UNFASHION SHOW 2019 - Bodies: Sculptural Geometries | Spatial Explorations. Photo by Samuel Pettersson
The academic year 2019/2020 was Umeå School of Architecture’s 10th year as a department and undeniably also a year characterized by change.

When the fall semester began Mikael Elofsson, Dean of Umeå University’s Faculty for Science and Technology, had temporarily stepped in as Head of Department pending the appointment of a new leadership.

By late October we began our work as that new leadership with anticipation and joy. The transition worked out comparatively smoothly – largely thanks to the collective, creative and solution-driven spirit among both staff and students.

As the fundamental vision, pedagogy and ethos of Umeå School of Architecture (UMA) continues, a new leadership will simultaneously bring about some changes in organizational structures and priorities. During the last years, much time and effort have been spent successfully strengthening our Educational Programmes.

Therefore, it is now a fundamental priority to also build up and strengthen the position of the department in Research. This academic year will however also be in our memories for years to come due to another circumstance: the coronavirus Covid-19 and its rapid, global circulation.

Like many universities around the world, we too have had to adapt to recommendations and regulations deemed necessary to, as we have gotten used to express it; flatten the curve.

In the middle of March 2020, work and studies were hastily moved from our intimate on-site environment which normally characterizes UMA to distance learning and online formats.

This change has naturally required large efforts from both employees and students.

Writing this introduction at the end of the spring semester, we do feel confident stating that this transition has succeeded beyond our expectations. We have been able to continue our education programmes and largely all other activities conducted at the department without meeting unsolvable challenges. While these conditions have been demanding, they have likewise allowed us the opportunity to explore new formats, platforms and pedagogy for Architectural education, research and practice.

Another aspect worth highlighting as we wrap up the year is the fact that the Students of UMA have continued to produce high-quality work throughout the period. This is obvious and can be seen in the pages of the publication that you are now holding in your hands or viewing on your screen: UMA Works 2020.

As we eagerly await more normalized conditions – to be back on-site and to further develop our educations, research, facilities and structures together – UMA Works provides us the possibility to look back on everything we’ve collectively achieved during the past year.

For readers external to Umeå School of Architecture – regardless if you are part of the Architecture field, collaborators of the department, a curious citizen or someone thinking about applying to our programmes – we wish that this publication will give insight into and inspiration from the activities at UMA during the academic year 2019/2020.

The Umeå School of Architecture Leadership
Mikael Henningsson, Head of Department
Michael Gruber, Assistant Head of Department
Sara Thor, Deputy Head of Department
Amalia Katopodis, Programme Director

Photo by EBE.
Umeå School of Architecture

A local and global school of architecture

Umeå School of Architecture (UMA) is a department of Umeå University that occupies a unique academic and geographical position in Sweden. The school operates in-between the artistic, the scientific and the professional field of knowledge and has a strong focus on exploratory and experimental work based on broad inter-disciplinary perspectives. UMA engages with contemporary societal challenges, and our profile and education is significantly embedded in issues of ethical design and sustainable development, attracting teachers and students from all over the world that wish to contribute to this endeavour.

The location of the school in a rapidly growing, service-dominated city within a natural resource-rich but depopulating region provides a distinctive atmosphere but is also an excellent context and scale for holistic approaches in case studies of the conditions for, and the effects of architecture and urban design. Increasingly this has led to live projects situated within the city and region as well as related international projects in areas subject to political change and social deprivation.

