresa
Kleiva





Spring 2018:
UWAS-C0014
Spatial Structures (5 cr)

During this intuitive introduction to various geometric and topological phenomena, we set up a systematic approach to relevant spatial practices in visual arts and take on even some provocative and surprising concepts. The lectures, workshops and exercises involve fundamental structures in spaces of varying dimensionality, and how they may appear through visual work.

Fall 2018:
MS-C1001
Shapes in Action (5 cr)

Students will learn to recognize and analyze symmetric patterns and structures observed in our environment and in their own professional practices. Topics discussed include planar, spherical and hyperbolic 2D symmetries, Kleinian groups, conformal dynamics, 3D geometries, manifolds, orbifolds and fractals.

Spring 2019:
MS-E1000
Crystal Flowers in Halls of Mirrors (10 cr)

During the course student groups will build a prominent, mathematically themed art exhibition targeted to a wide audience in collaboration with EMMA - Espoo Museum of Modern Art. Through the art projects students deepen their understanding of various geometric and topological phenomena, and find new interpretations of them.

AALTO MATH&ARTS

Piloting for an academic minor, Aalto Math&Arts has three transdisciplinary courses in the context of University Wide Art Studies (UWAS), integrating mathematics with visual arts, design and architecture. Patterns and structures, symmetries and transformations reveal aspects of our environment and practices which can be presented, studied and developed using the language of modern mathematics. The contents of the courses set up an ideal foundation for applications in digital technologies such as CAD, 3D printing, game design and VR. The courses are open to students in all levels of education, from the schools of Aalto and other universities in Finland, as well as to school teachers. No previous studies in mathematics or arts are required and the courses can be taken independently, but either or both of the 5cr courses should be finished before MS-E1000.

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Thank you!