

BODY
& **SPACE**

BODY & SPACE

An exhibition in progress

BODY & SPACE- man and environment - has been exhibited during 2006-2007 at Stockholm International Furniture Fair, Fiera di Mobile in Milan, MateriO in Paris, Design week in Prague, Textile fair in Brussels, Designers Week in Eindhoven, Futurotextiles in Lille and Avantex in Frankfurt.

Ulla Bodin
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In daily life, the textile material has always been connected with our bodies, a necessity for our survival. Textiles protect us from strong sunshine and against a cold and wet climate. Since the ancient time in which weaving was invented, textiles have been used for our bodies and spaces.

Today we develop textiles for new applications in Smart textiles, wearable built in technology to create innovations for public spaces, the automobile industry, health care and sports.

In November 2005, the Swedish School of Textiles, the THS, decided to find a new way to exhibit and promote the profile of the education at the international Stockholm Furniture Fair in February 2006.

The intention of the THS was to show its knowledge in materials and the prototype production capabilities of the unique textile machine park available at the THS. Further, we wanted to put focus on our strength in working across borders with design/technology for the future in a global world.

For some years now, PhD students have been conducting research in the field of technical and Smart textiles and master students are now following in their tracks. Research in interaction design, environmental and sustainable textiles has increased.

At the THS the creativity of art is combined with the ingenuity of technology. The textile field is interdisciplinary. The School conducts research in Fashion and Textile Design, Interaction Design, Technology, and Design Management.

Ulla Eson Bodin, Professor in Textile Design at HDK, University of Gothenburg, Artistic Supervisor and Professor in Textile- and Fashion Design at The Swedish School of Textiles, University College of Borås 1996-2002. From 2002 Consulting Professor at The Swedish School of Textiles. Her research and artistic development work are based on knitting techniques for Smart textiles and she works as curator for exhibitions abroad.

**BODY
& SPACE**

International Furni

Stockholm

February 2006

ture

Placid place

I started out sitting and thinking in an empty space. I thought about all the million's of things that are flooding my everyday life. At that time I realized I needed to create a placid place.

Jenny Stefansdotter Stentoft,
Bachelor, Final work,
The Swedish School of Textiles,
University College of Borås.



The exhibition BODY & SPACE, man and environment, shows the breadth and depth of the education and research at the THS. The experimental materials, fashion, and products currently found at THS are in some cases at the research stage, while others are on the brink of production. Entering the exhibition in Stockholm demanded everything to be minutely organised. First of all, items had to be chosen and thus criteria had to be set up for the selection among the items available. Every material, idea, prototype, and product had to be new in its field or displaying new possibilities and new applications.

It presented an aesthetic problem to create an exhibition in a specified area with fixed walls and a floor we could not change. Anna Persson, artist, was engaged in the planning and she started out by making a model. The participating students brought their items to our meetings and through discussion we were successful.

A special information folder had to be created for this exhibition, telling the background story of the project and giving descriptions of every displayed textile. Because of the exhibition content, e.g. changeable textiles and afterglow effects, one challenge was to put in some kind of special effects in the folder. We consulted Kari Palmqvist, graphic designer, to discuss the layout with us and decided to print the folder with neon yellow afterglow effect on the front page. For many years, Swedish design has been in focus and has become well-known. We saw a gleam of hope to realize this project and present the THS at the Milan Furniture Fair. In case the exhibition would continue to tour Europe, the folders had to be printed in an English version.



A pioneering spirit and radical experiments in new textile materials

"My beginning was far from what I had hoped for: fate put into my hands limp threads! Threads to build a future? But distrust turned into belief and I was on my way."

Anni Albers

In the entire current global development of new materials, including textiles, the optimal combination of sometimes contradictory material properties presents a special challenge for our times and generates a pioneering spirit worldwide comparable with the Bauhaus movement of the 1920s.

Today, seemingly unusual blends of existing materials can lead to surprisingly innovative textile products by means of beneficial properties, built-in intelligence and new manufacturing processes.

Today's textiles are customized materials with totally new properties and design features that can be shaped, combined and utilized in totally new ways. Built-in electronics and sensors measure our movements, positions and biological data and evaluate them.

Fabrics are able to sense our emotions and react to them by changing their state and triggering entirely new functions. They store energy, are luminous, interact with people and give directions. The new textiles increase our safety and create new forms of mobile communication. Their surfaces are antibacterial, conductive, sound-absorbent and dirt-repellent.