The school focuses on socially engaged forms of education and practice that are carried out in design studios with different thematic orientations, exploring new fields of knowledge related to architecture and urban planning. By developing an awareness of the historical, theoretical, political and professional concerns and agendas that drive the contemporary debate on architecture and urban planning, the students are able to choose subjects orientated towards the development of their professional identity and to find a basis for future research and practice. The aim is to promote a deeper insight into the societal challenges and the architect’s role in 21st Century society in order to meet a future with an emphasis on cross-disciplinary co-operation. The development of this design practice means that a greater freedom can be given to combining expertise in creative, professional and research practices & methods, providing a more holistic and inter-disciplinary environment, which is in accordance with global educational trends. Our studies focus on research themes that have particular relevance to contemporary society with an emphasis on climate and resources, emerging technologies, socially sustainable urban and rural development and ethical design. We investigate how these issues affect the local area and the region around Umeå; and how these are related to other global contexts. This, in turn, helps to develop a deeper understanding of the socio-cultural dynamics of the regional context, which can be translated into new design strategies and interventions on a wider scale. The subject development integrates artistic, pedagogical, professional and research practice as well as creating new forms of practice. Important elements of the programme include social and environmental sustainability, resource awareness, working at different scales, experimenting with technical solutions and prototyping through full-scale construction and architectural interventions and installations in the physical environment. The design process is explored through investigative and process-oriented methods, and modes of working are tested and developed through unconventional experimentation, where the learning environment is conceived as a laboratory.

Architecture students of today need to develop a reflective approach based on critical thinking and the ability to take a political and philosophic stance on a wide range of societal and ethical questions. Through wider collaborations with society, both locally and internationally, we aim to find new ways to support students to develop their critical thinking and to provide them with the tools necessary to approach the societal challenges they will meet in their working life. Our ambition is that this will allow our students to acquire a global and deeper understanding of the criteria for the architecture and infrastructure needed for a more sustainable future.
Human existence is fundamentally an embodied condition. It is sensory and corporeal. In that sense, the understanding of the world is acquired through the exploration of all senses; tactile experiences are explored before our visual image gets developed: since a crawling child is touching the cold, soft, warm or rough surfaces, a direct experience of physical sensations becomes a dynamic learning process. Therefore, the body becomes the locus of perception, memory and imagination: the body feels, remembers and moves. Fundamentals is the frame for experimentation with the core knowledge of architecture, where design, process and making are integrated into the education. The studio is defined both as a learning platform and as a pedagogical methodology based on artistic, material, technical and conceptual explorations, where thinking with the hand translates into learning by making. The strategy is defined by a series of interconnected experiments that evolve from one dimension (line) to three dimensions (volume) transforming from geometrical delineations to imaginary spaces, exploring and implementing a combined set of tools that evolve from drawing to model, from immaterial to material. The studio explores the relationship between body and space, through movement and perception, through a physical and phenomenological experimentation, using the body as an object, as a tool and medium to access into geometry and surface, into mass and void, into space and narrative, into phenomena and experience, into city and landscape.
SPATIAL EXPLORATIONS

Body Series | Geometric Series | Object Series

From top left to bottom right, by: Lina Degerth, Elina Martinsson, Sofia Öhman & Ebba Landstedt; Valentin Strohkirch; Sverker T. Jernudd; Po-Ling Hui; Sara K. Sjöholm; Annika Badenius; Johannes Nilsson; Fredrika Lindvall; Gustav Marklund; Nathalie Svahn; Malin Dybeck; Jonas Eltes

SPATIAL EXPLORATIONS

Solids & Voids | Spatial Series

From top left to bottom right, by: Malin Öster; Emma Nordström; Fabian Wetterrot; Frida Öberg & Elin Edström; Axel Gillblad; Lovisa Adolfi; Adam Sävhage
The exponential growth of mankind has set a drastic change in our environment. The notion of Anthropocene is no longer questioned. As species inhabiting this world, we have made a mark on our planet. Our habitats are moving towards urban areas. The formerly colonized rural landscapes are giving way to de-populated mono-culture resource production machines in order to rationalize our existence. Accumulation and uneven distribution of resources in cities cause friction among communities and corporate interests that disables us from taking collective actions. Sweden has a unique way to tackle the rural commons: Allemansrätten. It secures for everyone the right to access the landscape and to harvest its wild berries, fruits, mushrooms etc. Allemansrätten was first labelled in 1940, but while society has shifted from a rural to an urban condition during the last 70 years, allemansrätten remains the same. How does one define an updated version of allemansrätten that reflects the state of contemporary urbanized society? This studio investigates how resources are shaping our landscapes, cities and every-day lifestyles. How are resources created and distributed? We learned from the urban (Umeå) and the rural (Holmön) conditions of Norrland in order to understand how tools of architecture can support and nurture stronger communities around common assets in a way that does not threaten our own existence in the future. As architects being interested in the well-being of our surroundings, we set out to explore breaches that could be filled and reinvent alternative ways of being a society.
How does one define an updated version of allemansrätten that reflects the state of contemporary urbanized society?
Studio 2 has explored two suburbs of Umeå, Ersboda in the north and Tomtebo in the east. Our city has an ambitious vision to have 200,000 inhabitants by the year of 2050. While the densification of the city centre will add several thousand new homes, Umeå needs to continue to grow outwards. This is a space where the good intentions of architects and planners meet the economic reality of private development and consumerism.