Areas in which the new textiles can be used are highly specific and include health care, intelligent protective clothing, sportswear and leisurewear, art and games, smart military wear and clothing, and smart automotive and industrial textiles. In this context textiles gain a totally new significance as innovative materials that question the role of textiles in the context of contemporary society.

As designers we will, in the future, face totally new tasks and must radically rethink textiles in terms of their form, use and significance. The design process requires an experimental, scientific and interdisciplinary approach. Knowledge of textile traditions, new skills, curiosity and unconventional thinking are equally important prerequisites.

The experimental materials, fashion and products that are currently taking shape at the Textilhögskolan i Borås are in some cases still at the research stage while others are on the brink of production.

A number of the clothing and bag prototypes designed in Borås have already been tested for design and function and have gained recognition all over the world.

Marion Ellwanger, Professor in Textile Design

Notes:
1. Sigrid Horstmann-Welßbe: Interview with Anni Albers, Orange, Conn., Feb. 21, 1967; transcript in The Josef and Anni Albers Foundation archives.

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ELECTRIC BEAUTY

According to Einstein, energy can only be transformed or never destroyed. Electricity transforms into heat and light into warmth. The distance between the hand and cloth is the space where skin meets another material. My design transports energy that the hand generates, embodied by the element of water. Electricity flows in a net of water and sparkle, with light. The form is abstract and sculptural. The net of frill is shaped into different characters of water elements.

Malin Johansson Södervall, Master student,
The Swedish School of Textiles,
University College of Borås.



THE FABRICATION BAG: an accessory to a mobile phone
Would you like that your mobile phone sometimes
communicates with you in a way other than through sound



1



2



1. SILENCE

In recent years, fabrics have seldom been used in public premises such as offices, schools and restaurants. The poor acoustic conditions resulting from this affect people in a negative way.

This is a knitted sound-absorbing fabric made of 100% wool. The fabric is developed together with Acqwool AB and the Swedish National Testing and Research Institute. It is an attempt to make a sound-absorbent fabric with pleasant look.

Margareta Zetterblom, PhD student,
The Swedish School of Textiles,
University College of Borås.

2. SMART TEXTILES

Smart Textiles is a generic term for textile materials and products that interact with the environment and users. Smart Textiles combined with wearable technology introduce a shift in textile and fashion, from a passive to a dynamic behaviour, from textiles and clothing with one single function to products with double function. This undershirt is integrated with textile-based sensors that monitor vital signs such as heart rate. Textile-based sensors are soft, convenient, washable and therefore reusable.

Lena Berglin, PhD student, The Swedish School of Textiles, University College of Borås.

3. ROOM EXPERIENCE

An experimental work with textiles in rooms. This room should be a place for rest and for taking a break from everyday doings.

In this project I wanted to make use of the textile's capacity. And, experimentally, see how it can change the expression of a room. My room models lack windows but with combinations of textile and artificial light an illusion of daylight is brought about, which makes the room feel more open and deeper.

The purpose has also been to break the square that many rooms are built upon.

Cecilia Andersson, Master student,
The Swedish School of Textiles,
University College of Borås.

The idea behind BODY & SPACE has to be clarified. All the technical tools, the modern textile industrial computerized machines at the THS, give the students unimagined possibilities to develop new materials, yarns with completely new properties to weave and knit for new specific purposes. Also, there is a laboratory for dyeing, measuring, and testing and a new excellent industrial department for making coated fabrics. The new textiles have properties such as conducting light, absorbing sound, changing colours, and performing an ECG.

The space at our disposal at the Stockholm Furniture Fair was big enough, but the location was a little out of the way. This position was a challenge. By covering the floor with silver coated paper and painting the walls with metal enamel, our space took on a very futuristic appearance together with all the equipment made of oxidised sheet-metal. The textile presentation looked very good against this background arrangement. After the Stockholm fair we evaluated the event. All students felt positive about having been involved and claimed to have learned a lot. Contacts with different companies were also fruitful and a discussion on going further with BODY & SPACE began.



Electric beauty

According to Einstein, energy can only be transformed, never destroyed. Electricity transforms into light and light into warmth. The distance between the body and cloth is the space where skin meets another material. My design transports energy that the body generates, embodied by the element of water. Eternity flows in a net of water and sparkle, with vibrant light. The form is abstract and sculptural. The net of frill is shaped into different characters of the water elements.