Umeå is an important regional centre, so its urbanism will always be affected by the pragmatics of car transport. We wanted to imagine how our city could grow in a way that accepts this reality, while still being democratic, sustainable and inclusive for its citizens.

Second-year students have explored a sequence of prescriptive briefs. Working within the framework of the Sharing Cities Sweden programme, the municipality of Umeå has committed to connecting local institutions and citizens to develop sharing services in mobility, space, products and services. The culmination of second-year work have been the proposals for neighbourhood hubs for the new developments of Tomtebo Strand and Tomtebo Gård.

Our third-year students have approached these suburbs with a greater degree of intellectual autonomy. In the autumn their projects engaged with the unplanned consumerist economies that define Ersboda’s edge to the highway and city. In the spring, their Bachelor projects have developed critical and creative ideas about what our growing suburbs will need in the future.
suburbs
consumption
circular economy
community
sharing
A Parisian squeezing an orange in a fancy juicer for breakfast. The construction of new infrastructures for a growing population in China. An Ecuadorian dentist assistant recruited in Madrid to make a living in Sweden. The rise of the price of iron ore in London. A worker’s housing unit that is moved 3 km on a trailer in Kiruna.

What is the connection between these stories? A collection of craters easily detectable while traveling by Google Earth reveals the location of Kiruna, the northernmost city in Sweden. To be more precise, the lunar like landscape corresponds to Kirunavaara, one of the purest iron ore deposits in the world. Iron ore extraction is responsible for radical changes in the built environment in Northern Sweden, but also for the socio-spatial transformations across places and territories. The Kiruna orebody is the essential component of a global network that is all but invisible. From a stylish tea spoon in your cupboard to the heavyweight European railway network. It takes a whole planet to make Kiruna and it takes Kiruna to make a planet.

Studio 3 investigates the spatial and social organisations of past, present and future Kiruna. Through the iteration of spatial representations, case studies, research methods and theoretical frameworks, the studio explores the possibilities of Kiruna as a city where multiple presents and futures can co-exist simultaneously.
Student work by:
UMA 4-5, Studio 12

Tectonic Performance
The Science and Craft of building

Keywords:
- bones
- enclosures
- organs
- operative skin
- skeleton
- structure
- tectonics

Technical support:
- Kent Brodin
- Mikael Hanson
- Sven-Erik Hildener

Tectonics in architecture relates to the science of construction. Yet the notion of Tectonics raises construction to an art form, through the symbiosis of technical requirements and creative design. The Studio applies a wide set of suitable artistic and architectural methods: Geometry, patterns, modular structures, construction, fabrication systems, material explorations, local traditions, cultural heritage and social sustainability. These constitute an innovative field of research identifying the physical limits of architecture as an advanced creative discipline and introducing new hybrid conditions to the built environment. The studio agenda develop new languages, morphologies and atmospheres using tectonic expression and its relation with time, through temporary and permanent design parameters. Combining building science and artistic processes, the studio becomes a platform to explore methods that allow us to learn by making, design by testing and explore by research. The studio develops a strong technical agenda. It focuses on structure as a fundamental component of architecture; a skeleton that allows buildings to be situated in its context. The structure is understood as the building’s DNA. The studio reflects on the performance of buildings investigating material behaviours, building science and environmental impacts. The project in the Fall term concentrates on Self-supported Modular Structures, exploring flexible components, assembly logics and the under-lying mechanics of materiality. In the Spring term, these are developed into complex Construction Systems, leading to a more consciously socio-ecological way of building.
PENTAGORGEOUS. Student work by Marcus Hägglund. Foldable triangular structures, handcraft fabricated hanging without fixation elements (screws, bolds). Photo by Alejandro Haiek Coll