Therese Södervall, Master student,
The Swedish School of Textiles,
University College of Borås.

Acquiring a place to exhibit BODY & SPACE in Milan during the Fiera di Mobile at the end of February 2006 would be impossible, people told us. Every inch of exhibition space had been occupied for years. By a lucky chance we found a place in the prominent district Tortona, reputed to host the best design exhibitions. We were glad to meet with the understanding of the Board of the THS when they granted us the means for this project to take a leap into the unknown. The exhibition stand at the Tortona district was presented via mail. There was no chance of hanging anything from the ceiling or fasten any items on the walls. New solutions had to be found to fit the exhibition into the room. This was a new challenge. New metal constructions had to be made. The PhD and master students went to Milan to put together the exhibition lead by Anna Persson. The textiles did indeed look very nice with the old architecture with white walls and a dark wooden floor. The exhibition plan worked perfectly.

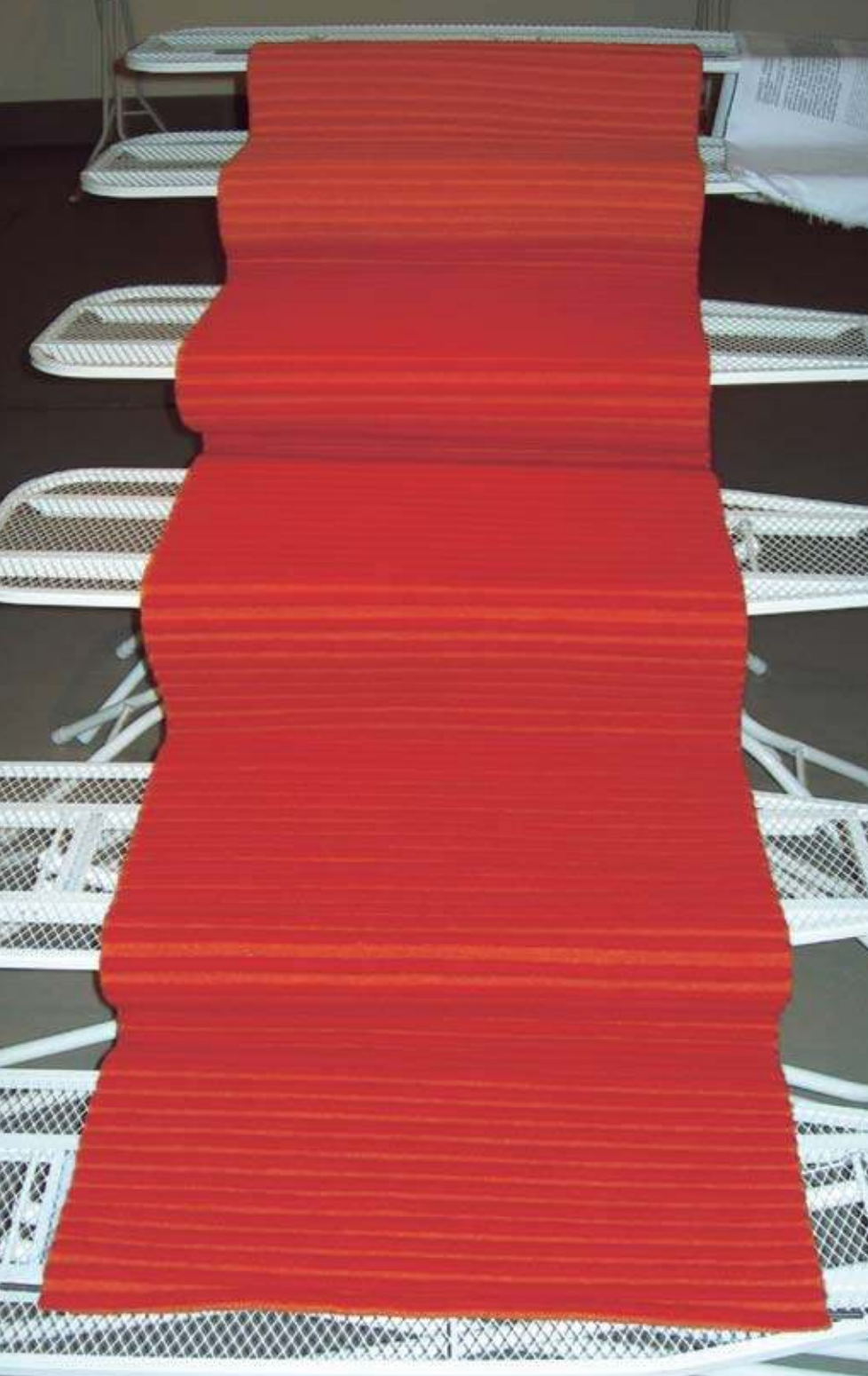




Glow

Glow is a flat-knitted textile that can be used in lighting products or combined with daylight or other light-sources as interior installations. The appearance of the textile changes from white to a chosen colour when light passes through it. The energy from the light charges the phosphorescent yarn which, when it gets dark, emits lights, creating a third and distinctly different appearance.

Linnéa Nilsson, Master student, The Swedish School of Textiles, University College of Borås.



Silence

In recent years, fabrics have seldom been used in public premises such as offices, schools and restaurants. The poor acoustic conditions resulting from this affect people in a negative way. This is a knitted sound-absorbing fabric made of 100% wool. The fabric is developed together with Acqwool AB and the Swedish National Testing and Research Institute. It is an attempt to make a sound-absorbent fabric with pleasant look. Margareta Zetterblom. PhD student, The Swedish School of Textiles, University College of Borås.

This event gave the THS a fantastic opportunity to meet Europe. By exhibiting in the most important design district in Milan we suddenly discovered that we attracted attention. Elodie Ternaux, director of MateriO, an important material bank company in Paris, visited our exhibition and invited us to exhibit together with Grado Zero Espace, one of the most successful sportswear companies in Europe that also collaborates with both Nasa and Esa.

Ulla Eson Bodin and Lena Berglin visited MateriO in Paris to make sure all textiles were in order. In July, during the exhibition period, it was interesting to come back for a video documentary and an interview with Elodie Ternaux, who is both an engineer and an industrial designer. She had invited two talented set designers to create the exhibition. The items were shown very smartly and sensitively on simple white ironing-boards together with texts on transparent fabric. Elodie Ternaux was deeply impressed, positive, and surprised with all the attention and interest in technical and Smart Textiles. Technical textiles are most interesting materials for the moment, she mentioned.



Knitted lamp

The lamp consists of two layers of textiles, knitted on a flat-bed machine in white and glossy transparent yarns. Both layers have the same pattern, one in positive and the other in negative picture. The frame is transparent plastic folio and it is about one meter high.
Hanna Bolin, Master student, The Swedish School of Textiles, University College of Borås.

A journalist from the famous design paper *Frame* made a big scoop on new textiles and 90 % of the images came from *BODY & SPACE*. Through this publication all of the participants in the article received lots of mails with inquiries about their materials. Elodie Ternaux brought part of the exhibition to Decotec, a textile fair in Brussels, to show *Textiles for the future* on the 9th – 12th of September.

During the exhibition period in June and July in Paris, visitors from other design forums saw and were deeply interested in *BODY & SPACE*. We were invited to the Design week in Prague on the 1st – 14th of October 2006 by the people responsible for Innovative Material there. Some of our items were chosen for that event. Elodie Ternaux took care of the transportation.

The invitation from Futurotextile in Lille was surprising. The exhibition would last from 14th October 2006 to 14th January 2007. Elodie Ternaux had recommended us and somebody from Lille visited the exhibition in Paris and decided to invite us. We were also invited, together with MateriO, to show *BODY & SPACE* at the Brainport Material Laboratory Designers' Week in Eindhoven on the 21st to 29th of October. Duplicates had to be made to display our textiles in two places at the same time. At Futurotextile only two schools were invited: Central St. Martin's School, London and the THS.

We had to take care of the setting and presentation. Students went to Lille in advance to make the arrangements. Futurotextile was a huge exhibition, 3000 square metres of textiles, fashion, and space equipment from the 60's to new experiments and research of today. Together with Central St. Martin's School, *BODY & SPACE* was placed in a rather dark space which allowed the glowing of the dark textiles to play with the soft light. The theatrical setting attracted visitors to look closely. The total number of visitors at Futurotextile was estimated to at least 200.000.