TANGLE. Student work by Matilda Thorup. Permeable Inflatable envelope exposed to -15 ° degrees. Photo by Rocio Pina.
Exploring conditions in-between

Place & Identity

Studio 13 sets out to challenge our role as architects in order to investigate the importance of identity in relation to placemaking. In a world of shifting borders and communities; where issues of urbanisation and the depletion of our natural resources on a global scale continue to raise critical questions concerning the future of our structured societies; we pause to look closer at the hidden, the erased, the conditions at the edge or in-between.

The studio is locally situated with focus on Umeå as field for action and research in order to address current, global matters of place and identity. We are interested in understanding the relationship between common space and social action; in empowering local communities to become agents in city making.

What tactics and processes could be involved in the making of place? What are the poetic notions attached to identity and how it is perceived? What are the spatial manifestations that emerge?

We draft out the physical structures and reveal the invisible networks that govern our everyday lives.

We raise questions around how the experience of a place is able to alter our perception of physical space and give way to new resilient structures and aesthetics. Through transdisciplinary research and architectural tactics, we aim to explore the consequences of our direct civic actions and document their ability to transform space into place.
From top left to bottom right of page 30-31, work by: Aurora Engfeldt, Märta Wadman, Bethany Scott, Johan Vonkavaara, Julia Abbevik, Frida Bergner & Alex Lefterow, Pétur Stefánsson, Yoko Xie, Jonathan Ridell, Fanny Tersmeden, Aapo Rautio, Enric Ballera Navarro, Ida Holmlund, Kristina Östman, Sofia Holmström

architectural intervention

research & prototyping
In Year 1–3 of the Architecture Programme, courses in History, Urban Planning, Technology and Theory are closely integrated with the studio work. The supporting studies courses provide tools for the architectural project, expand the notion of Architecture and aims to encourage critical thinking.

UMA 1: The framework of Theory in Year 1 is to explore and define methods of communication and reflection. The course adds theoretical, philosophical and communicative aspects to the core notions of the studio. Space, Object and Body through workshops, seminars and assignments.

UMA 2: The 2nd year delves deeper into the notion of context and how to understand the situation architecture operates within as it creates, transforms, mutates, destroys, relates to and makes appear. For the academic year 2019/2020, the fall semester course was titled “The Idea of Futurity. From Critique to Construction”. The concept is borrowed from Roberto Unger, cutting out and turning over some of the primary assumptions of a radical critical architecture theory seminar.

UMA 3. The courses in Theory of architecture in Year 3 aims to introduce methods of research, mapping and communication in contemporary architecture and urbanism, in order to investigate emerging spatial responses. Rather than theory being ‘the map’, we use theory to find our way. During the fall semester, students were offered a workshop organised in collaboration with Norrlandsoperan, Mia Habib dance company and Oslo School of Architecture. Four days were spent to reflect and speculate on climate migrations as a common horizon of humanity, and on the implied changes of perspective for the disciplines of architecture and spatial planning. Combining body practice, discussions, readings and model making, the workshop mixed theoretical perspectives and experimental making. During the spring semester, the course is strongly linked to the bachelor project. Several short workshops allowed the students to confront their project strategies with different case studies and to develop their own standpoint in a manifesto. The course was integrated in the studio teaching and focused in the last part of the year on how to present the theoretical background and design of the bachelor project, combining text and visual representation.

Vertical Workshop. Each fall semester, UMA opens with a workshop where students from all years get together to collaborate around a current topic. The workshop is an opportunity to conduct large-scale research or interventions quickly, but it is also a task were new students get quickly accustomed to institutional instruments of critique which might productively combine a reasonable doubt regarding the continued efficacy of avantgarde pessimism with an optimism about the possibility of imagining new forms. What we need, according to Unger, is a second step after critique: an elaboration of a positive programme towards a future, surpassing critical analysis. Therefore, the seminar and its lectures analysed different canonical utopian and dystopian future models and rules of architecture itself through history. The students were asked to imagine their own contemporary Utopia in the form of a group manifesto through a text, a critical reflection and collage.

In the spring semester, titled “The status of man and the status of his objects”, reading of seminal articles, presentations and discussions were the basis of investigation into the status of the human condition and its relation to the development of modern architecture. Parallel to the issue of subjectivity (and its objects), other important applications of modernity such as technology, migration, liberal economic practices, globalization, climate change and politics continue to evolve with astounding speed and ease, dramatically transforming the environment in which the contemporary subject lives. What are the forces at work? What is this new environment of space and time about, what is the relation between digital and analogue spaces? Who is the contemporary subject? And what are the things, objects and events that define it? These are some of the questions addressed in this architecture theory seminar.

The Supporting studies courses in History, Urban Planning, Technology and Theory are closely integrated with the studio work. The spring semester, the course is strongly linked to the bachelor project. Several short workshops allowed the students to confront their project strategies with different case studies and to develop their own standpoint in a manifesto. The course was integrated in the studio teaching and focused in the last part of the year on how to present the theoretical background and design of the bachelor project, combining text and visual representation.
As architects we can no longer deny the politics of our work, each of our decisions affects society and the planet. As such this course aims to help students develop a critical understanding of the built environment and our role as architects within it. The aim of the Theory and History course is two-fold, first to engage students with a base understanding of theoretical concepts in relation to the built environment. Secondly it is about adequately equipping students to carry out rigorous research and develop their own criticality. This course is an important transition towards their self-directed research in the fifth-year thesis. One of the core aims is to bridge this gap between theory and practice and hence students are expected to translate theoretical ideas into spatial designs within the synthesis course.

This year the course studied eight key areas in response to contemporary city making; Pedagogy and Praxis, Power and Politics, Globalization and Neoliberalism, The right to the city, Commons, Gentrification and Co-production. Students worked in seminar groups to digest and then present the core ideas of the text to their fellow classmates, giving all students a solid grounding in architectural theory.

Students then worked on individual research projects which supported their synthesis work in the design studio, before finally submitting a critical essay and critical reflection on the semester’s research.

Architects are faced with the challenge to work to better society whilst having to consider our impact on the environment, economy and everyday lives. Therefore, the Professional Studies course is designed to give students an introduction to some of the realities, which will face them when they begin practicing architecture after leaving university.

The course emphasises how creatively engaging with these realities can lead to innovative solutions for the industry creating a new knowledge base with which students can define what architectural practice should look like in the future. Through a series of practice visits to local offices in Umeå and workshops on other forms of alternative practice fourth year students report in an exercise to define their future career path, starting them on their way into life after University.

Keywords: commons, co-production, gentrification, pedagogy, praxis, power, professionalism

Lecturers & guests: Annika Bindler, James B. Brown, Jaime Montes, Jonas Björkman, Lillemor Lyren, Staffan Schartner
In first-year, History of Architecture takes departure in the notion of Modernism. This academic year, the fall semester course addressed core definitions, values and expressions of modernity through readings, seminars and group work. In the spring semester, focus shifted to meanings and form of open public spaces through time, focusing on key moments and typologies of their development. Students worked in groups analysing a selection of cases and presenting them to the rest of the class.

In Year 2, the fall semester course focused on the period from Classical Antiquity until the 19th Century, covering four extended periods: the establishment of Western Architecture in Ancient Greece and Rome, the contributions of the Middle Ages, the recovery of Antiquity in the Renaissance, and the influence of the revolution of ideas of the Age of Enlightenment. The spring semester course continued by addressing the use, meanings and form of open public spaces through time, focusing on key moments and typologies of their development.