Textile microphones

In this project we work with sound transmission in textile and piezoelectric textile structure for recording of sound. The primary aim is to develop a textile microphone element but the impact of sound transmission in textile is also an interesting issue. Examples of applications for this project are health monitoring, sound design and sound adsorbing applications
Lena Berglin, Phd student
Margaretha Zetterblom, Phd student





Object



PERK

PERK

wall

innovative textiles



The Design Academy of Eindhoven is very well-known, situated in the old Philips building in Eindhoven. There are students from all around the world in their Master's programme. Li Edelkoort is director of the Design Academy and her influence is very strong. Every October the students display their examination works at the same time as the Technical University with educations in design and architecture. It was very interesting to take part in the designers' examination works, but textile was not a big topic at the Academy. The Design Week in Eindhoven is very important and about 60.000 people visit the shows and exhibitions during the week. There were several exhibition spaces in Eindhoven. We were represented at the most important space, the one where the seminars and ceremonies were held.

A big blue box, 15 metres long and 3 metres high, was designed to show new textiles in round openings. BODY & SPACE were given 65 % of one side of the box.

We were working together with Elodie Ternaux to place all materials on our side of the box. On the other side were samples from Materialenbibliothek Eindhoven. Curator Simone de Waar from Holland was also responsible for printed flyers with extraordinary support to The Swedish School of Textiles.

In connection with this event a one-day workshop was held, called Material Tables and organised by Material Sense. Lena Berglin and Ulla Eson Bodin participated. We took part in interesting discussions about the future of textile design and we also received an invitation to come back with new exhibitions another year.



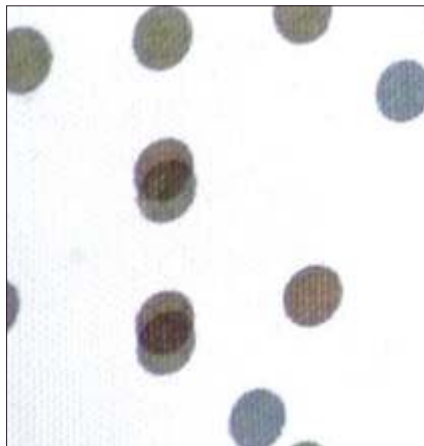


Anaglyph

The thought of making something two-dimensional into an extra dimension using perception to fool the eyes or the brain, made me think of anaglyph glasses for 3D-pictures.

This is a digitally-printed anaglyph pattern which turns from two to three dimensions in a striking moment when you put your anaglyph glasses on. Tina Carlsson. Bachelor student, The Swedish School of Textiles, University College of Borås.