In 3rd year, the course investigated the processes of urbanization and the scale-notions of Cities, Metropolis and Megalopolis. The analysis of current large urban structures was carried out through the examination of case studies. Students worked in groups, each one analysing a megacity with the main objective of explaining its characteristics and features in relation to its history and its actual conditions and presenting their observations to the rest of the class with a careful selection of images and their own graphics or diagrams.
The point of departure for the Technology and Environmental Impact courses is that they regard the wider subject area as an intrinsic part of architectural and spatial design. Hence, their integration into the Architecture studio project helps to underpin the progression of the courses throughout both the Bachelor and Masters Programme. The courses structures include lectures, readings, case studies, core notions, concepts, and strategies, focusing on Sustainable Architecture. The aim is to provide an understanding and knowledge of technology as a design tool, and how to convert theoretical knowledge into practical knowledge, by exploring ways to generate a strategy driven design through a holistic understanding of the environmental impact in Architecture.

The core principles of Technology are introduced in the first year. The second-year focuses on case studies of bioclimatic architecture, exploring their structural strategies and spatial qualities. In the fourth-year courses, these notions are further explored as design generators, and are translated into drawings, constructions, and structural strategies in the architectural projects. The fifth-year focuses on investigations and prototypes aimed towards the development of the master thesis. A key aspect and important part of the successful integration and progression of the Technology courses is the collaboration with eternal experts in related fields, which is a long established and ongoing process that includes invited lectures, seminars, and promotes direct interaction with the students.
The building works as a learning environment for the social justice leaders. Arcus Center for Social Justice in Michigan is in relation to the area, the method of cordwood construction has historically been commonly used but is a technique seldom found in the area. The architect of this building wants to respond to the local heritage and language and plantation-style typologies of the Age of Enlightenment. The spring semester course continued by addressing contributions of the Middle Ages, the recovery of open public spaces through time, investigating the processes of urbanization, and examining urban structures as part of cases and presenting them to the rest of the class.

In Year 2, the fall semester course addressed core definitions of the notion of modernism, focusing on key moments and typologies of their development. Students worked in groups analysing a selection of images and their conditions and presenting their observations and critical arguments. In the spring semester, focusing on key moments and typologies of their development, the group work shifted to meanings and form of open public spaces through readings, seminars and own graphics or diagrams. Students worked in groups, each one analysing a megacase of current large urban structures. The main focus was carried out through the examination of current large urban structures, their characteristics and features in detail, the analysis of case studies. Students worked in groups, each one analysing a megacase of current large urban structures. The main focus was carried out through the examination of current large urban structures.

The role of wood.

Gluing the stripes together against the mold. The curved glulam beam is sawn into a thinner piece - straightening the sides by sawing it thinner. Drilling holes - for the clamps that keep the wooden stripes in position. The curved glulam beam is sawn into a thinner piece - straightening the sides by sawing it thinner. Drilling holes - for the clamps that keep the wooden stripes in position.

Heating the wooden stripes > 70 °c. The natural glue of the wood gets heated and it becomes bendable. The role of wood.

Flexible to different scales.

Making the wooden stripes into a package. The curved glulam beam is sawn into a thinner piece - straightening the sides by sawing it thinner. Drilling holes - for the clamps that keep the wooden stripes in position. The curved glulam beam is sawn into a thinner piece - straightening the sides by sawing it thinner. Drilling holes - for the clamps that keep the wooden stripes in position.

Gluing the stripes together against the mold. The curved glulam beam is sawn into a thinner piece - straightening the sides by sawing it thinner. Drilling holes - for the clamps that keep the wooden stripes in position.

Metal covers to protect wood beams when exposed. Reinforcing weather protection tekst.

1. Wall build up:
   - Plaster finish
   - Air gap
   - Masonite booms
   - Wood fibre insulation
   - Tape & wind barrier
   - Blocks for singles
   - Finally Wood singles
   - About 60 single shingles

2. Floor build up:
   - Hardwood flooring
   - Wood fibre insulation
   - Tape & wind barrier
   - Blocks for air gap
   - Protected wood flooring

Dimensions:
By: Dohu Iwama, 2019.