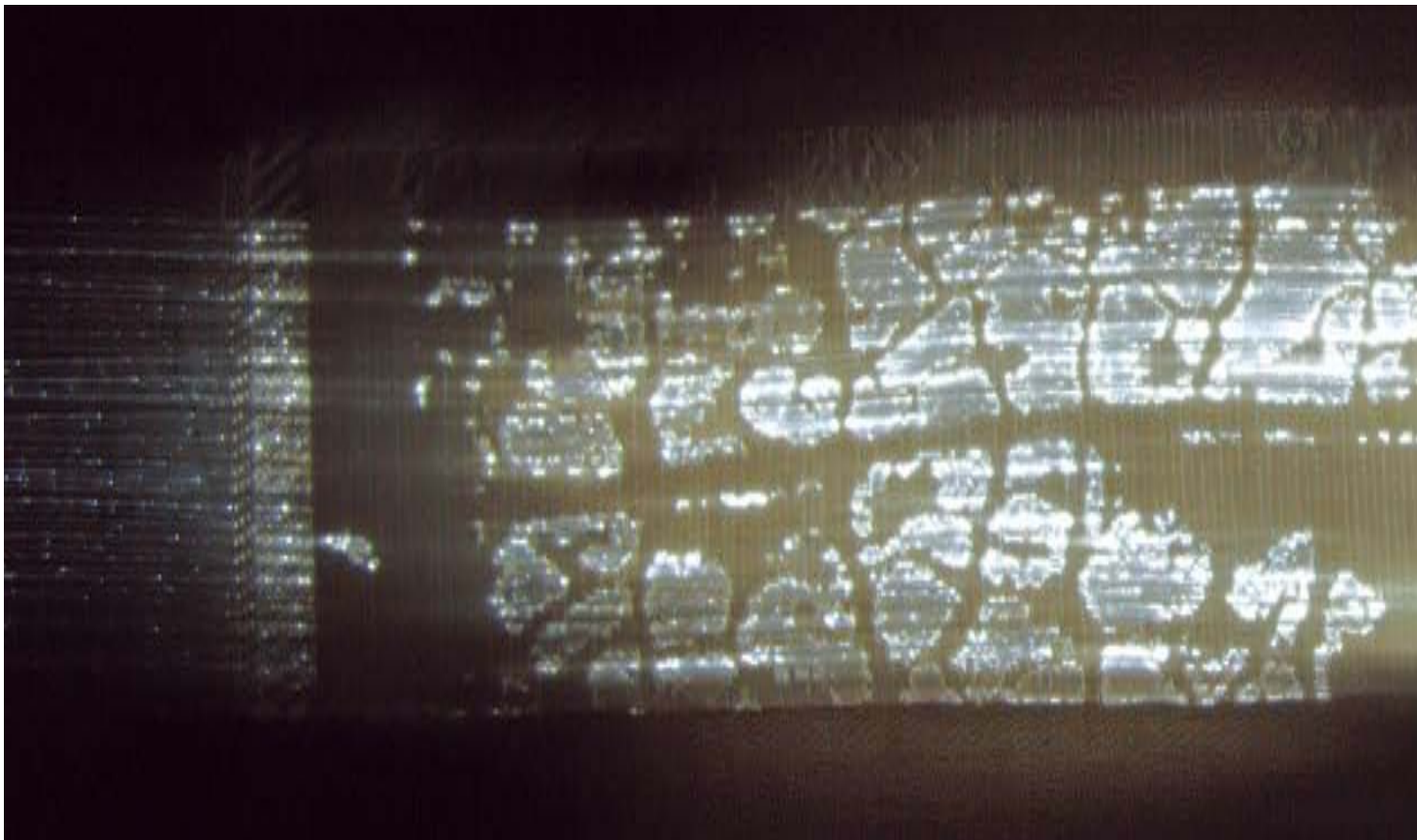




The fabrication bag: an accessory to a mobile phone

Would you like that your mobile phone sometimes expressed itself in another way than through sound and vibration signals? When you put your phone in the Fabrication Bag the phone's sound and vibration signals will be replaced with changes in the dynamic textile pattern on the bag. The bag is designed to be personal and unobtrusive; where you see a missed call others will probably just see a bag. The bag is a part of the Fabrication project where we investigate the expressional possibilities of computational technology and textile patterns through a combination of the two.

Linda Worbin PhD student,
The Swedish School of Textiles,
University College of Borås.
Hanna Landin, PhD student,
IDC, Interaction Design Collegium,
Department of Computer Science and
Engineering, Chalmers University of
Technology.
University College of Borås.



Light Textiles

Is a research work which focuses on the development of light textiles based on the integration of optical fibres into textile structures. The aim is to create textile light designs which offer big light surfaces that have an even all over and strong light effect, thereby two groups of light textile designs should be achieved: monochrome and huge abstract organic structures in light. Finally they could be used as a big movable light screens in a space either private or public.

Materials: optical fibres, metal wires, cotton

Technique: Jacquard weave

Barbara Jansen

Diploma Textile Designer, Berlin

Master student, Textile Design, Borås



Room experience

An experimental work with textiles in rooms.

This room should be a place for rest and for taking a break from everyday doings.

In this project I wanted to make use of the textile's capacity. And, experimentally, see how it can change the expression of a room. My room models lack windows but with combinations of textile and artificial light an illusion of daylight is brought about, which makes the room feel more open and deeper.

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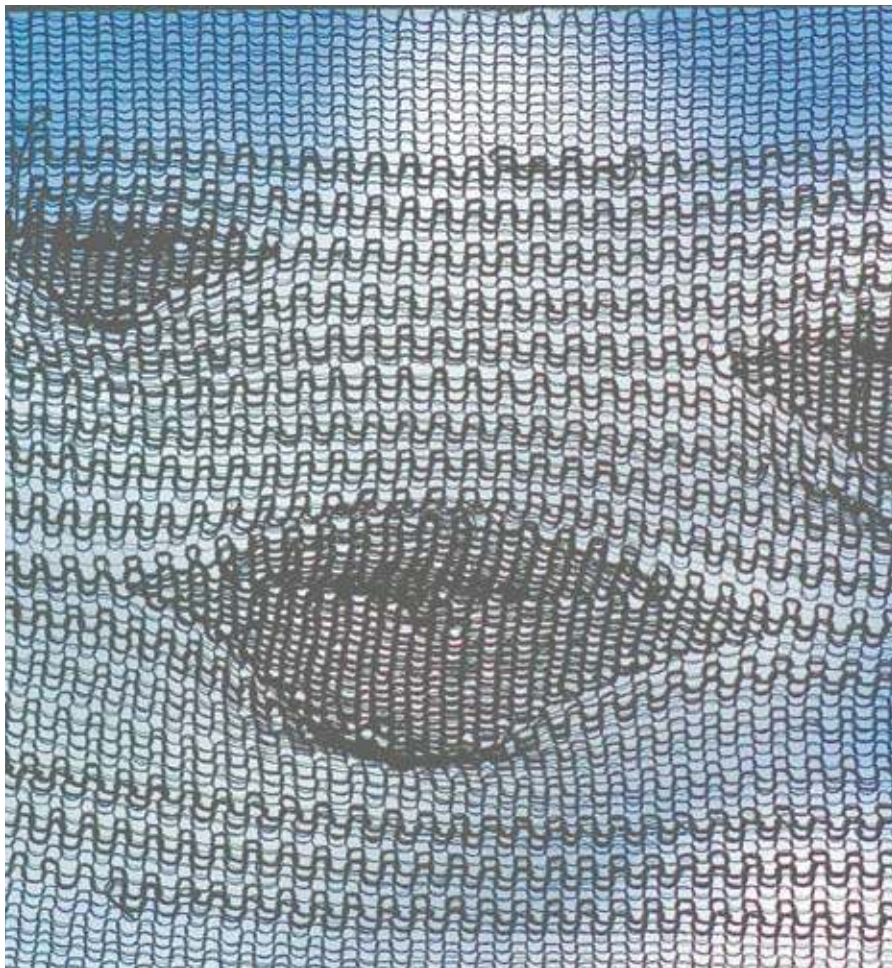
Cecilia Andersson, Master student,
The Swedish School of Textiles,
University College of Borås.





In June the schedule said to visit the Avantex fair in Frankfurt. A very compact and exact plan had to be devised because of the nominal space, 3x3 metres. The small space had to convey a very strong expression. Using very strong colours that nobody expected would make sure the exhibition attracted attention. The neon colours were brought together with silver metal materials and black and white to get a strong design. These good intentions worked out well. The small THS exhibition place was crowded all the time.





Sensitive skin

The Sensitive Skin collection shows the possibilities of textiles to act as a protective skin sensitive to the outside stimuli. The project explores the relation between glass, textile and natural light. The aim of the project was to design a textile substitute for both the esthetic and functional layers in the glass. Here the esthetics is combined with a specific function regarding sun as heat reflective due to the metal inside.

Partial knitting has been used as technique on flat knitting machines to give surface relief. The pattern design in the collection is expressing also the idea of the skin, a protective surface with cellular structure.

The materials that used are on the border between building and textile design as metal yarns and plastic polymers as monofilament but also yarns with special proprieties regarding light like light reflective and light emitting.

Delia Dumitrescu,

Masterstudent in Textile design, Swedish School of Textiles

Since April a dialog is going on with Dr Zane Berzina, researcher in Textile Art at Goldsmith, London University. She was invited to the THS in March 2007 to hold a workshop with the master students and was very interested in how the THS presents textiles in BODY & SPACE. Zane Berzina, born in Latvia, lives in London, works internationally, and takes a special interest in initiating collaboration projects between the Baltic States and other foreign universities. The THS has been invited to exhibit BODY & SPACE at the National Gallery in Riga in February 2008. Zane Berzina will be the local curator in Riga together with Ulla Eson Bodin, curator from the THS.

Lena Berglin, PhD student and researcher at the THS has been invited to Riga by the Swedish Embassy in Latvia in November 2007 to do a three-day introduction of the coming exhibition BODY & SPACE.

In September 2007 Ulla Eson Bodin visited the National Art Gallery in Riga together with Zane Bersina to see the space and discuss the design and artistic expression of the exhibition. Everywhere the BODY & SPACE exhibition is displayed presents it with a different expression. At the National Art Gallery in Riga, an architecture exhibition will be displayed at the same time as BODY & SPACE and the exhibition will be adapted in an appropriate way.

Ulla Eson Bodin
Curator of BODY & SPACE
Professor in Textile Design